
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark one)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 30, 2018

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

For the transition period from _____ to _____

Commission file number 0-10976

Microwave Filter Company, Inc

(Exact name of registrant as specified in its charter)

New York
(State or other jurisdiction of
incorporation or organization)

16-0928443
(I.R.S. Employer
Identification No.)

6743 Kinne Street, East Syracuse, NY
(Address of principal executive offices)

13057
(Zip code)

Registrant's telephone number including area code (315) 438-4700

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Common stock, par value \$.10 per share
Title of class

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
YES ☐ NO ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
YES ☐ NO ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports, and (2) has been subject to such filing requirements for the past 90 days.
YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any

amendment to this Form 10-K. []

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company (as defined in Rule 12b-2 of the Exchange Act).

Large accelerated filer [] Accelerated filer [] Non-accelerated filer [] (Do not check if smaller reporting company) Smaller reporting company [X]
Emerging growth company []

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES [] NO [X]

The aggregate market value of the voting stock held by non-affiliates of the registrant as of the last business day of the registrant’s most recently completed second fiscal quarter was \$1,681,780.

Indicate the number of shares outstanding of each of the issuer’s classes of common stock, as of the latest practicable date.

Shares of common stock outstanding at November 16, 2018: 2,579,680

DOCUMENTS INCORPORATED BY REFERENCE

Part III: Portions of the Definitive Proxy Statement to be filed with the Securities and Exchange Commission in connection with the solicitation of proxies for the Company’s 2019 Annual Meeting of Shareholders are incorporated by reference into Part III. (With the exception of those portions which are specifically incorporated by reference in this Form 10-K, the Proxy Statement is not deemed to be filed or incorporated by reference as part of this report.)

PART I

ITEM 1. BUSINESS.

FORWARD-LOOKING CAUTIONARY STATEMENT

In an effort to provide investors a balanced view of the Company’s current condition and future growth opportunities, this Annual Report on Form 10-K may include comments by the Company’s management about future performance. These statements which are not historical information are “forward-looking statements” pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These, and other forward-looking statements, are subject to business and economic risks and uncertainties that could cause actual results to differ materially from those discussed. These risks and uncertainties include, but are not limited to: risks associated with demand for and market acceptance of existing and newly developed products as to which the Company has made significant investments; general economic and industry conditions; slower than anticipated penetration into the satellite communications, mobile radio and commercial and defense electronics markets; competitive products and pricing pressures; increased pricing pressure from our customers; risks relating to governmental regulatory actions in broadcast, communications and defense programs; as well as other risks and uncertainties, including but not limited to those detailed from time to time in the Company’s Securities and Exchange Commission filings. These forward-looking statements are made only as of the date hereof, and the Company undertakes no obligation to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise. You are encouraged to review Microwave Filter Company’s 2018 Annual Report and other Securities and Exchange Commission filings. Forward looking statements may be made directly in this document or “incorporated by reference” from other documents. You can find many of these statements by looking for words like “believes,” “expects,” “anticipates,” “estimates,” or similar expressions.

GENERAL DEVELOPMENT OF BUSINESS

Microwave Filter Company, Inc. (hereinafter referred to as MFC) was incorporated in New York State on September 26, 1967. MFC is the successor of Microwave Filter Company which was founded in April of 1967.

On July 1, 1990, MFC acquired Niagara Scientific, Inc. (hereinafter referred to as NSI.)

MFC and its subsidiaries are sometimes referred to collectively as the “Company.”

NARRATIVE DESCRIPTION OF BUSINESS

Microwave Filter Company, Inc. (MFC)

Established in 1967 in East Syracuse, New York, MFC occupies a modern 40,000 square foot facility with an impressive complement of analytical and design software, test instrumentation, prototype and manufacturing equipment to create passive filters, components and sub systems in the frequency range of 10 MHz to 50 GHz.

MFC manufactures radio frequency (RF) filters and related components for eliminating interference and facilitating signal processing for such markets as Cable Television, Broadcast, Commercial and Military Communications, Avionics, Radar, Navigation and Defense. The Company designs waveguide, stripline/ microstrip, transmission line, miniature/subminiature and lumped constant filters. Configurations include bandpass, highpass, lowpass, bandstop, multiplexers, tunable notch, tunable bandpass, high power filters, amplitude equalized, delay equalized and filter networks. The Company actively produces over 1,700 standard products and has designed more than 5,000 custom products for specialized applications.

The manufacturing facility includes a modern CAD system, a test department with automated network analyzers to 50 GHz, a high capacity conveyor soldering oven and a fully compliant finishing operation. The Company’s Quality Management System has been certified ISO 9001:2015 recognizing the Company as a quality vendor.

Efficient computer simulation, design and analysis software enhanced by proprietary MFC developed software, allow rapid and accurate filter development at reasonable cost. Automated network analyzers provide rigorous product testing and performance data storage on a serial number basis in most cases.

A network based CAD system allows the transfer of data and programs to the CNC turning and milling centers for fabrication of machined parts. Prototype PC boards are similarly produced by computer controlled PC board mills.

A Grieve high capacity conveyor soldering oven is used for production of large quantity assemblies while smaller production quantities are assembled at hand soldering or brazing stations.

ISO 9001:2015 contract and design review procedures coupled with a QA department that is compliant with MIL-I-45208 inspection systems and MIL-STD-45622 calibration system standards assures process and product integrity.

Other in-house testing facilities include environmental chambers capable of testing products for temperatures of -40 to 200 degrees Celsius and humidity up to 100 percent. Several high power amplifiers are available for power tests. We have 2500 watt capability from 88-108Mhz with 200 watt capability up to 2200 Mhz. Facilities are also available for salt spray, sand and dust, shock and vibration, RFI leakage and altitude testing.

MARKETS

Microwave Filter Company, Inc. (MFC).

RF and Microwave - This market encompasses both commercial and military applications. Filters in defense applications are used for such purposes as air to ground communications, radar and land communications. In commercial areas, filters are used to protect such equipment as receivers, transmitters, transceivers and any other electronics used for signal processing. In addition to filters, this market is also served with MFC's Ferrosorb product line. Ferrosorb is a microwave absorbing material available in sheets, loads and a variety of other shapes. The product is used to offer protection by shielding signals or absorbing selective bands.

MFC's RF/Microwave products are sold primarily to Original Equipment Manufacturers that serve the mobile radio, commercial communications and defense electronics markets. The Company continues to invest in production engineering and infrastructure development to penetrate OEM market segments as they become popular. MFC is concentrating its technical resources and product development efforts toward potential high volume customers as part of a concentrated effort to provide substantial long-term growth. The Company is also actively sourcing complimentary products to distribute to augment sales.

Satellite - Microwave filters for removing interference are provided for commercial antennas. A variety of products are available that offer protection and or solutions to interference that affects the feedhorn, downconverter and receiver. An extensive offering of filters are also available for satellite services utilizing the higher KU and KA frequency bands. Management expects the demand for these types of filters to continue with the proliferation of earth stations world wide and increased sources of interference.

Mobile Radio and Data Links - MFC provides filters to a variety of mobile radio services such as cellular telephone, two way radio and paging to eliminate interference in transmit or receive equipment. More recently there has been demand for filters and duplexers for broadband microwave applications for Voice Over Internet Protocol ("VOIP") with the number of services increasing and ISP use. The advent of license exempt applications has increased the need for interference filtering. With the number of services increasing and our air waves becoming more congested, filters are increasingly important to many transmit operations.

Cable Television (CATV) - The CATV marketplace continues to change as cable operators begin the process of migrating to the latest DOCSIS (Data Over Cable Service Interface Specification) standard, DOCSIS 3.1.

DOCSIS 3.1 continues the evolution of digital CATV systems with the focus of improving spectrum efficiency and providing greater programming flexibility to benefit consumers. These changes move CATV systems from one that is channelized to one segmented into larger frequency blocks. The ultimate goal of DOCSIS 3.1 is to expand the operating frequency capabilities beyond 1700MHz. DOCSIS 3.1 will provide substantial increases in internet speed and allow for increased TV picture resolution; i.e., Ultra High Definition (UHD) or 4K TV and beyond. DOCSIS 3.1 allows CATV operators to remain competitive with their fiber optic counterparts.

MFC primarily serves this market with standard and custom filters used at the headend to process signals and remove interference. A very popular application involves removing or re-routing TV channels to organize programming line ups in multi-dwelling facilities (i.e. hospitals, senior living facilities.)

Since all cable operators initially receive substantial programming via satellite, products from our satellite market cross over into the cable television market. C-band satellite receive systems are prone to various types of terrestrial interference which are curable in many cases by applying MFC bandpass filters.

Broadcast – MFC continues to develop and expand its series of wireless diplexers.

Due to analog to digital conversion within the TV (UHF/VHF) broadcast industry, Microwave Filter Company has developed new filter products to accommodate the wider bandwidths necessary for the digital transmission. In order to accommodate the wider digital TV signal bandwidths, customers have been forced to replace their existing (narrower bandwidth) analog filters with (wider bandwidth) digital filters.

As a result of the recent Broadcast Incentive Auction, UHF channels 38-51 have been auctioned off for Internet Service Provider operations. TV Stations within this channel range that wish to continue broadcasting will be relocated to the remaining UHF spectrum of channels 14-36. This reallocation is expected to align well with MFC's UHF broadcast filters and combining systems as the changeovers take place.

MFC also continues to serve other segments of the Broadcast industry such as FM radio, STL (TV Studio-to-Transmitter Links) and the BAS (Broadcast Auxiliary Service) band (formerly known as the ENG (Electronic News Gathering) band.)

WORLD TRADE

The Company's international sales decreased \$66,310 or 16.4% to \$338,005 for the fiscal year ended September 30, 2018 when compared to international sales of \$404,315 during the fiscal year ended September 30, 2017.

SUPPLIERS

The Company depends on outside suppliers for raw materials, components and parts, and services. Although items are generally available from a number of suppliers, the Company purchases certain raw materials and components from a single supplier. If such a supplier should cease to supply an item, the Company believes that new sources could be found to provide the raw materials and components. However, manufacturing delays and added costs could result. The Company has not experienced significant delays of this nature in the past, but there can be no assurance that delays in delivery due to supply shortages will not occur in the future. Substantial periods of lead time for delivery of certain materials are sometimes experienced by the Company, making it necessary to inventory varied quantities of materials.

PATENTS AND LICENSES

The Company has no patents, trademarks, copyrights, licenses or franchises of material importance.

SEASONAL FLUCTUATIONS

There are no significant seasonal fluctuations in the Company's business.

GOVERNMENT CONTRACTS

The Company is not dependent in any material respect on government contracts.

SIGNIFICANT CUSTOMERS

Sales to one customer represented 32% of total sales for the fiscal year ended September 30, 2018 compared to 41.2% of total sales for the fiscal year ended September 30, 2017. These sales are in connection with a multiyear program in which the Company is a subcontractor. A loss of this customer or programs related to this customer could materially impact the Company.

EXPORT CONTROLS

Our products are subject to the Export Administration Regulations (“EAR”) administered by the U.S. Department of Commerce and may, in certain instances, be subject to the International Traffic in Arms Regulations (“ITAR”) administered by the U.S. Department of State. EAR restricts the export of defense products, technical data and defense services. We believe that we have implemented internal export procedures and controls in order to achieve compliance with the applicable U.S. export control regulations.

