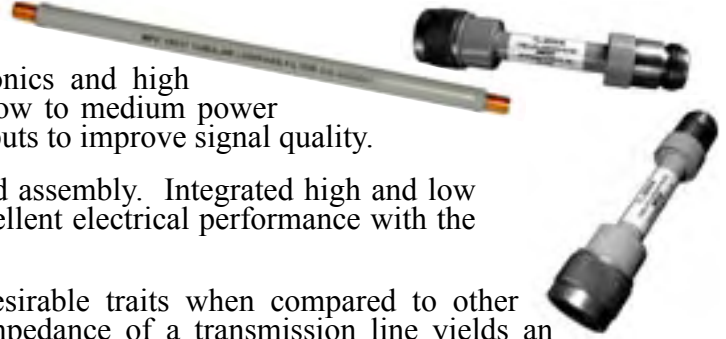




**Microwave Filter Company**

# TL Series Tubular Lowpass Filters



Tubular Lowpass Filters are used to suppress harmonics and high frequency interference. Typical applications include low to medium power transmitter output filters and test equipment receiver inputs to improve signal quality.

Each Lowpass Filter is a precision machined captivated assembly. Integrated high and low impedance elements within the assembly allow for excellent electrical performance with the smallest possible package size.

High/Low Impedance Lowpass Filters have many desirable traits when compared to other construction styles. Manipulating the characteristic impedance of a transmission line yields an inherently low-profile, axially connected filter with a minimal number of solder joints. The net result is high performance and reliability at a low per piece cost.

### FEATURES:

- In-Line, low profile construction
- Temperature stable
- Custom units available
- High power units available
- Broad range of cutoff frequencies and rejection specifications
- Multiple connector and mounting options
- Low VSWR

### COMMON SPECIFICATIONS:

Passband: 0.4fc – 1.0 fc  
 Stopband:  
 At 1.2 fc: 25 db min. Rejection  
 At 1.5 fc: 55 dB min. Rejection  
 Power Rating:  
 < 7 GHz: 50W avg, 4 kW peak  
 > 7 GHz: 25W avg, 1 kW peak  
 > 12 Ghz 10W avg, 300W peak  
 Temperature: -55° C to 150° C

### MODEL DESIGNATION

Code	Description
1	Number of Sections
2	Model Number
3	Cutoff Frequency (MHz)

### SAMPLE

<u>5</u>	<u>TL20-</u>	<u>1000</u>
1	2	3

**\* See Tables 1-4 on Pages 59-60 for Model / Connector Options**

### Contact Factory With Your Specific Needs For:

- Electrical Performance
- Mechanical Configuration

**6743 KINNE STREET  
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**TABLE 1**

<b>Model Selections &amp; Specifications for TLN Series/N Connectors</b>					
<b>Model Number</b>	<b>Cut-Off MHz</b>	<b>VSWR (Max)</b>	<b>Loss (dB)</b>	<b>Length* in.(mm)</b>	<b>Weight* oz.(g)</b>
TL400N	400	1.3	<0.2	14.6 (409)	7 (178)
TL700N	700	1.3	<0.2	9.9 (277)	6 (152)
TL1000N	1000	1.3	<0.2	7.4 (207)	5 (127)
TL1500N	1500	1.3	<0.2	5.8 (162)	4 (102)
TL2000N	2000	1.3	<0.2	4.7 (132)	4 (102)
TL3000N	3000	1.3	<0.2	4.8 (134)	3 (76)
TL4000N	4000	1.4	<0.2	4.0 (112)	3 (76)
TL5000N	5000	1.4	<0.2	3.6 (101)	3 (76)
TL6000N	6000	1.4	<0.2	3.2 (90)	3 (76)
TL7000N	7000	1.4	<0.2	3.0 (84)	3 (76)
TL8000N	8000	1.5	<0.3	3.2 (90)	3 (76)
TL9000N	9000	1.5	<0.3	3.0 (84)	3 (76)
TL10000N	10000	1.5	<0.4	2.8 (78)	3 (76)
TL11000N	11000	1.5	<0.4	2.8 (78)	3 (76)
TL12000N	12000	1.5	<0.4	2.7 (76)	3 (76)
TL15000N	15000	1.5	<0.4	1.6 (45)	0.5 (12.7)
TL18000N	18000	1.5	<0.4	1.9 (53)	0.5 (12.7)

