

## LCW Series



### Chebyshev – High-Power

Frequency Range from 600 kHz to 600 MHz

Application-Specific Designs

SERIES NUMBER	NUMBER OF POLES	INSERTION LOSS at 0.1 x f <sub>-3dBc</sub> dB MAXIMUM	STOPBAND	
			ATTENUATION dBc MINIMUM	FREQUENCY
FREQUENCY <sub>-3dBc</sub> – 600 kHz – 600 MHz – specify any f within that range				
LC3W	3	0.5	-40	4.20 x f <sub>-3dBc</sub>
LC5W	5	0.5	-50	2.50 x f <sub>-3dBc</sub>
LC7W	7	0.5	-60	2.00 x f <sub>-3dBc</sub>
LC9W	9	0.5	-60	1.60 x f <sub>-3dBc</sub>
LC11W	11	0.5	-60	1.40 x f <sub>-3dBc</sub>
LC13W	13	0.5	-80	1.40 x f <sub>-3dBc</sub>

Note: TTE's products are made in the USA. Application-specific designs are made to order. Typical delivery is 2 weeks. Expedited lead time of 3-5 days is available on many products.

**For RoHS compliant, add "R" to part number. Example: LC9W-50M-20W-50-N**

**TTE designates a component RoHS-compliant by adding "R" (RoHS) within the part number.**

**These RoHS components meet the ≤ 0.1% lead requirement and they are compatible with 260°C soldering processes.**

#### NOTES:

- Operating Temperature Range: 0°C to +70°C
- Number of Poles: 3, 5, 7, 9, 11 or 13
- VSWR: 1.5:1 Typical
- Input Power: to \*300 watts
- Case Type: Refer to **Case Selection Guide**
- Normalized Response: Refer to **Graphs**
- Product Info: Refer to **LCW Series**

\*Into a 50Ω or 75Ω load as specified at the time of order.  
300W of power is not available for all models and frequencies,  
consult factory.

#### TERMINATIONS:

50 Ω	100 MHz - 200 MHz
50 Ω or 75 Ω	600 kHz - 100 MHz

#### STOPBAND FREQUENCY CALCULATIONS:

Using part number LC9W-50M-20W-50-N, we know that the filter is a 9 pole Chebyshev High-Power lowpass filter. Scroll down to series number LC9W. Moving to the right we find the stopband specification listed as -60dBc minimum at 1.60 x f<sub>-3dBc</sub>. Thus, the -60dBc frequency is at 80 MHz (1.60 x 50 MHz).

#### PART NUMBER DERIVATION:

LC9W	-50M	-20W	-50	-N
1	2	3	4	5

- 1) Series, LC9W (which has 9 poles)
- 2) f<sub>-3dBc</sub>
- 3) Power in watts
- 4) Terminations
- 5) N female connectors standard