ENVIRONMENTAL REGULATION

Compliance with federal, state and local requirements relating to the discharge of substances into the environment, the disposal of hazardous waste and other activities affecting the environment has been accomplished without material effect on the Company’s liquidity and capital resources, competitive position or financial statements and management believes that such compliance will not have a material effect on the Company’s liquidity and capital resources, competitive position or financial statements in the future

BACKLOG

At September 30, 2018, the Company’s total backlog of orders, which represents firm orders from customers, was \$1,301,734 compared to \$702,665 at September 30, 2017. The total Company backlog at September 30, 2018 is scheduled to ship during fiscal 2019. However, backlog is not necessarily indicative of future sales. Accordingly, the Company does not believe that its backlog as of any particular date is representative of actual sales for any succeeding period.

EMPLOYEES

At September 30, 2018, the Company employed 29 full-time, 6 part-time and 2 temporary employees.

RESEARCH AND DEVELOPMENT

The Company maintains and expects to continue to maintain an active research and development program. The Company believes that such a program is needed to maintain its competitive position in existing markets and to provide products for emerging markets. Costs in connection with research and development were \$334,851 and \$326,965 for the fiscal years 2018 and 2017, respectively. Research and development costs are charged to operations as incurred.

COMPETITION

The principal competitive factors facing both MFC are price, technical performance, service and the ability to produce in quantity to specific delivery schedules. Based on these factors, the Company believes it competes favorably in its markets.

AVAILABLE INFORMATION

Our Internet address is www.microwavefilter.com. There we make available, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, our proxy statement and any amendments to those reports or statements filed or furnished pursuant to Section 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (SEC). Our SEC reports can be accessed through the investor relations link of our website. The information found on our website is not part of this or any other report we file with or furnish to the SEC.

The public may read and copy any materials that we file with the SEC at the SEC’s Public Reference Room located at 450 Fifth Street NW, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains electronic versions of our reports on its website at www.sec.gov.

ITEM 1A. RISK FACTORS

As a “smaller reporting company”, we are not required to provide information required by this item.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES.

MFC’s office and manufacturing facility is located at 6743 Kinne Street, East Syracuse, New York. This facility, which is owned by MFC, consists of 40,000 square feet of office and manufacturing space located on 3.7 acres.

On July 2, 2013, Microwave Filter Company, Inc. (the “Company”) entered into a Ten Year Term Loan with KeyBank National Association in the amount of Five Hundred Thousand and No/100 Dollars (\$500,000.00). The amount of all advances outstanding together with accrued interest thereon shall be due and payable on July 2, 2023 (“Maturity”). The Company shall pay interest on the outstanding principal balance of this Note at the rate per annum equal to 4.5%. The net proceeds from the Term Loan will be available to provide working capital as needed. The total amount outstanding as of September 30, 2018 and 2017 was \$270,172 and \$318,998, respectively.

The Company has secured this Note by: (a) a Mortgage, Assignment of Rents, Security Agreement and Fixture Filing which creates a 1st lien on real property situated in the Town of Dewitt, County of Onondaga, and State of New York and known as 6743 Kinne Street, East Syracuse, New York; (b) a General Assignment of Rents and Leases; (c) an Environmental Compliance and Indemnification; and (d) such other security as may now or hereafter be given to Lender as collateral for the loan.

ITEM 3. LEGAL PROCEEDINGS.

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS.

The Company’s securities are currently quoted on the OTC marketplace (www.otcmarkets.com) under the symbol “MFCO.”

The following table shows the high and low closing sales prices for MFC’s common stock for each full quarterly period within the two most recent fiscal years. The quotations represent prices in the over-the-counter market between dealers in securities. They do not include retail mark-ups, mark-downs or commissions.

<u>Fiscal 2018</u>	<u>High</u>	<u>Low</u>
Oct. 1, 2017 to Dec. 31, 2017	\$ 0.66	\$ 0.59
Jan. 1, 2018 to Mar. 31, 2018	0.73	0.59
Apr. 1, 2018 to June 30, 2018	1.00	0.60
July 1, 2018 to Sept. 30, 2018	0.60	0.57
<u>Fiscal 2017</u>	<u>High</u>	<u>Low</u>
Oct. 1, 2016 to Dec. 31, 2016	\$ 0.65	\$ 0.55
Jan. 1, 2017 to Mar. 31, 2017	0.79	0.60
Apr. 1, 2017 to June 30, 2017	0.70	0.61
July 1, 2017 to Sept. 30, 2017	0.65	0.59

The Company had 548 holders of record of its common stock at November 16, 2018. Included in this number are shares held in “nominee” or “street” name and, therefore, the number of beneficial owners of the common stock is believed to be substantially in excess of the foregoing number.

Payment of future dividends, if any, will be at the discretion of the Board of Directors after taking into consideration various factors, including the Company’s financial condition, operating results and current and anticipated cash needs.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Microwave Filter Company, Inc. (MFC) operates primarily in the United States and principally in one industry. The Company extends credit to business customers, including original equipment manufacturers (OEMs), distributors and other end users, based upon ongoing credit evaluations. Microwave Filter Company, Inc. designs, develops, manufactures and sells electronic filters, both for radio and microwave frequencies, to help process signal distribution and to prevent unwanted signals from disrupting transmit or receive operations. Markets served include cable television, television and radio broadcast, satellite broadcast, mobile radio and commercial and defense electronics. NSI’s sales consist of spare parts orders.

RESULTS OF OPERATIONS

The following table sets forth the Company’s net sales by major product group for each of the fiscal years in the two year period ended September 30, 2018.

Product group	Fiscal 2018	Fiscal 2017
Microwave Filter:		
RF/Microwave	\$ 1,400,083	\$ 1,651,812
Satellite	1,176,034	778,775
Broadcast TV	425,787	276,443
Cable TV	334,897	322,193
Niagara Scientific	5,010	7,446
Total	<u>\$ 3,341,811</u>	<u>\$ 3,036,669</u>
Sales backlog at 9/30	<u>\$ 1,301,734</u>	<u>\$ 702,665</u>

Fiscal 2018 compared to fiscal 2017

Consolidated net sales for the fiscal year ended September 30, 2018 equaled \$3,341,811, an increase of \$305,142 or 10%, when compared to consolidated net sales of \$3,036,669 during the fiscal year ended September 30, 2017

MFC’s RF/Microwave product sales decreased \$251,729 or 15.2% to \$1,400,083 during the fiscal year ended September 30, 2018 when compared to sales of \$1,651,812 during the fiscal year ended September 30, 2017. MFC’s RF/Microwave products are sold primarily to Original Equipment Manufacturers (OEM) that serve the mobile radio, commercial communications and defense electronics markets. Sales to one OEM customer decreased \$181,755 to \$1,070,250, or 32% of total sales, during the fiscal year ended September 30, 2018 compared to sales of \$1,252,005, or 41.2% of total sales, during the fiscal year ended September 30, 2017. These sales are in connection with a multiyear program in which the Company is a subcontractor. The Company continues to invest in production engineering and infrastructure development to penetrate OEM market segments as they become popular. MFC is concentrating its technical resources and product development efforts toward potential high volume customers as part of a concentrated effort to provide substantial long-term growth. Over the last year, MFC, in conjunction with various OEM’s, has developed and supplied prototypes as well as small production runs in support of new programs being introduced to the marketplace. It is our belief that a continuation of this effort will help increase sales as well as reinforcing MFC’s position as a quality manufacturer of RF filters and assemblies.

MFC’s Satellite product sales increased \$397,259 or 51% to \$1,176,034 during the fiscal year ended September 30, 2018 when compared to sales of \$778,775 during the fiscal year ended September 30, 2017. The increase can be attributed to an increase in demand for filters which suppress strong out-of-band interference caused by military and civilian radar systems and other sources. Management expects demand for these types of filters to continue with the proliferation of earth stations world wide and increased sources of interference.

MFC's Broadcast TV product sales increased \$149,344 or 54% to \$425,787 for the fiscal year ended September 30, 2018 when compared to sales of \$276,443 for the fiscal year ended September 30, 2017. The increase can primarily be attributed to the Broadcast Incentive Auction. This auction repurposed 84 Mhz of frequency spectrum to be allocated to wireless broadband. UHF stations that had been operating in that frequency spectrum would be required to relocate to a lower available channel. Combining networks and other accessories manufactured by MFC make this transition possible.

MFC's Cable TV product sales increased \$12,704 or 3.9% to \$334,897 during the fiscal year ended September 30, 2018 when compared to Cable TV product sales of \$322,193 during the fiscal year ended September 30, 2017. Management continues to project flat or a decrease in demand for Cable TV products due to the shift from analog to digital television. Due to the inherent nature of digital modulation versus analog modulation, fewer filters will be required. The Company has developed filters for digital television and there will still be requirements for analog filters for limited applications in commercial and private cable systems.

At September 30, 2018, the Company's total backlog of orders, which represents firm orders from customers, equaled \$1,301,734 compared to \$702,665 at September 30, 2017. The total Company backlog at September 30, 2018 is scheduled to ship during fiscal 2019. However, backlog is not necessarily indicative of future sales. Accordingly, the Company does not believe that its backlog as of any particular date is representative of actual sales for any succeeding period.

Gross profit increased \$317,215 to \$1,325,884 during the fiscal year ended September 30, 2018 when compared to gross profit of \$1,008,669 during the fiscal year ended September 30, 2017. The increase in gross profit can be attributed the higher sales volume and lower payroll and payroll related expenses due to a reduction in head count in production labor and production support positions due to retirement and employee turnover with the positions not immediately filled.

Selling, general and administrative (SG&A) expenses increased \$71,955 or 5.7% to \$1,333,710 during the fiscal year ended September 30, 2018 when compared to SG&A expenses of \$1,261,755 during the fiscal year ended September 30, 2017. The increase can be attributed to higher payroll costs.

Other income (expense) was an expense of \$8,183 for the fiscal year ended September 30, 2018 compared to expense of \$11,130 for the fiscal year ended September 30, 2017 primarily due to interest expense of \$13,366 offset by miscellaneous non-operating income of \$5,183 for the fiscal year ended September 30, 2018 and interest expense of \$15,545 offset by miscellaneous non-operating income of \$4,415 for the fiscal year ended September 30, 2017. Other income generally consists of interest income, sales of scrap material, the forfeiture of non-refundable deposits and other incidental items.

The Company recorded income taxes of \$50 and \$0 for the fiscal year ended September 30, 2018 and September 30, 2017. Any other provision for income tax expense was fully offset by a reversal of a portion of the Company's valuation allowance. Any benefit for losses has been subject to a valuation allowance since the realization of the deferred tax benefit is not considered more likely than not. As required by FASB ASC 740 the Company has evaluated the positive and negative evidence bearing upon the realization of its deferred tax assets. The Company has determined that, at this time, it is more likely than not that the Company will not realize all of the benefits of federal and state deferred tax assets, and, as a result, a valuation allowance was established. See Note 7 to the consolidated financial statements.

LIQUIDITY AND CAPITAL RESOURCES

MFC defines liquidity as the ability to generate adequate funds to meet its operating and capital needs. The Company’s primary source of liquidity has been funds provided by operations and its existing cash balances.

	September 30	
	2018	2017
Cash & cash equivalents	\$ 674,045	\$ 667,940
Working capital	\$ 1,147,509	\$ 1,149,368
Current ratio	4.18 to 1	4.24 to 1
Long-term debt	\$ 219,071	\$ 270,172

Cash and cash equivalents increased \$6,105 to \$674,045 at September 30, 2018 when compared to \$667,940 at September 30, 2017. The decrease was a result of \$62,282 in net cash provided by operating activities, \$7,348 in net cash used for capital expenditures, \$48,826 in net cash used for repayment of a note payable and \$3 in net cash used to purchase treasury stock.

Net cash provided by operating activities fluctuates between periods primarily as a result of differences in sales and net income and the timing of the collection of accounts receivable, purchase of inventory, and payment of accounts payable.

