15 MHz Low Pass Filter



EF526

Description

The EF526 Low Pass Filter employs a 5th order elliptic filter design. The design reduces group delay variation while preserving a practical 5th order rejection skirt. Uniquely, the EF526 is designed to terminate into DAQ, lab equipment, oscilloscope, or any modern voltage signal transfer systems that have high impedance inputs. For $V_{transfer}$ systems, this architecture provides the highest signal-to-noise ratio capabilities.

Specifications

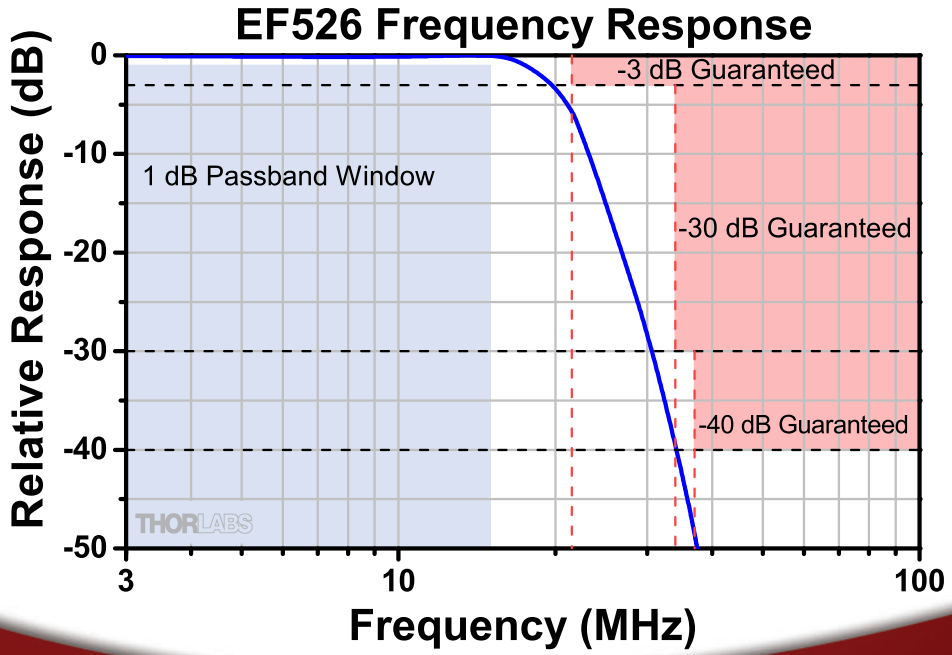
EF526	
	Value[a]
Passband (1 dB Window)	0 to 15 MHz
3 dB Rejection	>21.5 MHz
30 dB Rejection	>34 MHz
40 dB Rejection[b]	>37 MHz
Source Impedance (BNC Female)	50 Ω (Typical)
Load Impedance[c] **(BNC Male)**	≥100 kΩ (Typical)
Input Voltage	±10 V (Max)
Storage Temperature	-20 to +70 °C

a. Values measured at 25 °C.
b. Rejection measured to 500 MHz.
c. This filter can be operated with termination resistances below 1 kΩ, however, the passband will narrow at smaller termination resistances and the performance is not guaranteed.

