

LE Series



Elliptical Function – Anti-Aliasing

Frequency Range from 100 Hz to 500 MHz

Application-Specific Designs

SERIES NUMBER	NUMBER OF POLES	INSERTION LOSS at 0.1 x f -3dBc dB MAXIMUM	STOPBAND	
			ATTENUATION dBc MINIMUM	FREQUENCY
FREQUENCY -3dBc – 100 Hz to 500 MHz – specify any f within that range				
LE7415	7	0.5	-40	1.15 x f -3dBc
LE7640	7	0.5	-60	1.40 x f -3dBc
LE7890	7	0.5	-80	1.90 x f -3dBc
LE9410	9	0.5	-40	1.10 x f -3dBc
LE9615	9	0.5	-60	1.15 x f -3dBc
LE9840	9	0.5	-80	1.40 x f -3dBc
LE1141	11	0.5	-40	1.06 x f -3dBc
LE1161	11	0.5	-60	1.10 x f -3dBc
LE1182	11	0.5	-80	1.20 x f -3dBc

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: LE1182R-100M-50-720A

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

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

NOTES:

- Operating Temperature Range: 0°C to +70°C
- Number of Poles: 7, 9 or 11
- VSWR: 1.5:1 Typical
- Input Power: 20 mW
- Case Type: Refer to **Case Selection Guide**
- Case Options: PCB, SMT, BNC or SMA
- Normalized Response: Refer to **Graphs**
- Product Info: Refer to **LE Series**

TERMINATIONS:

50 Ω	100 MHz - 200 MHz
50 Ω or 75 Ω	300 kHz - 100 MHz
1 kΩ - 50 Ω	10 kHz - 300 kHz
10 kΩ - 1 kΩ	1 kHz - 10 kHz

STOPBAND FREQUENCY CALCULATIONS:

Using part number LE1182-100M-50-720A, we know that the filter is an 11 pole Elliptical Function – Anti-Aliasing lowpass filter. Scroll down to series number LE1182. Moving to the right we find the stopband specification listed as -80dBc minimum at 1.20 x f -3dBc. Thus, the -80dBc frequency is at 120 MHz (1.20 x 100 MHz).

PART NUMBER DERIVATION:

LE1182	*(T)	** (R)	-100M	-50	-720A
1	2	3	4	5	6

- 1) Series, LE1182 (which has 11 poles)
- *2) The "T" option specifies a filter with low THD for ADC/DAC testing. When selected the minimum THD is $> -80\text{dBc}$, -96dBc typical.
- **3) "R" RoHS compliant. Allow for longer lead time.
- 4) f -3dBc
- 5) Terminations
- 6) Case selection from the case selection guide. "T" option cases are larger than standard.