On July 2, 2013, Microwave Filter Company, Inc. (the “Company”) entered into a Ten Year Term Loan with KeyBank National Association in the amount of Five Hundred Thousand and No/100 Dollars (\$500,000.00). The amount of all advances outstanding together with accrued interest thereon shall be due and payable on July 2, 2023 (“Maturity”). The Company shall pay interest on the outstanding principal balance of this Note at the rate per annum equal to 4.5%. The net proceeds from the Term Loan will be available to provide working capital as needed. The total amount outstanding as of September 30, 2018 and 2017 was \$270,172 and \$318,998, respectively.

The Company has secured this Note by: (a) a Mortgage, Assignment of Rents, Security Agreement and Fixture Filing which creates a 1st lien on real property situated in the Town of Dewitt, County of Onondaga, and State of New York and known as 6743 Kinne Street, East Syracuse, New York; (b) a General Assignment of Rents and Leases; (c) an Environmental Compliance and Indemnification; and (d) such other security as may now or hereafter be given to Lender as collateral for the loan.

Management believes that its working capital requirements for the foreseeable future will be met by its existing cash balances, future cash flows from operations and its current credit arrangements.

Off-Balance Sheet Arrangements

At September 30, 2018 and 2017, the Company did not have any unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which might have been established for the purpose of facilitating off-balance sheet arrangements.

Critical Accounting Policies

The Company’s consolidated financial statements are based on the application of accounting principles generally accepted in the United States of America (GAAP). GAAP requires the use of estimates, assumptions, judgments and subjective interpretations of accounting principles that have an impact on the assets, liabilities, revenue and expense amounts reported. The Company believes its use of estimates and underlying accounting assumptions adhere to GAAP and are consistently applied. Valuations based on estimates are reviewed for reasonableness and adequacy on a consistent basis throughout the Company. Primary areas where financial information of the Company is subject to the use of estimates, assumptions and the application of judgment include revenues, receivables, inventories, warranty reserves and taxes.

Revenues from product sales are recorded as the products are shipped and title and risk of loss have passed to the customer, provided that no significant vendor or post-contract support obligations remain and the collection of the related receivable is probable. Billings in advance of the Company’s performance of such work are reflected as customer deposits in the accompanying consolidated balance sheet.

Allowances for doubtful accounts are based on estimates of losses related to customer receivable balances. The establishment of reserves requires the use of judgment and assumptions regarding the potential for losses on receivable balances.

The Company’s inventories are stated at the lower of cost determined on the first-in, first-out method or net realizable value. The Company uses certain estimates and judgments and considers several factors including product demand and changes in technology to provide for excess and obsolescence reserves to properly value inventory.

The Company established a warranty reserve which provides for the estimated cost of product returns based upon historical experience and any known conditions or circumstances. Our warranty obligation is affected by product that does not meet specifications and performance requirements and any related costs of addressing such matters.

The Company has deferred tax assets that are reviewed for recoverability and valued accordingly. These assets are evaluated by using estimates of future taxable income streams and the impact of tax planning strategies. Valuations related to tax accruals and assets can be impacted by changes to tax codes, changes in statutory tax rates and the Company’s future taxable income levels. The Company has provided a full valuation allowance against its deferred tax assets.

SAFE HARBOR STATEMENT UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

In an effort to provide investors a balanced view of the Company’s current condition and future growth opportunities, this Annual Report on Form 10-K may include comments by the Company’s management about future performance. These statements which are not historical information are “forward-looking statements” pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These, and other forward-looking statements, are subject to business and economic risks and uncertainties that could cause actual results to differ materially from those discussed. These risks and uncertainties include, but are not limited to: risks associated with demand for and market acceptance of existing and newly developed products as to which the Company has made significant investments; general economic and industry conditions; slower than anticipated penetration into the satellite communications, mobile radio and commercial and defense electronics markets; competitive products and pricing pressures; increased pricing pressure from our customers; risks relating to governmental regulatory actions in broadcast, communications and defense programs; as well as other risks and uncertainties, including but not limited to those detailed from time to time in the Company’s Securities and Exchange Commission filings. These forward-looking statements are made only as of the date hereof, and the Company undertakes no obligation to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise. You are encouraged to review Microwave Filter Company’s 2018 Annual Report and other Securities and Exchange Commission filings. Forward looking statements may be made directly in this document or “incorporated by reference” from other documents. You can find many of these statements by looking for words like “believes,” “expects,” “anticipates,” “estimates,” or similar expressions.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

As a “smaller reporting company”, we are not required to provide information required by this item.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The Financial Statements called for by this item are submitted as a separate section of this report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Management’s responsibility includes establishing and maintaining adequate internal control over financial reporting. The Company’s management, with the participation of the Company’s Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company’s disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of the end of the period covered by this report. Based on such evaluation, the Company’s Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company’s disclosure controls and procedures were effective as of the end of the period covered by this report.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There have been no changes in the Company’s internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company’s management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the exchange act.

Under the supervision and with the participation of the Company’s management, including our principal executive officer and principal financial officer, the Company conducted an evaluation of its internal control over financial reporting using the criteria set forth in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. Based on this evaluation, the Company’s management concluded and certifies that its internal control over financial reporting was effective as of September 30, 2018.

This annual report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Our report was not subject to attestation by our registered public accounting firm pursuant to rules of the SEC that permit the Company to provide only management’s report in this annual report.

ITEM 9B. OTHER INFORMATION

None.

PART III

The information called for by “Item 10. Directors, Executive Officers, and Corporate Governance”, “Item 11. Executive Compensation”, “Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters”, “Item 13. Certain Relationships and Related Transactions, and Director Independence” and “Item 14. Principal Accountant Fees and Services”, is hereby incorporated by reference to the Company’s Proxy Statement for its Annual Meeting of Shareholders, to be filed with the SEC pursuant to Regulation 14a under the Securities Exchange Act of 1934, as amended.

PART IV

ITEM 15. FINANCIAL STATEMENT SCHEDULES AND EXHIBITS.

(a) 1. and 2. Financial Statements and Schedules:

Reference is made to the list of Financial Statements submitted as a separate section of this report.

(b) Exhibits:

Reference is made to the List of Exhibits submitted as a separate section of this report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Microwave Filter Company, Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MICROWAVE FILTER COMPANY, INC.

/S/ Paul W. Mears
By: Paul W. Mears
(Chief Executive Officer)

/S/ Richard Jones
By: Richard Jones
(Vice President and Chief Financial Officer)

Dated: December 5, 2018

Pursuant to the requirements Of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/S/ Robert R. Andrews
Robert R. Andrews
(Director)

/S/ Frank Markovich
Frank Markovich
(Director)

/S/ Sidney Chong
Sidney Chong
(Director)

/S/ Carl F. Fahrenkrug
Carl F. Fahrenkrug
(Director)

/S/ Paul W. Mears
Paul W. Mears
(Director)

Dated: December 5, 2018

ANNUAL REPORT ON FORM 10-K

MICROWAVE FILTER COMPANY, INC.
AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

ITEM 8, ITEM 15(a)(1) and (2)

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All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Microwave Filter Company, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Microwave Filter Company, Inc. and Subsidiaries (The “Company”) as of September 30, 2018 and 2017, and the related consolidated statements of operations, stockholders’ equity, and cash flows for the years then ended, and the related notes. In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2018 and 2017, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U. S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Dannible & McKee, LLP

Dannible & McKee, LLP

We have served as the Company’s auditor since 2015.

Syracuse, New York

December 5, 2018

Microwave Filter Company and Subsidiaries
Consolidated Balance Sheets

	September 30,	
	2018	2017
Assets		
Current assets:		
Cash and cash equivalents	\$ 674,045	\$ 667,940
Accounts receivable-trade, net of allowance for doubtful accounts of \$4,000 and \$4,000	402,760	350,703
Inventories, net of obsolete inventory reserve of \$463,286 and \$445,393	377,603	458,158
Prepaid expenses and other current assets	54,416	27,858
Total current assets	<u>1,508,824</u>	<u>1,504,659</u>
Property, plant and equipment, net	<u>261,474</u>	<u>326,778</u>
Total Assets	<u><u>\$ 1,770,298</u></u>	<u><u>\$ 1,831,437</u></u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 116,938	\$ 104,349
Customer deposits	35,278	43,893
Accrued payroll and related expenses	38,711	39,710
Accrued compensated absences	90,449	96,490
Notes Payable - Short Term	51,101	48,826
Other current liabilities	28,838	22,023
Total current liabilities	<u>361,315</u>	<u>355,291</u>
Notes Payable - Long Term	<u>219,071</u>	<u>270,172</u>
Total other liabilities	<u>219,071</u>	<u>270,172</u>
Total liabilities	<u>580,386</u>	<u>625,463</u>
Stockholders' equity:		
Common stock, \$.10 par value. Authorized 5,000,000 shares Issued 4,324,140 in 2018 and 2017, Outstanding 2,579,680 in 2018 and 2,579,684 in 2017	432,414	432,414
Additional paid-in capital	3,248,706	3,248,706
Accumulated deficit	(796,444)	(780,385)
Common stock in treasury, at cost, 1,744,460 shares in 2018 and 1,744,456 shares in 2017	<u>(1,694,764)</u>	<u>(1,694,761)</u>
Total stockholders' equity	<u>1,189,912</u>	<u>1,205,974</u>
Total Liabilities and Stockholders' Equity	<u><u>\$ 1,770,298</u></u>	<u><u>\$ 1,831,437</u></u>

The accompanying notes are an integral part of the consolidated financial statements.

Microwave Filter Company and Subsidiaries
Consolidated Statements of Operations

	For the Years Ended September 30	
	2018	2017
Net sales	\$ 3,341,811	\$ 3,036,669
Cost of goods sold	<u>2,015,927</u>	<u>2,028,000</u>
Gross profit	1,325,884	1,008,669
Selling, general and administrative expenses	<u>1,333,710</u>	<u>1,261,755</u>
Loss from operations	(7,826)	(253,086)
Non-operating Income (Expense)		
Interest income	1,243	1,880
Interest expense	(13,366)	(15,545)
Miscellaneous	<u>3,940</u>	<u>2,535</u>
Loss before income taxes	(16,009)	(264,216)
Provision for income taxes	<u>(50)</u>	<u>(0)</u>
NET LOSS	<u>\$ (16,059)</u>	<u>\$ (264,216)</u>
Per share data:		
Basic and Diluted Loss		
Per Common Share	\$ (0.01)	\$ (0.10)
Shares used in computing net loss per common share:		
Basic and diluted	2,579,681	2,580,271

The accompanying notes are an integral part of the consolidated financial statements.

Microwave Filter Company and Subsidiaries
Consolidated Statements of Stockholders' Equity
For the Years Ended September 30, 2018 and 2017

	Common Stock		Additional	Accumulated	Treasury Stock		Total
	Shares	Amt	Paid-in Capital	Deficit	Shares	Amt	Stockholders' Equity
Balance September 30, 2016	4,324,140	432,414	3,248,706	(516,169)	1,743,133	(1,693,950)	1,471,001
Net loss				(264,216)			(264,216)
Purchase of treasury stock					1,323	(811)	(811)
Balance September 30, 2017	4,324,140	432,414	3,248,706	(780,385)	1,744,456	(1,694,761)	1,205,974
Net loss				(16,059)			(16,059)
Purchase of treasury stock					4	(3)	(3)
Balance September 30, 2018	<u>4,324,140</u>	<u>\$ 432,414</u>	<u>\$ 3,248,706</u>	<u>\$ (796,444)</u>	<u>1,744,460</u>	<u>\$ (1,694,764)</u>	<u>\$ 1,189,912</u>

The accompanying notes are an integral part of the consolidated financial statements.