**TABLE 2**

<b>Model Selections &amp; Specification for TNC (TLT Series)</b>					
<b>Model Number</b>	<b>Cut-off (MHz)</b>	<b>VSWR (Max)</b>	<b>Loss (dB)</b>	<b>Length* in</b>	<b>Weight* oz.</b>
TL300T	300	1.3	<0.3	15	8
TL400T	400	1.3	<0.3	14.6	6
TL500T	500	1.3	<0.3	14	6
TL600T	600	1.3	<0.35	12	5.5
TL800T	800	1.3	<0.35	9.5	5
TL1000T	1000	1.4	<0.4	7.5	4.7
TL1200T	1200	1.4	<0.4	6.2	4.5
TL1500T	1500	1.4	<0.4	5.9	4
TL1800T	1800	1.5	<0.5	5.1	4
TL2000T	2000	1.5	<0.5	4.8	3.5
TL3000T	3000	1.6	<0.65	4.6	3.2
TL4000T	4000	1.6	<0.65	4.2	3
TL5000T	5000	1.6	<0.65	3.8	3

\* Weights and lengths all nominal



Microwave Filter Company

# TL Series Tubular Lowpass Filters

TABLE 3

Model Selections & Specification for BNC (TLB Series)					
Model Number	Cut-off (MHz)	VSWR (Max)	Loss (dB)	Length* in	Weight* oz.
TL300B	300	1.3	<0.3	15	8
TL400B	400	1.3	<0.3	14.6	6
TL500B	500	1.3	<0.3	14	6
TL600B	600	1.3	<0.35	12	5.5
TL800B	800	1.3	<0.35	9.5	5
TL1000B	1000	1.4	<0.4	7.5	4.7
TL1200B	1200	1.4	<0.4	6.2	4.5
TL1500B	1500	1.4	<0.4	5.9	4
TL1800B	1800	1.5	<0.5	5.1	4
TL2000B	2000	1.5	<0.5	4.8	3.5
TL3000B	3000	1.6	<0.65	4.6	3.2
TL4000B	4000	1.6	<0.65	4.2	3
TL5000B	5000	1.6	<0.65	3.8	3

TABLE 4

Model Selections & Specification for SMA (TLS Series)					
Model Number	Cut-off (MHz)	VSWR (Max)	Loss (dB)	Length* in	Weight* oz.
TL400S	400	1.3	<0.2	14.6	8
TL500S	500	1.3	<0.2	14.4	6
TL800S	800	1.3	<0.2	9.5	6
TL1000S	1000	1.3	<0.2	7.5	5.5
TL1200S	1200	1.3	<0.3	6.2	5
TL1500S	1500	1.3	<0.4	6.2	4.7
TL2000S	2000	1.3	<0.4	4.8	4.5
TL3000S	3000	1.4	<0.4	4.6	4
TL4000S	4000	1.4	<0.4	4	4
TL5000S	5000	1.4	<0.4	3.6	3.5
TL6000S	6000	1.4	<0.4	3.2	3.2
TL7000S	7000	1.5	<0.4	3	3
TL8000S	8000	1.5	<0.5	3.1	3
TL9000S	9000	1.5	<0.5	3	2.8
TL10000S	10000	1.5	<0.5	2.8	2.8
TL12000S	12000	1.5	<0.5	2.8	2.5
TL15000S	15000	1.5	<0.6	2	2.5
TL18000S	18000	1.5	<0.6	1.7	0.6
TL20000S	20000	1.5	<0.6	1.6	0.6

\* Weights and lengths all nominal

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