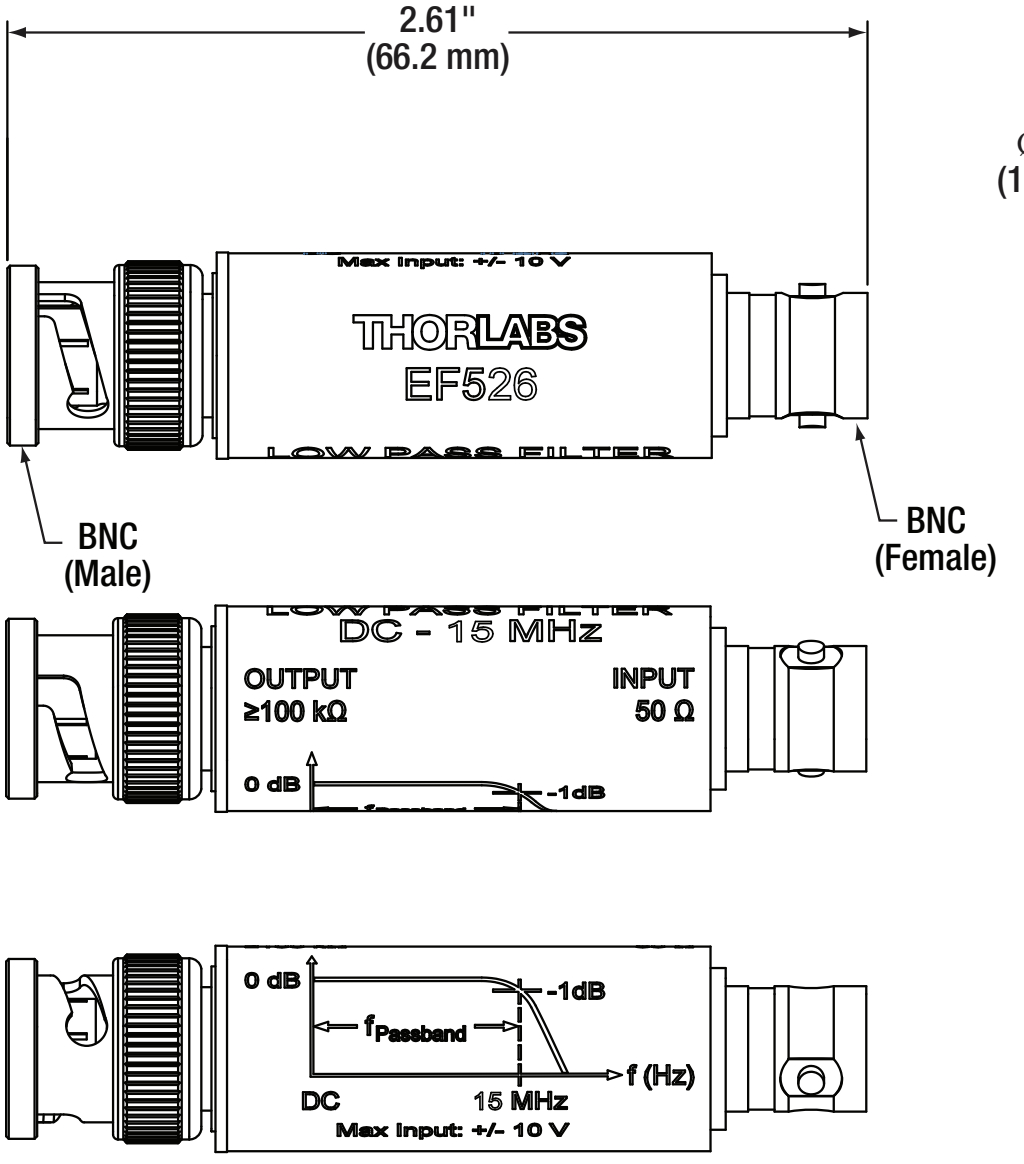
Sample Response Data

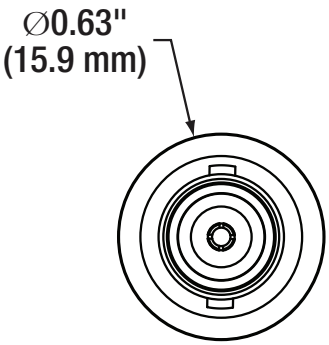
Frequency (Hz)	Rel. Resp. (dB)	Group Delay Variation (nS)
2.99E+06	-0.06	0
3.35E+06	-0.07	0.14
3.71E+06	-0.08	0.608
4.12E+06	-0.10	0.906
4.57E+06	-0.11	1.454
5.07E+06	-0.13	1.759
5.62E+06	-0.14	2.597
6.24E+06	-0.14	3.052
6.92E+06	-0.15	3.862
7.67E+06	-0.15	4.987
8.51E+06	-0.16	5.826
9.44E+06	-0.15	6.891
1.04E+07	-0.12	7.637
1.25E+07	-0.03	9.296
1.34E+07	0.00	10.075
1.49E+07	-0.04	12.553
1.50E+07	-0.04	13.001
1.53E+07	-0.08	13.79
1.68E+07	-0.35	21.579
1.98E+07	-2.78	37.439
2.16E+07	-5.88	21.961

Frequency (Hz)	Rel. Resp. (dB)
2.18E+07	-6.27
2.38E+07	-11.45
2.61E+07	-18.17
2.90E+07	-25.36
3.19E+07	-33.31
3.54E+07	-43.42
3.69E+07	-48.35
3.72E+07	-49.44
3.76E+07	-50.57
4.17E+07	-69.66
4.62E+07	-59.77
5.13E+07	-61.74
5.64E+07	-69.68
6.25E+07	-71.82
6.94E+07	-63.30
7.69E+07	-59.94
8.61E+07	-58.60
9.38E+07	-58.25



Drawings


2.61"
(66.2 mm)
Max Input: +/- 10 V
THORLABS
EF526
LOW PASS FILTER
BNC
(Male)
BNC
(Female)
DC - 15 MHz
OUTPUT
≥100 kΩ
INPUT
50 Ω
0 dB
-1dB
0 dB
-1dB
f Passband
f (Hz)
DC
15 MHz
Max Input: +/- 10 V


∅0.63"
(15.9 mm)