Microwave Filter Company and Subsidiaries
Consolidated Statements of Cash Flows

	For the Years Ended September 30	
	2018	2017
Cash flows from operating activities:		
Net loss	\$ (16,059)	\$ (264,216)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation	72,652	81,488
Inventory obsolescence provision	17,893	9,865
Changes in assets and liabilities:		
Accounts receivable-trade	(52,057)	(4,070)
Inventories	62,662	(19,276)
Prepaid and other current assets	(26,558)	33,815
Accounts payable and customer deposits	3,974	57,654
Accrued payroll, compensated absences and related expenses	(7,040)	(52,388)
Other current liabilities	6,815	5,749
Net cash provided by (used in) operating activities	<u>62,282</u>	<u>(151,379)</u>
Cash flows from investing activities:		
Capital expenditures	<u>(7,348)</u>	<u>(56,335)</u>
Net cash used in investing activities	<u>(7,348)</u>	<u>(56,335)</u>
Cash flows from financing activities:		
Repayment of note payable	(48,826)	(46,652)
Purchase of treasury stock	<u>(3)</u>	<u>(811)</u>
Net cash used in financing activities	<u>(48,829)</u>	<u>(47,463)</u>
Net increase (decrease) in cash and cash equivalents	6,105	(255,177)
Cash and cash equivalents at beginning of year	<u>667,940</u>	<u>923,117</u>
Cash and cash equivalents at end of year	<u>\$ 674,045</u>	<u>\$ 667,940</u>
Supplemental disclosures of cash flows:		
Cash paid during the year for :		
Interest	\$ 13,538	\$ 15,712
Taxes	\$ 50	\$ 0

The accompanying notes are an integral part of the consolidated financial statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Nature of Business

Microwave Filter Company, Inc. (MFC) operates primarily in the United States and principally in one industry. The Company extends credit to business customers based upon ongoing credit evaluations. Microwave Filter Company, Inc. designs, develops, manufactures and sells electronic filters, both for radio and microwave frequencies, to help process signal distribution and to prevent unwanted signals from disrupting transmit or receive operations. Markets served include cable television, television and radio broadcast, satellite broadcast, mobile radio, commercial communications and defense electronics.

b. Basis of Consolidation

The consolidated financial statements include the accounts of Microwave Filter Company, Inc. (MFC) and its wholly-owned subsidiaries, Niagara Scientific, Inc. (NSI) and Microwave Filter International, LTD. (MFI) (dormant); located in Syracuse, New York. All significant intercompany balances and transactions have been eliminated in consolidation.

c. Revenue Recognition

Revenues from product sales are recorded as the products are shipped and title and risk of loss have passed to the customer, provided that no significant vendor or post-contract support obligations remain and the collection of the related receivable is probable. Billings in advance of the Company's performance of such work are reflected as customer deposits in the accompanying consolidated balance sheet.

d. Cash and Cash Equivalents

The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash and accounts receivable. Cash and cash equivalents consist of cash in banks and money market funds. The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. The Company's cash is held at federally insured institutions and balances may periodically exceed insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk with respect to cash. The Company also routinely assesses the financial strength of its customers and, as a consequence, believes that its trade accounts receivable credit risk exposure is limited.

e. Trade Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in the Company's existing accounts receivable. The Company reviews its allowance for doubtful accounts monthly. Past due balances are reviewed individually for collectibility. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. The Company does not have any off-balance-sheet credit exposure related to its customers.

f. Inventories and Reserve for Obsolescence

Inventories are stated at the lower of cost determined on the first-in, first-out method or net realizable value.

Net realizable value is determined as the estimated selling price in the normal course of business minus the cost of completion, disposal and transportation.

The Company records a reserve for obsolete or excess inventory. The Company considers inventory quantities greater than a three year supply based on current year activity as well as any additional specifically identified inventory to be excess. The Company also provides for the total value of inventories that are determined to be obsolete based on criteria such as customer demand and changing technologies.

g. Research and Development

Costs in connection with research and development, which amount to \$334,851 and \$326,965 for the fiscal years 2018 and 2017, respectively, are charged to operations as incurred.

h. Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation is provided using the straight-line method over the estimated useful lives of the respective assets. Buildings and building improvements are depreciated over an estimated service life of 10 to 30 years. Machinery and equipment are depreciated over an estimated useful life of 3 to 10 years. Office equipment and fixtures are depreciated over an estimated useful life of 3 to 10 years. At the time of sale or retirement, the cost and accumulated depreciation are removed from the respective accounts and the resulting gain or loss is recognized in income.

i. Income Taxes

The Company accounts for income taxes under FASB ASC 740-10. Deferred tax assets and liabilities are based on the difference between the financial statement and tax basis of assets and liabilities as measured by the enacted tax rates which are anticipated to be in effect when these differences reverse. The deferred tax provision is the result of the net change in the deferred tax assets and liabilities. A valuation allowance is established when it is necessary to reduce deferred tax assets to amounts expected to be realized. The Company has provided a full valuation allowance against its deferred tax assets.

The Company follows FASB ASC 740-10, which clarifies the accounting for uncertainty in income taxes recognized in an entity's financial statements and prescribes a recognition threshold and measurement attributes for financial statement disclosure of tax positions taken or expected to be taken on a tax return. Additionally, it provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. The Company will include interest on income tax liabilities in interest expense and penalties in operations if such amounts arise. The Company determined it has no uncertain tax positions and therefore no amounts are recorded.

j. Earnings Per Share

The Company presents basic earnings per share ("EPS"), computed based on the weighted average number of common shares outstanding for the period, and when applicable diluted EPS, which gives the effect to all dilutive potential shares outstanding (i.e. options) during the period after restatement for any stock dividends. There were no dividends declared during the fiscal year ended September 30, 2018 and 2017. Loss used in the EPS calculation is net loss for each year. There were no dilutive potential shares outstanding for the years ended September 30, 2018 and 2017.

k. Fair Value of Financial Instruments

The carrying value of the Company cash and cash equivalents, accounts receivable and accounts payable approximate fair value because of the short maturity of those instruments. The carrying value of the Company's note payable approximates its fair value.

The Company currently does not trade in or utilize derivative financial instruments.

l. Miscellaneous Non-operating Income

Miscellaneous non-operating income generally consists of sales of scrap material and the forfeiture of non-refundable deposits and other incidental items.

m. Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

n. Warranty Costs

The Company established a warranty reserve which provides for the estimated cost of product returns based upon historical experience and any known conditions or circumstances. Our warranty obligation is affected by product that does not meet specifications and performance requirements and any related costs of addressing such matters. Warranty costs were approximately \$5,000 for the fiscal years ended September 30, 2018 and 2017, respectively.

o. Impairment of Long-Lived Assets

The carrying values of long-lived assets other than goodwill are generally evaluated for impairment only if events or changes in facts and circumstances indicate that carrying values may not be recoverable. Any impairment determined would be recorded in the current period and would be measured by comparing the fair value of the related asset to its carrying value. Fair value is generally determined by identifying estimated undiscounted cash flows to be generated by those assets. No impairments have been recorded for the fiscal years ended September 30, 2018 and 2017.

p. New Accounting Pronouncements

In February 2016, the FASB issued FASB ASU No. 2016-02, *Leases (Topic 842)*. The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. For operating leases, a lessee is required to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in the statement of financial position. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. The accounting applied by a lessor is largely unchanged from that applied under previous GAAP. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Earlier application is permitted. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The Company is currently evaluating the effect that the adoption of this ASU will have on its financial statements.

2. INVENTORIES

Inventories net of provision for obsolescence consisted of the following:

	September 30	
	2018	2017
Raw materials and stock parts	\$ 306,658	\$ 337,462
Work-in-process	37,062	21,861
Finished goods	33,883	98,835
	<u>\$ 377,603</u>	<u>\$ 458,158</u>

The Company’s reserve for obsolescence equaled \$463,286 at September 30, 2018 and \$445,393 at September 30, 2017.

3. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consisted of the following:

	September 30	
	2018	2017
Land	\$ 143,000	\$ 143,000
Building and improvements	1,928,599	1,928,599
Machinery and equipment	3,501,925	3,497,015
Office equipment and fixtures	1,919,178	1,916,740
	<u>7,492,702</u>	<u>7,485,354</u>
Less: Accumulated depreciation	<u>7,231,228</u>	<u>7,158,576</u>
Property, plant and equipment, net	<u>\$ 261,474</u>	<u>\$ 326,778</u>
Depreciation expense	<u>\$ 72,652</u>	<u>\$ 81,488</u>

4. NOTES PAYABLE

On July 2, 2013, Microwave Filter Company, Inc. (the “Company”) entered into a Ten Year Term Loan with KeyBank National Association in the amount of Five Hundred Thousand and No/100 Dollars (\$500,000.00). The amount of all advances outstanding together with accrued interest thereon shall be due and payable on July 2, 2023 (“Maturity”). The Company shall pay interest on the outstanding principal balance of this Note at the rate per annum equal to 4.5%. The net proceeds from the Term Loan will be available to provide working capital as needed. The total amount outstanding as of September 30, 2018 and 2017 was \$270,172 and \$318,998 respectively. Interest accrued as of September 30, 2018 and 2017 was \$946 and \$1,113 respectively.

The Company has secured this Note by: (a) a Mortgage, Assignment of Rents, Security Agreement and Fixture Filing which creates a 1st lien on real property situated in the Town of Dewitt, County of Onondaga, and State of New York and known as 6743 Kinne Street, East Syracuse, New York; (b) a General Assignment of Rents and Leases; (c) an Environmental Compliance and Indemnification; and (d) such other security as may now or hereafter be given to Lender as collateral for the loan. The future obligations of the loan are as follows:

Year Ended September 30,	Principal Payments	Interest Payments	Total Payments
2019	51,101	11,263	62,364
2020	53,456	8,908	62,364
2021	55,972	6,392	62,364
2022	58,680	3,684	62,364
2023	50,963	1,007	51,970
	<u>\$ 270,172</u>	<u>\$ 31,254</u>	<u>\$ 301,426</u>

5. PROFIT SHARING AND 401-K PLANS

The Company maintains both a non-contributory profit sharing plan and a contributory 401-K plan for all employees over the age of 21 with one year of service. Annual contributions to the profit sharing plan are determined by the Board of Directors and are made from current or accumulated earnings, while contributions to the 401-K plan were matched at a rate of 100% of an employee’s first 6% of contributions during fiscal 2018. The maximum corporate match was 6% of an employee’s compensation during fiscal 2018.

The Company’s matching contributions to the 401-K plan for the years ended September 30, 2018 and 2017 were \$71,392 and \$70,316, respectively. Additionally, the Company may make discretionary contributions to the non-contributory profit sharing plan. These contributions were \$0 in 2018 and 2017.

6. OBLIGATIONS UNDER OPERATING LEASES

The Company leases equipment under an operating lease agreement expiring on December 31, 2018. Rental expense under this lease for the year ended September 30, 2018 was \$4,930.

