



EF500

### Description

The EF500 DC Block Filter employs a modified 1<sup>st</sup> order Butterworth filter design. The design extends the low end of the 1 dB passband to 1 Hz in a BNC coaxial package. The EF500 is designed to terminate into DAQ, lab equipment, oscilloscopes, 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

EF500	
	Value <sup>a</sup>
Pulse Rise Time	>250 ps
Passband (1 dB Window) <sup>b</sup>	>1 Hz (Nominal)
3 dB Rejection	<0.3 Hz (Nominal)
40 dB Rejection	<3 mHz (Nominal)
80 dB Rejection	<30 $\mu$ Hz (Nominal)
Source Impedance (BNC Female)	50 $\Omega$ (Typical)
Load Impedance <sup>c</sup> (BNC Male)	$\geq$ 100 k $\Omega$
Input Voltage	$\pm$ 10 V (Max)
Storage Temperature	-20 to +70 $^{\circ}$ C

a. Values measured at 25  $^{\circ}$ C.

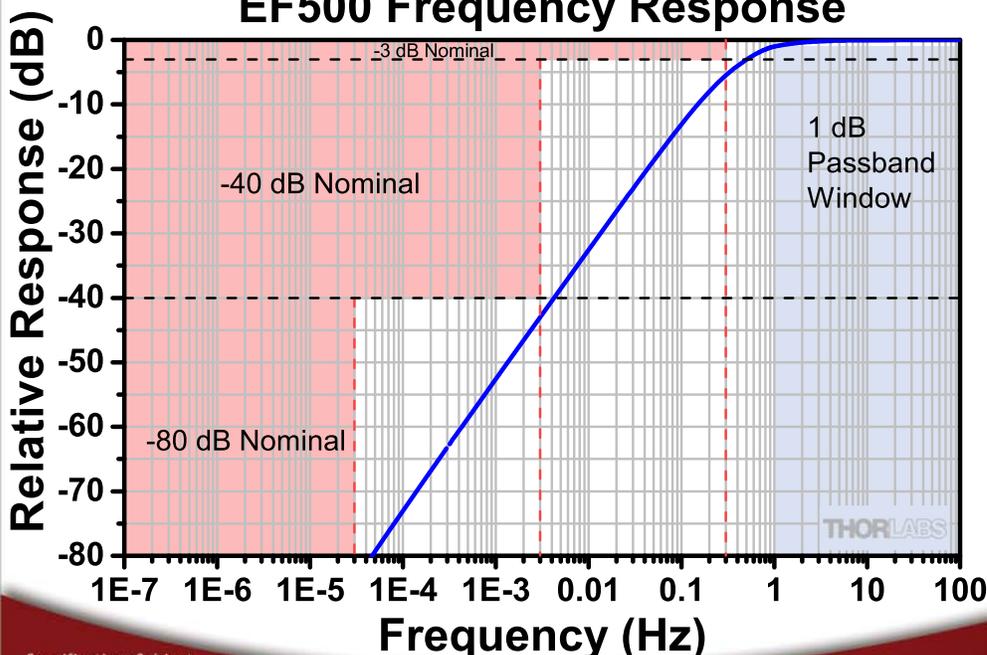
b. Performance measured to 600 MHz.

c. This filter can be operated with termination resistances below 1 k $\Omega$ , however, the passband will narrow at smaller termination resistances and the performance is not guaranteed.

### Sample Response Data

Frequency (Hz)	Rel. Resp. (dB)
0.00003	-84.00
0.0003	-63.00
0.0027	-44.00
0.1	-12.40
0.3	-5.16
0.6	-2.29
0.8	-1.43
1	-0.95
1.5	-0.57
2	-0.35
3	-0.21
6	-0.07
10	-0.07
30	0.00
100	0.00

### EF500 Frequency Response



## Drawings