Minimum rental commitments at September 30, 2018 for this lease are:

Year Ended September 30	Lease Payments
2019	<u>1,232</u>
	<u>\$ 1,232</u>

7. INCOME TAXES

The components of the provision for income taxes in the accompanying consolidated statements of operations are as follows:

	Year Ended September 30,	
	2018	2017
Currently payable:		
Federal	\$ 0	\$ 0
State	50	0
Deferred (credit)	0	0
	<u>\$ 50</u>	<u>\$ 0</u>

The components of the provision for income taxes differs from the amount that would result from applying the federal statutory rate for the periods ended September 30, 2018 and 2017 is as follows:

	Year ended September 30,			
	2018		2017	
	Amount	%	Amount	%
Statutory tax rate	\$ 8,797	24.2%	\$ (89,833)	(34.0)%
Effect of change in income tax rates	(87,833)	(242.1)%	0	0%
Research and development tax credits	(14,728)	(40.5)%	(13,883)	(5.2)%
Valuation allowance change	93,764	258.4%	103,647	39.2%
Permanent differences	0	0.0%	69	0.0%
	<u>\$ 0</u>	<u>0.0%</u>	<u>\$ 0</u>	<u>0.0%</u>

The temporary differences which give rise to deferred tax assets and (liabilities) at September 30 are as follows:

	2018	2017
Inventory	\$ 101,398	\$ 157,515
Accrued warranty	2,625	4,250
Accrued vacation	15,004	26,347
Accounts receivable	885	1,432
Accelerated depreciation	22,477	27,320
Research and development tax credit carryforward	305,357	288,369
AMT credit carryforward	37,521	37,521
NOL carryforward	232,389	268,666
Valuation allowance	(717,656)	(811,420)
	<u> </u>	<u> </u>
Net deferred tax assets	<u>\$ 0</u>	<u>\$ 0</u>

During December 2017, the Tax Cuts and Jobs Act (the “ACT”) was signed into law reducing the Federal corporate income tax rate from 34 percent to 21 percent. Based on the provisions of the ACT, the Company remeasured their net deferred tax assets applying the lower income tax rates to the Company’s net deferred tax assets. In addition, in accordance with the applicable Internal Revenue Code, the Company is required to calculate its current tax provision for fiscal 2018 using a blended corporate tax rate, resulting in a reduction in the effective current tax rate from 34.00 percent to 24.25 percent. The Company has provided a full valuation allowance against its net deferred tax assets. Accordingly, no impact arising from the change in the tax rates arising from the provisions of the ACT is reflected in these consolidated financial statements.

As required by FASB ASC 740 the Company has evaluated the positive and negative evidence bearing upon the realization of its net deferred tax assets. The Company has determined that, at this time, it is more likely than not that the Company will not realize all of the benefits of federal and state net deferred tax assets, and, as a result, a valuation allowance was established. The research and development tax credit carryforwards and NOL carryforwards generated through September 30, 2017, of approximately \$300,000 and \$800,000 expire at various times through 2037. Pursuant to the ACT, any of the Company’s newly-generated Federal NOL carryforwards can be carried forward indefinitely, while being limited to 80% of taxable income (determined without regard to the deduction.) As of September 30, 2018, the Company’s Federal AMT credit carryforward of approximately \$35,000 is refundable in any year prior to 2022, in an amount equal to 50% (100% for tax years beginning in 2021) of the excess minimum tax credit for the tax year, over the amount of the credit allowable for the year against the regular tax liability. The Company is currently open to audit under the statute of limitations by the Internal Revenue Service for the fiscal years September 30, 2016 through September 30, 2018. The Company has no uncertain tax positions. As of September 30, 2018 and 2017 there is no accrual for interest or penalties related to uncertain tax positions.

8. INDUSTRY SEGMENT DATA

The Company’s primary business segment involves the operations of Microwave Filter Company, Inc. (MFC) which designs, develops, manufactures and sells electronic filters, both for radio and microwave frequencies, to help process signal distribution and to prevent unwanted signals from disrupting transmit or receive operations.

9. SIGNIFICANT CUSTOMERS

Sales to one customer represented 32% of total sales for the fiscal year ended September 30, 2018 compared to 41.2% of total sales for the fiscal year ended September 30, 2017. A loss of this customer or programs related to this customer could materially impact the Company.

10. LEGAL MATTERS

None.

EXHIBIT INDEX

Exhibit No.	Description
3.1	<u>MFC Certificate of Corporation, as amended (incorporated by reference to MFC's Proxy Statement dated March 14, 1996 for the April 4, 1996 Annual Meeting and MFC's Report on Form 10-Q dated May 14, 1996.)</u>
3.2	<u>MFC Amended and Restated Bylaws. (incorporated by reference to MFC's Proxy Statement dated March 14, 1996 for the April 4, 1996 Annual Meeting and MFC's Report on Form 10-Q dated May 14, 1996.)</u>
31.1	<u>Section 13a-14(a)/15d-14(a) Certification of Paul W. Mears</u>
31.2	<u>Section 13a-14(a)/15d-14(a) Certification of Richard L. Jones</u>
32.1	<u>Section 1350 Certification of Paul W. Mears and Richard L. Jones</u>

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CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

MICROWAVE FILTER COMPANY, INC.

Under Section 805 of the Business Corporation Law.

We, the undersigned, the President of Microwave Filter Company, Inc., and Secretary,
respectively, hereby certify:

1. The name of the Corporation is MICROWAVE FILTER COMPANY, INC.
2. The Certificate of Incorporation was filed with the Department of State on the
26th day of September, 1967 under the name, MICROWAVE FILTER COMPANY, INC.
3. The following is adopted as a new Section 6 of the Certificate of Incorporation:

6. NOTICE OF SHAREHOLDER BUSINESS AND NOMINATIONS

A. Nominations of persons for election to the Board of Directors of the Corporation and the proposal of business to be considered by the shareholders may be made at an annual meeting of the shareholders (i) pursuant to the Corporation's notice of meeting, (ii) by or at the direction of the Board of Directors or (iii) by any shareholder of the Corporation who was a shareholder of record at the time of giving of notice provided for in this section of the Certificate of Incorporation, who is entitled to vote at the meeting and who complies with the notice procedures set forth in the Certificate of Incorporation.

B. For nominations or other business to be properly brought before an annual meeting by a shareholder pursuant to clause (iii) of paragraph A of this section, the shareholder must have given timely notice thereof in writing to the Secretary of the Corporation and such other business must otherwise be a proper matter for shareholder action. To be timely, a shareholder's notice shall be delivered to the Secretary at the principal executive offices of the Corporation not later than the close of business on the 60th day nor earlier than the close of business on the 90th day prior to the first anniversary of the preceding year's annual meeting; provided, however, that in the event that the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice by the shareholder to be timely must be delivered not earlier than the close of business on the 90th day prior to such annual meeting and not later than the close of business on the later of (i) the 60th day prior to such annual meeting or (ii) the 10th day following the day on which public announcement of the date of such

meeting is first made by the Corporation. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for giving of a shareholder's notice as described above. Such shareholder's notice shall set forth (x) as to each person whom the shareholder proposes to nominate for election or reelection as a director all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 14a-11 thereunder (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected); (y) as to any other business that the shareholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such shareholder and the beneficial owner, if any, on whose behalf the proposal is made; and (z) as to the shareholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (A) the name and address of such shareholder, as they appear on the Corporation's books, and of such beneficial owner, and (B) the class and number of shares of the Corporation which are owned beneficially and of record by such shareholder and such beneficial owner.

C. Notwithstanding anything in the second sentence of paragraph B of this section to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement of the Corporation naming all of the nominees for Director or specifying the size of the

increased Board of Directors at least 70 days prior to the first anniversary of the preceding year's annual meeting, a shareholder's notice required by this section of the Certificate of Incorporation shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary at the principal executive office of the Corporation not later than the close of business on the 10th day following the day on which such public announcement is first made by the Corporation.

D. Only such business shall be conducted at a special meeting of shareholders as shall have been brought before the meeting pursuant to the Corporation's notice of meetings. Nominations of persons for election to the Board of Directors may be made at a special meeting of shareholders at which directors are to be elected pursuant to the Corporation's notice of meeting (a) by or at the direction of the Board of Directors or (b) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any shareholder of the Corporation who is a shareholder of record at the time of giving of notice provided for in this Bylaw, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in the Bylaw. In the event the Corporation calls a special meeting of shareholders for the purpose of electing one or more directors to the Board of Directors, any such shareholder may nominate a person or persons (as the case may be), for the election to such positions(s) as specified in the Corporation's notice of meetings, if the shareholder's notice required by paragraph B of this section shall be delivered to the Secretary at the principal executive office of the Corporation not earlier than the close of business on the 90th day prior to such special

meeting and not later than the close of business on the later of (i) the 60th day prior to such special meeting or (ii) the 10th day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. In no event, shall the public announcement of an adjournment of a special meeting commence a new time period for the giving of shareholders notice.

E. Only such persons who are nominated in accordance with procedures set forth in this section shall be eligible to serve as directors and only such business shall be conducted at a meeting of shareholders as shall have been brought before the meeting in accordance with the procedures set forth in this section. Except as otherwise provided by law, the Chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in the Certificate of Incorporation and, if any proposed nomination or business is not in compliance with this section to declare that such defective proposal or nomination shall be disregarded.

F. For purposes of the Certificate of Incorporation "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 15 or 15(d) of the Exchange Act.

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G. Notwithstanding the foregoing provisions of this section a shareholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth in this section. Nothing in this section shall be deemed to affect any rights (a) of shareholders to request inclusion of proposals in the Corporation's proxy statement pursuant to the Rule 14a-8 under the Exchange Act or (b) of the holders of any series of Preferred Stock to elect directors under specified circumstances.

4. The following is adopted as a new Section 7 of the Certificate of Incorporation:

7. INDEMNIFICATION AND INSURANCE

A. The Corporation shall indemnify to the fullest extent now or hereafter provided for or permitted by law each person involved in, or made or threatened to be made a party to, any action, suit, claim or proceeding, arbitration, alternative dispute resolution mechanism, investigation, administrative or legislative hearing or any other actual, threatened, pending or completed proceeding, whether civil or criminal, or whether formal or informal, and including an action by or in the right of the corporation or any other corporation, or any partnership, joint venture, trust, employee benefit plan or other enterprise, whether profit or nonprofit (any such entity, other than the corporation, being hereinafter referred to as an "Enterprise"), and including appeals therein (any such process being hereinafter referred to as a "Proceeding"), by reason of the fact that such

person, such person's testator or intestate (i) is or was a Director or Officer of the corporation, or (ii) while serving as a Director or Officer of the corporation, is or was serving, at the request of the corporation, as a Director, Officer, or in any other capacity, in any other Enterprise, against any and all judgments, fines, penalties, amounts paid in settlement, and expenses, including attorneys' fees, actually and reasonably incurred as a result of or in connection with any Proceeding, or any appeal therein, except as provided in paragraph B below.

B. No indemnification shall be made to or on behalf of any such person if a judgment or other final adjudication adverse to such person establishes that such person's acts were committed in bad faith or were the result of active and deliberate dishonesty and were material to cause of action so adjudicated, or that such person personally gained in fact a financial profit or other advantage to which such person was not legally entitled. In addition, no indemnification shall be made with respect to any Proceeding initiated by any such person against the corporation, or a Director or Officer of the corporation, other than to enforce the terms of this section, unless such Proceeding was authorized by the Board of Directors. Further, no indemnification shall be made with respect to any settlement or compromise of any Proceeding unless and until the corporation has consented to such settlement or compromise.

C. Written notice of any Proceeding for which indemnification may be sought by any person shall be given to the corporation as soon as practical. The corporation shall then be permitted to participate in the defense of any such Proceeding

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or, unless conflicts of interest or position exist between such person and the corporation in the conduct of such defense, to assume such defense. In the event that the corporation assumes the defense of any such proceeding, legal counsel selected by the corporation shall be acceptable to such person. After such an assumption, the corporation shall not be liable to such person for any legal or other expenses subsequently incurred unless such expenses have been expressly authorized by the corporation. In the event that the corporation participates in the defense of any such Proceeding, such person may select counsel to represent such person in regard to such a Proceeding; however, such person shall cooperate in good faith with any request that common counsel be utilized by the parties to any Proceeding who are similarly situated, unless to do so would be inappropriate due to actual or potential differing interests between or among such parties.

D. In making any determination regarding any person's entitlement to indemnification hereunder, it shall be presumed that such person is entitled to indemnification, and the corporation shall have the burden of proving the contrary.

E. The corporation shall indemnify any employee and agent to the extent such person shall be entitled to indemnification by law by reason of being successful on the merits or otherwise in defense of any action to which such person is named a party by reason of being an employee or other agent of the corporation, and the corporation may further indemnify any such person if it is determined on a case by case basis by the Board of Directors that indemnification is proper in the specific case.

F. Notwithstanding anything to the contrary in this Certificate of Incorporation, no person shall be indemnified to the extent, if any, it is determined by the Board of Directors or by written opinion of legal counsel designated by the Board of Directors for such purpose that indemnification is contrary to applicable law.

G. The corporation may, as the Board of Directors may direct, purchase and maintain such insurance on behalf of any person who is or at anytime has been a Director, Officer, employee or other agent of in a similar capacity with the corporation, or who is or at any time has been, at the direction or request of the corporation, a Director, Trustee, Officer, President, Manager, Advisor, or other agent of Enterprise against any liability asserted against and incurred by such person.

H. Except in the case of a Proceeding against a Director or Officer specifically approved by the Board of Directors, the corporation shall, subject to Paragraphs A through G above, pay all expenses incurred by or on behalf of a Director or Officer in defending any Proceeding in advance of the final disposition of such Proceeding. Such payments shall be made promptly upon receipt by the corporation, from time to time of a written demand of such person for such advancement, together with an undertaking by or on behalf of such person to repay any expenses so advanced to the extent that the person receiving the advancement is ultimately found not to be entitled to indemnification for part of all of such expenses.

I. The rights to indemnification and advancement of expenses granted by or pursuant to this section 7 of the Certificate of Incorporation: (a) shall not limit or exclude, but shall be in addition to, any other rights which may be granted by or pursuant to any statute, corporate charter, bylaw, resolution of shareholders or directors or agreement; (b) shall be deemed to constitute contractual obligations of the corporation only to any Director or Officer who is serving in a capacity referred to in Paragraph A at any time after the Effective Date of this Section 7 of the Certificate of Incorporation which shall be April 4, 1996 and upon compliance with Section 725 of the NY Business Corporation Law; (c) shall continue to exist after the repeal or modification of Article XII of the Bylaws or this section 7 of the Certificate of Incorporation with respect to events occurring after the Effective Date; and (d) shall continue as to a person who has ceased to be a Director or Officer after the Effective Date and shall inure to the benefit of the estate, spouse, heirs, executors, administrators or assigns of such person. It is the intent of this section 7 of the Certificate of Incorporation to require the corporation to indemnify the persons referred to herein for aforementioned judgments, fines, penalties, amounts paid in settlement, and expenses, including attorneys' fees, in each and every circumstance in which such indemnification could lawfully be permitted by express provision of bylaws, and the indemnification required by this section shall not be limited by the absence of any express recital of such circumstance.

5. The following is adopted as a new Section 8 of the Certificate of Incorporation:

8. DIRECTORS' LIABILITY

To the fullest extent permitted by the New York Business Corporation Law as presently in effect or hereafter amended, a director of the Corporation shall not be personally liable to the Corporation or its shareholders for damages for any breach of duty as a director. Any repeal or modification of this Article by the shareholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing hereunder with respect to any act or omission occurring prior to such repeal or modification.

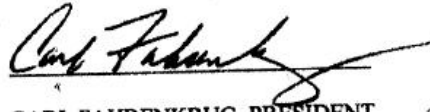
6. The following is adopted as a new Section 9 of the Certificate of Incorporation:

9. SHAREHOLDER VOTE REQUIRED TO ALTER, AMEND OR REPEAL

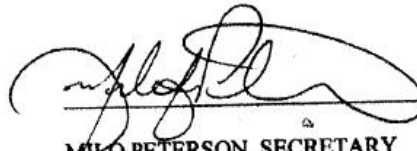
Notwithstanding anything contained in this Certificate of Incorporation to the contrary, the affirmative vote of the holders of at least two thirds (2/3) of the outstanding shares entitled to vote in the election of Directors shall be required to alter, amend or repeal this Certificate of Incorporation or Section 3 of Article II, and Sections 2, 3, 4 and 5 of Article IV of the Bylaws.

7. The above amendments to the Certificate of Incorporation were authorized by the Board of Directors followed by a vote of the holders of a majority of all outstanding shares entitled to vote thereon at a meeting of the shareholders.

IN WITNESS WHEREOF, this certificate has been subscribed this 9th day of June, 1997, by the undersigned who affirms that the statements made herein are true under penalties of perjury.



CARL FAHRENKRUG, PRESIDENT



MILO PETERSON, SECRETARY

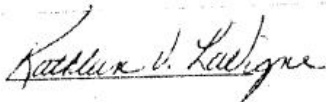
STATE OF NEW YORK)
COUNTY OF ONONDAGA) SS:
CITY OF SYRACUSE)

I, CARL FAHRENKRUG, being duly sworn, depose and state that I am the President of Microwave Filter Company, Inc., the corporation named in and described in the foregoing certificate and that I have read the foregoing certificate and know the contents thereof to be true, except as to matters therein stated to be alleged upon information and belief, and as to those matters, I believe them to be true.


CARL FAHRENKRUG

Sworn to before me this

9th day of June, 1997.



NOTARY PUBLIC

KATHLEEN V. LAVIGNE
Notary Public, State of New York
Office: Syracuse, New York 13202
My Commission Expires: 6/30/99

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CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

MICROWAVE FILTER COMPANY, INC.

UNDER SECTION 905 OF THE BUSINESS CORPORATION LAW

Richard Jones

Microwave Filter Company, Inc.

6743 Kinne Street

East Syracuse, New York 13057

**STATE OF NEW YORK
DEPARTMENT OF STATE**

FILED JUN 13 1997

TAX S

BY:

[Signature]

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AMENDED AND RESTATED BYLAWS

of

MICROWAVE FILTER COMPANY, INC.

Date of Adoption: May 23, 1996

ARTICLE I

Offices

The principal office of the Corporation shall be in the Village of East Syracuse, County of Onondaga, State of New York. The Corporation may also have offices at such other places within or without the State of New York as the Board may from time to time determine or the business of the Corporation may require

ARTICLE II

Shareholders

1. PLACE OF MEETINGS

Meetings of the Shareholders shall be held at the principal office of the Corporation or at such place within or without the State of New York as the Board shall authorize.

2. ANNUAL MEETING.

The annual meeting of the Shareholders shall be held on such date and at such time as shall be designated by the Board of Directors and stated in the notice of such meeting, when the Shareholders shall elect a Board and transact such other business as may properly come before the meeting.

3. SPECIAL MEETINGS

Special meetings of the shareholders may be called by the Chairman of the Board of Directors or by the President, and shall be called by the Chairman of the Board or by the Secretary at the request in writing of a majority of the Board of Directors or two

thirds (2/3) of the holders of the outstanding shares entitled to vote in the election of Directors. Such meetings shall be held at such time as may be fixed in the call and stated in the notice of meetings. Any such written request shall state the purpose or purposes of the proposed meeting. Business transacted at a special meeting shall be confined to the purposes stated in the notice.

4. FIXING RECORD DATE.

For the purpose of determining the Shareholders entitled to notice of or vote at any meeting of Shareholders or any adjournment thereof, or to express consent to or dissent from any proposal without a meeting, or for the purpose of determining shareholders entitled to receive payment of any dividend or the allotment of any rights, or for the purpose of any other action, the Board shall fix, in advance, a date at the record date for any such determination of Shareholders. Such date shall not be more than fifty nor less than 10 days from the date of such meeting, nor more than fifty days prior to any other action. If no record date is fixed it shall be determined in accordance with the provision of law.

5. NOTICE OF MEETINGS OF SHAREHOLDERS

Written notice of each meeting of Shareholders shall state the purpose or purposes for which the meeting is called, the place, date and hour of the meeting and unless it is the annual meeting, shall indicate that it is being issued or at the direction of the person or persons calling the meeting. Notice shall be given either personally or by mail to each Shareholder entitled to vote at such meeting, not less than ten nor more than fifty days before the date of the meeting. If action is proposed to be taken that might entitle Shareholders to payment for their shares, the notice shall include a statement of that purpose and to that effect. If mailed, the notice is given when deposited in the United States mail, with postage thereon prepaid, directed to the Shareholder at his address as it appears on the record of Shareholders, or if he shall have filed with the Secretary a written request that notices to him be mailed to some other address, then directed to him at such other address.

6. WAIVERS

Notice of meeting need not be given to any Shareholder who signs a waiver of notice, in person or by proxy, whether before or after the meeting. The attendance of any Shareholder at a meeting, in person or by proxy, without protesting prior to the conclusion of the meeting the lack of notice of such meeting, shall constitute a waiver of notice by him.

7. QUORUM OF SHAREHOLDERS

Unless the Certificate of Incorporation provides otherwise, the holders of one-third of the shares entitled to vote thereat shall constitute a quorum at a meeting of

Shareholders for the transaction of any business, provided that when a specified item of business is required to be voted on by a class or classes, the holders of a majority of the shares of such class or classes shall constitute a quorum for the transaction of such specified item of business.

When a quorum is once present to organize a meeting, it is not broken by the subsequent withdrawal of any Shareholders.

The Shareholders present may adjourn the meeting despite the absence of a quorum.

8. PROXIES

Every Shareholder entitled to vote at a meeting of Shareholders or to express consent or dissent without a meeting may authorize another person or persons to act for him by proxy.

Every proxy must be signed by the Shareholder or his attorney-in-fact. No proxy shall be valid after expiration of eleven months from the date thereof unless otherwise provided in the proxy. Every proxy shall be revocable at the pleasure of the Shareholder executing it, except as otherwise provided by law.

9. QUALIFICATION OF VOTERS

Every Shareholder of record shall be entitled at every meeting of Shareholders to one vote for every share standing in his name on the record of Shareholders, unless otherwise provided in the Certificate of Incorporation.

10. VOTE OF SHAREHOLDERS.

Except as otherwise required by statute or by the Certificate of Incorporation:

(a) Directors shall be elected by a plurality of the votes cast at a meeting of Shareholders by the holders of shares entitled to vote in the election;

(b) All other corporate action shall be authorized by a majority of the votes cast.

11. WRITTEN CONSENT OF SHAREHOLDERS

Any action that may be taken by vote may be taken without a meeting on written consent, setting forth the action so taken, signed by the holders of all the

outstanding shares entitled to vote thereon or signed by such lesser number of holders as may be provided for in the Certificate of Incorporation.

ARTICLE III

NOTICE OF SHAREHOLDERS BUSINESS AND NOMINATIONS

1. ANNUAL MEETINGS OF SHAREHOLDERS.

(a) Nominations of persons for election to the Board of Directors of the Corporation and the proposal of business to be considered by the shareholders may be made at an annual meeting of the shareholders (i) pursuant to the Corporation notice of meeting, (ii) by or at the direction of the Board of Directors or (iii) by an shareholder of the Corporation who was a shareholder of record at the time of giving of notice provided for in this Bylaw, who is entitled to vote at the meeting and who complies with the notice procedures set forth in this Bylaw.

(b) For nominations or other business to be properly brought before an annual meeting by a shareholder pursuant to clause (iii) of paragraph (1)(a) of this Bylaw, the shareholder must have given timely notice thereof in writing to the Secretary of the Corporation and such other business must otherwise be a proper matter for shareholder action. To be timely a shareholder's notice shall be delivered to the Secretary at the principal executive offices of the Corporation not later than the close of business on the 60th day nor earlier than the close of business on the 90th day prior to the first anniversary of the preceding year's annual meeting; *provided, however*, that in the event that the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice by the shareholder to be timely must be delivered not earlier than the close of business on the 90th day prior to such annual meeting and not later than the close of business on the later of (i) the 60th day prior to such annual meeting or (ii) the 10th day following the day on which public announcement of the date of such meeting is first made by the Corporation. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for the giving of a shareholder's notice as described above. Such shareholder's notice shall set forth (x) as to each person whom the shareholder proposes to nominate for election or reelection as a Director all information relating to such person that is required to be disclosed in solicitations of proxies for election of Directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 14a-11 thereunder (including such person's written consent to being named in the proxy statement as a nominee and to serving as a Director if elected); (y) as to any other business that the shareholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such shareholder and the beneficial owner, if any, on whose behalf the proposal is made; and (z) as to the shareholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (a) the name

and address of such shareholder, as they appear on the corporation's books, and of such beneficial owner and (b) the class and number of shares of the Corporation which are owned beneficially and of record by such shareholder and such beneficial owner.

(c) Notwithstanding anything in the second sentence of paragraph (1)(b) of this Bylaw to the contrary, in the event that the number of Directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement of the Corporation naming all of the nominees for Director or specifying the size of the increased Board of Directors at least 70 days prior to the first anniversary of the preceding year's annual meeting, a shareholder's notice required by this Bylaw shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary at the principal executive offices of the Corporation not later than the close of business on the 10th day following the day on which such public announcement is first made by the Corporation.

2. SPECIAL MEETINGS OF SHAREHOLDERS.

Only such business shall be conducted at a special meeting of shareholders as shall have been brought before the meeting pursuant to the Corporation's notice of meeting. Nomination of persons for election to the Board of Directors may be made at a special meeting of shareholders at which Directors are to be elected pursuant to the Corporation's notice of meeting (a) by or at the direction of the Board of Directors or (b) provided that the Board of Directors has determined that Directors shall be elected at such meeting, by any shareholder of the Corporation who is a shareholder of record at the time of giving of notice provided for in this Bylaw, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in this Bylaw. In the event the Corporation calls a special meeting of shareholders for the purpose of electing one or more Directors, any such shareholder may nominate a person or persons (as the case may be), for election to such positions as specified in the Corporation's notice of meeting, if the shareholder's notice required by paragraph (1)(b) of this Bylaw shall be delivered to the Secretary at the principal executive office of the Corporation not earlier than the close of business on the 90th day prior to such special meeting and not later than the close of business on the later of (i) the 60th day prior to such special meeting or (ii) the 10th day following the day on which public announcement is first made of the date of the special meeting and or the nominees proposed by the Board of Directors to be elected at such meeting. In no event shall the public announcement of an adjournment of a special meeting commence a new time period for the giving of a shareholder's notice as described above.

3. GENERAL.

(a) Only such persons who are nominated in accordance with the procedures set forth in this Bylaw shall be eligible to serve as Directors and only such business shall be conducted at a meeting of shareholders as shall have been brought before the meeting in accordance with the procedures set forth in this Bylaw. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, the Chairman of the meeting shall

have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in this Bylaw and, if any proposed nomination or business is not in compliance with this Bylaw, to declare that such defective proposal or nomination shall be disregarded.

(b) For purposes of this Bylaw, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 15 or 15(d) of the Exchange Act.

(c) Notwithstanding the foregoing provisions of this Bylaw, a shareholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth in this Bylaw. Nothing in this bylaw shall be deemed to affect any rights (a) of shareholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act or (b) of the holders of any series of Preferred Stock to elect Directors under specified circumstances.

ARTICLE IV

DIRECTORS

1. BOARD OF DIRECTORS.

Subject to any provision in the Certificate of Incorporation the business of the Corporation shall be managed by its Board of Directors, each of whom shall be at least 18 years of age.

2. NUMBER OF DIRECTORS.

The number of Directors shall be fixed at nine or less.

3. ELECTION AND TERM OF DIRECTORS.

Directors shall be elected at each annual meeting of the shareholders, or, if no such election shall be held, at a meeting called and held in accordance with the statutes of the State of New York. Each Director shall be elected to hold office until the expiration of the term for which he is elected, and thereafter until a successor shall be elected and shall qualify. The directors shall be divided, with respect to the terms for which they

severally hold office, into three classes, hereby designated as Class I, Class II and Class III. Each class shall have three directors and the three classes shall be as nearly equal in number as possible. The initial terms of office of the Class I, Class II and Class III directors, elected at the 1996 annual meeting of shareholders, shall expire at the next succeeding annual meeting of shareholders, the second succeeding annual meeting of shareholders and the third succeeding annual meeting of shareholders, respectively. At each annual meeting of shareholders after 1996 the successors of the class of directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of shareholders to be held in the third year following the year of their election.

4. VACANCIES

Vacancies occurring in the Board of Directors for any reason may be filled by vote of a majority of the directors then in office, although less than a quorum exists or a vote of the holders of two-thirds (2/3) of the outstanding shares entitled to vote in the election of Directors. A Director elected to fill a vacancy shall be elected to hold office until the next annual meeting of the shareholders and thereafter until a successor shall be elected and shall qualify.

5. REMOVAL OF DIRECTORS.

Any of the directors may be removed from office, for cause only, by action of the Board of Directors or by vote of the shareholders holding two-thirds (2/3) of the outstanding shares entitled to vote in the election of Directors.

6. RESIGNATION.

A Director may resign at any time by giving written notice to the Board, the President or the Secretary of the Corporation. Unless otherwise specified in the notice, the resignation shall take effect upon receipt thereof by the Board or such officer, and the acceptance of the resignation shall not be necessary to make it effective.

7. QUORUM OF DIRECTORS.

Unless otherwise provided in the Certificate of Incorporation, a majority of the entire Board shall constitute a quorum for the transaction of business or any specified item of business.

8. ACTION OF THE BOARD.

Unless otherwise required by law, the vote of a majority of the Directors present at the time of the vote, if a quorum is present at such time, shall be the act of the Board.

9. PLACE AND TIME OF BOARD MEETINGS.

The Board may hold its meeting at the office of the Corporation or at such other places, either within or without the State of New York, as it may from time to time determine.

10. REGULAR ANNUAL MEETING.

A regular annual meeting of the Board shall be held immediately following the annual meeting of Shareholders at the place of such annual meeting of Shareholders.

11. NOTICE OF MEETINGS OF THE BOARD, ADJOURNMENT.

(a) Regular meetings of the Board may be held without notice at such time and place as it shall from time to time determine. Special meetings of the Board shall be held upon notice to the Directors and may be called by the President upon three days notice to each Director either personally or by mail or by wire; special meetings shall be called by the President or by the Secretary in a like manner on written request of two Directors. Notice of a meeting need not be given to any Director who submits a waiver of notice whether before or after the meeting or who attends the meeting without protesting prior thereof or at its commencement, the lack of notice to him.

(b) A majority of the Directors present, whether or not a quorum is present, may adjourn any meeting to another time and place. Notice of the adjournment shall be given all Directors who were absent at the time of the adjournment and, unless such time and place are announced at the meeting, to the other Directors.

12. CHAIRMAN.

At all meetings of the Board the President, or in his absence, the Chairman chosen by the Board shall preside.

13. EXECUTIVE AND OTHER COMMITTEES.

The Board, by resolution adopted by a majority of the entire Board, may designate from among its members an Executive Committee and other committees, each consisting of three or more Directors. The Executive Committee may have all the authority of the Board except such specifically excluded in BCL 712 and shall have such powers as the Board may determine. Each such committee shall serve at the pleasure of the Board and shall have such powers as the Board may from time to time determine.

14. COMPENSATION.

Reasonable compensation may be paid to directors for their services as a director, including additional reimbursement for expenses, either as a fixed sum for attendance at meetings or, in the case of the Chairman of the Board, as an annual sum covering all the duties undertaken by the Chairman. Nothing herein contained shall be construed to preclude a director from serving the Corporation in any other capacity and receiving compensation therefore.

15. ADVISORY BOARD.

The Board hereby establishes an Advisory Board, which shall be comprised of persons who are not officers or Directors of the Corporation, to render advice and counsel to the Board and its Committees. Members of the Advisory Board shall serve at the pleasure of the Board and may receive such compensation or remuneration as from time to time determined by the Board. Members of the Advisory Board shall be nominated by the Chairman and confirmed by the Board. Attendance at Board or Committee meetings by Advisory Committee members shall be by invitation of the Chairman or the Committee Chair, as appropriate.

16. TELEPHONIC MEETING.

Any one or more members of the Board of Directors or any committee thereof may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear such other. Participation by such means shall constitute presence in person at a meeting.

ARTICLE V

OFFICERS

1. OFFICES, ELECTION, TERM.

(a) Unless otherwise provided for in the Certificate of Incorporation, the Board may elect or appoint a President, one or more Vice Presidents, a Secretary and a Treasurer, and such other Officers as it may determine, who shall have such duties, powers and functions as hereinafter provide.

2. REMOVAL, RESIGNATION, SALARY, ET CETERA.

(a) Any officer elected or appointed by the Board may be removed by the Board with or without cause.

(b) In the event of the death, resignation or removal of an officer, the Board, in its discretion, may elect or appoint a successor to fill the unexpired term.

(c) Any two or more offices may be held by the same person, except the offices of President and Secretary.

(d) The salaries of all officers shall be fixed by the Board.

(e) The Directors may require any officer to give security for the faithful performance of his duties.

3. PRESIDENT.

The President shall be the Chief Executive Officer of the Corporation; he shall preside at all meetings of the Shareholders and of the Board; he shall have the management of the business of the Corporation and see that all orders and resolutions of the Board are carried into effect.

4. VICE PRESIDENTS.

During the absence or disability of the President, the Vice President, or if there are more than one, the Executive Vice President, shall have all the powers and functions of the President. Each Vice President shall perform such other duties as the Board shall prescribe.

5. SECRETARY.

The Secretary shall:

(a) attend all meetings of the Board and of the Shareholders;

(b) record all votes and minutes of any proceedings in a book to be kept for that purpose.

(c) give or cause to be given notice of all meetings of Shareholders and of special meetings of the Board;

(d) keep in safe custody the seal of the Corporation and affix it to any instrument when authorized by the Board;

(e) when required, prepare or cause to be prepared and available at each meeting of Shareholders a certified list in alphabetical order of the names of Shareholders entitled to vote thereat, indicating the number of shares of each respective class held by each;

(f) keep all the documents and records of the Corporation as required by law or otherwise in a proper and safe manner; and

(g) perform such other duties as may be prescribed by the Board.

6. ASSISTANT SECRETARIES.

During the absence or disability of the Secretary, the Assistant Secretary, or if there are more than one, the one so designated by the Secretary or by the Board, shall have all the powers and functions of the Secretary.

7. TREASURER.

The Treasurer shall:

(a) have the custody of the corporate funds and securities;

(b) keep full and accurate accounts or receipts and disbursements in the corporate books;

(c) deposit all money and other valuables in the name and to the credit of the Corporation in such depositories as may be designated by the Board;

(d) disburse the funds of the Corporation as may be ordered or authorized by the Board and preserve proper vouchers for such disbursements;

(e) render to the President and the Board at the regular meetings of the Board, or whenever they require it, an account of all his transactions as Treasurer and of the financial condition of the Corporation;

(f) render a full financial report at the annual meeting of the Shareholders if so requested;

(g) be furnished by all corporate officers and agents at his request, with such reports and statements as he may require as to all financial transactions of the corporation; and

(h) perform such other duties as are given to him by these Bylaws or as from time to time are assigned to him by the Board or the President.

8. ASSISTANT TREASURER.

During the absence or disability of the Treasurer, the Assistant Treasurer, or if there are more than one, the one so designated by the Secretary or by the Board, shall have all the powers and functions of the Treasurer.

9. SURETIES AND BONDS.

In case the Board shall so require, any officer or agent of the Corporation shall execute to the Corporation a bond in such sum and with such surety or sureties as the Board may direct, conditioned upon the faithful performance of his duties to the Corporation and including responsibility for the negligence and for the accounting for all property, funds or securities of the Corporation which may come into his hands.

ARTICLE VI

CERTIFICATE FOR SHARES

1. CERTIFICATES.

The shares of the Corporation shall be represented by certificates. They shall be numbered and entered into the books of the Corporation as they are issued. They shall exhibit the holder's name and the number of shares and shall be signed by the President or Vice President and the Treasurer or the Secretary and shall bear the Corporate seal.

2. LOST OR DESTROYED CERTIFICATES.

The Board may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation, alleged to have been lost or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate to be lost or destroyed. When authorizing such issue of a new certificate or certificates, the Board may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost or destroyed certificate or certificates or his legal representative, to advertise the same in such manner as it shall require and/or give the corporation a bond in such sum and with such surety or sureties as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost or destroyed.

3. TRANSFER OF SHARES.

(a) Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, and cancel the old certificate; every such transfer shall be entered on the transfer book of the Corporation which shall be kept at its principal office. No transfer shall be made within ten days next preceding the annual meeting of Shareholders.

(b) The Corporation shall be entitled to treat the holder of record of any share as the holder in fact thereof and, accordingly, shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person whether or not it shall have express or other notice thereof, except as expressly provided by the laws of New York.

4. CLOSING TRANSFER BOOKS.

The Board shall have the power to close the share transfer books of the Corporation for a period of not more than ten days during the thirty day period immediately preceding (1) any Shareholders' meeting or (2) any date upon which Shareholders shall be called upon to or have a right to take action without a meeting, or (3) any date fixed for the payment of a dividend or any other form of distribution, and only those Shareholders of record at the time the transfer books are closed, shall be recognized as such for the purpose of (1) receiving notice of or voting at such meeting, or (2) allowing them to take appropriate action, or (3) entitling them to receive any dividend or other form of distribution.

ARTICLE VII

DIVIDENDS

Subject to the provisions of the Certificate of Incorporation and to applicable law, dividends on the outstanding shares of the Corporation may be declared in such amounts and at such time or times as the Board may determine. Before payment of any dividend, there may be set aside out of the net profits of the Corporation available for dividends such sum or sums as the Board from time to time in its absolute discretion deems proper as a reserve fund to meet contingencies, or for equalizing dividends, or for repairing or maintaining property of the Corporation or for such other purpose as the Board shall think

conducive to the interest of the Corporation, and the Board may modify or abolish any such reserve.

ARTICLE VIII

CORPORATE SEAL

The seal of the Corporation shall be circular in form and bear the name of the Corporation, the year of its organization and the words "Corporate Seal, New York". The seal may be used by causing it to be impressed directly on the instrument or writing to be sealed, or upon adhesive substance affixed thereto. The seal of the certificates for shares or on any corporate obligation for the payment of money may be a facsimile, engaged or printed.

ARTICLE IX

EXECUTION OF INSTRUMENTS

All corporate instruments and documents shall be signed or countersigned, executed, verified or acknowledged by such officer or officers or other person or persons as the Board may from time to time designate.

ARTICLE X

FISCAL YEAR

The fiscal year shall begin the first day of October in each year.

ARTICLE XI

REFERENCES TO CERTIFICATE OF INCORPORATION

Reference to certificate of incorporation in these Bylaws shall include all amendments thereto or changes thereof unless specifically excepted.

ARTICLE XII

INDEMNIFICATION AND INSURANCE

1. INDEMNIFICATION

(a) The Corporation shall indemnify to the fullest extent now or hereafter provided for or permitted by law each person involved in, or made or threatened to be made a party to, any action, suit, claim or proceeding, arbitration, alternative dispute resolution mechanism, investigation, administrative or legislative hearing or any other actual, threatened, pending or completed proceeding, whether civil or criminal, or whether formal or informal, and including an action by or in the right of the Corporation or any other Corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise, whether profit or non-profit (any such entity, other than the Corporation, being hereinafter referred to as an "Enterprise"), and including appeals therein (any such process being hereinafter referred to as a "Proceeding"), by reason of the fact that such person, such person's testator or intestate (a) is or was a Director or Officer of the Corporation, or (b) while serving as a Director or Officer of the Corporation, is or was serving, at the request of the Corporation, as a Director, Officer, or in any other capacity, any other Enterprise, against any and all judgments, fines, penalties, amounts paid in settlement, and expense, including attorneys' fees, actually and reasonably incurred as a result of or in connection with any Proceeding, or any appeal therein, except as provided in subsection (b) below.

(b) No indemnification shall be made to or on behalf of any such person if a judgment or other final adjudication adverse to such person establishes that such person's acts were committed in bad faith or were the result of active and deliberate dishonesty and were material to the cause of action so adjudicated, or that such person personally gained in fact a financial profit or other advantage to which such person was not legally entitled. In addition, no indemnification shall be made with respect to any Proceeding initiated by any such person against the Corporation, or a Director or Officer of the Corporation, other than to enforce the terms of this Article XI, unless such Proceeding was authorized by the Board of Directors. Further, no indemnification shall be made with respect to any settlement or compromise of any Proceeding unless and until the Corporation has consented to such settlement or compromise.

(c) Written notice of any Proceeding of which indemnification may be sought by any person shall be given to the Corporation as soon as practicable. The Corporation shall then be permitted to participate in the defense of any such Proceeding or, unless conflicts of interest or position exist between such person and the Corporation in the conduct of such defense, to assume such defense. In the event that the Corporation assumes the defense of any such proceeding, legal counsel selected by the Corporation shall be acceptable to such person. After such an assumption, the Corporation shall not be liable to such person for any legal or other expenses subsequently incurred unless such expenses have been expressly authorized by the Corporation. In the event that the Corporation participates in the defense of any such Proceeding, such person may select counsel to represent such person in regard to such a Proceeding; however, such person shall cooperate in good faith with any request that common counsel be utilized by parties

to any Proceeding who are similarly situated, unless to do so would be inappropriate due to actual or potential differing interests between or among such parties.

(d). In making any determination regarding any person's entitlement to indemnification thereunder, it shall be presumed that such person is entitled to indemnification, and the Corporation shall have the burden of proving the contrary.

(e) The Corporation shall indemnify any employee and agent to the extent such person shall be entitled to indemnification by law by reason of being successful on the merits or otherwise in defense of any action to which such person is named a party by reason of being an employee or other agent of the Corporation, the Corporation may further indemnify any such person if it is determined on a case by case basis by the Board of Directors that indemnification is proper in the specific case.

(f) Notwithstanding anything to the contrary in these Bylaws, no person shall be indemnified to the extent, if any, it is determined by the Board of Directors or by written opinion of legal counsel designated by the Board of Directors for such purpose that indemnification is contrary to applicable law.

2. INSURANCE.

The Corporation may, as the Board of Directors may direct, purchase and maintain such insurance on behalf of any person who is or at any time has been a Director, Officer, employee or other agent of or in a similar capacity with the Corporation, or who is or at any time has been, at the direction or request of the Corporation, a Director, trustee, Officer, President, manager, advisor, or other agent of any Enterprise against any liability asserted against and incurred by such person.

3. ADVANCEMENT OF EXPENSES.

Except in the case of a proceeding against a Director or Officer specifically approved by the Board of Directors, the Corporation shall, subject to section 1 above, pay all expenses incurred by or on behalf of a Director or Officer in defending any Proceeding in advance of the final disposition of such Proceeding. Such payments shall be made promptly upon receipt by the Corporation, from time to time, of a written demand of such person for such advancement, together with an undertaking by or on behalf of such person to repay any expenses so advanced to the extent that the person receiving the advancement is ultimately found not to be entitled to indemnification for part or all of such expenses.

4. RIGHTS NOT EXCLUSIVE.

The rights to indemnification and advancement of expenses granted by or pursuant to the Article XI: (1) shall not limit or exclude, but shall be in addition to, any other rights which may be granted by or pursuant to any statute, corporate charter, bylaw,

resolution of shareholders or directors or agreement; (2) shall be deemed to constitute contractual obligation of the Corporation to any Director or Officer who serves in a capacity referred to in section 1 at any time while this Article XI is in effect; (3) shall continue to exist after the repeal or modification of this Article XI with respect to events occurring prior thereto; and (4) shall continue as to a person who has ceased to be a Director or Officer and shall inure to the benefit of the estate, spouse, heirs, executors, administrators or assigns of such person. It is the intent of this Article XI to require the Corporation to indemnify the persons referred to herein for the aforementioned judgments, fines, penalties, amounts paid in settlement, and expenses, including attorneys' fees, in each and every circumstance in which such indemnification could lawfully be permitted by express provisions of bylaws, and the indemnification required by this Article XI shall not be limited by the absence of any express recital of such circumstances.

ARTICLE XIII

BYLAW CHANGES

AMENDMENT, REPEAL, ADOPTION, ELECTION OF DIRECTORS

CONFORMING AMENDMENT

(a) Except as otherwise provided by these Bylaws or the Certificate of Incorporation, the Bylaws of the Corporation may be amended, repealed or adopted by vote of the holders of record of the shares at the time entitled to vote in the election of any Directors; provided that Section 3 of Article III, Sections 2, 3, 4, and 5 of Article IV and Section (a) of Article XIII of the Bylaws shall not be altered, amended or repealed and no provision inconsistent therewith shall be adopted without the affirmative vote of the holders of at least two-thirds (2/3) of the outstanding shares entitled to vote in the election of Directors. Except as otherwise provided above, Bylaws may also be amended, repealed, or adopted by the Board of Directors, but any Bylaw adopted by the Board may be amended or repealed by the shareholders entitled to vote thereon as herein above provided.

(b) If any Bylaw regulating an impending election of Directors is adopted, amended or repealed by the Board of Directors, there shall be set forth in the notice of the next meeting of shareholders for the election of Directors the Bylaws so adopted, amended or repealed, together with a concise statement of the changes made.

BYLAWS97.DOC
REVISION 1

RULE 13a-14(a) CERTIFICATION

I, Paul W. Mears, certify that:

1. I have reviewed this Annual Report on Form 10-K of Microwave Filter Company, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 5, 2018

/s/ Paul W. Mears

Paul W. Mears
Chief Executive Officer

RULE 13a-14(a) CERTIFICATION

I, Richard L. Jones, certify that:

1. I have reviewed this Annual Report on Form 10-K of Microwave Filter Company, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 5, 2018

/s/ Richard L. Jones

Richard L. Jones
Chief Financial Officer

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this Annual Report of Microwave Filter Company, Inc. (the “Company”) on Form 10-K for the period ended September 30, 2018, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Paul W. Mears, Chief Executive Officer, and Richard L. Jones, Chief Financial Officer, of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: December 5, 2018

/s/ Paul W. Mears

Paul W. Mears
Chief Executive Officer

Dated: December 5, 2018

/s/ Richard L. Jones

Richard L. Jones
Chief Financial Officer
