

## PSPL5500 Series DC Blocks

PSPL5500A, PSPL5501A, PSPL5508 Datasheet



The PSPL5500 Series of DC Blocks is composed of extremely broadband, coaxial blocking capacitors. Due to the coaxial construction, excellent microwave and very fast rise time responses are achieved. The PSPL5508 has a -3 dB bandwidth in excess of 26 GHz and a rise time faster than 8 ps. Large capacitance values up to 2.2  $\mu\text{F}$  are available that give -3 dB low frequency cutoffs as low as 0.7 kHz.

### Key performance specifications

- 0.7 kHz to > 26 GHz
- 8 ps Risetime

Typical performance

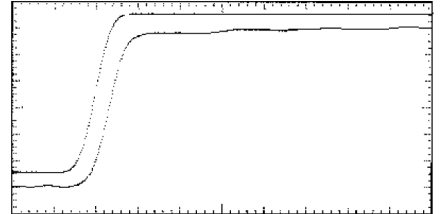
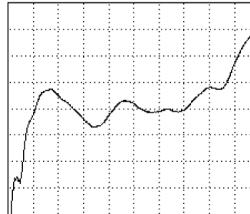
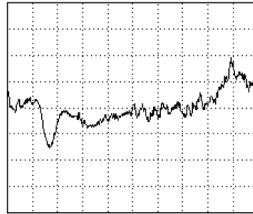
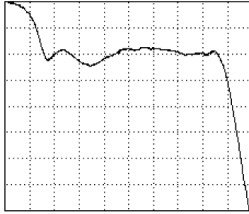
**Insertion Loss**  
0.25 dB/div,  
40 MHz to 25GHz,  
2.5 GHz/div

**Group Delay**  
5 ps/div,  
40 MHz to 25GHz,  
2.5 GHz/div

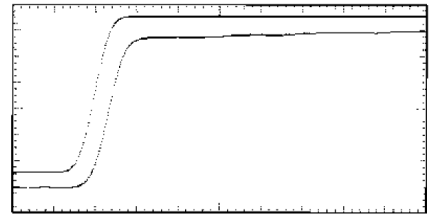
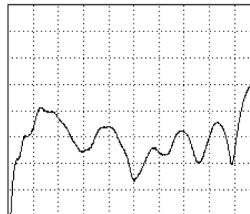
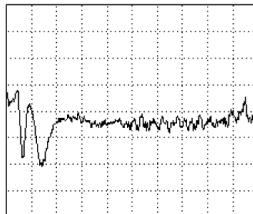
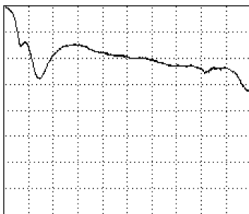
**Return Loss**  
5 dB/div,  
40 MHz to 25GHz,  
2.5 GHz/div

**10 ps Step Response**  
Top: In  
Bottom: Out  
20 ps/div

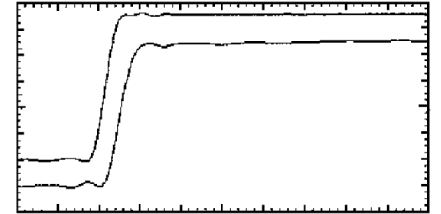
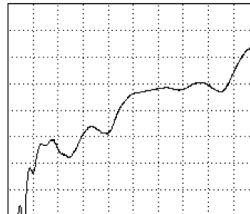
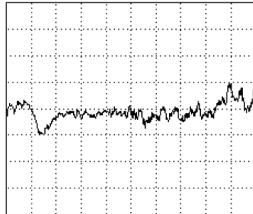
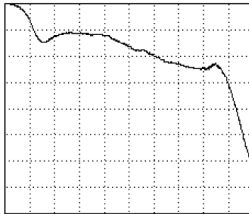
PSPL5500A



PSPL5501A



PSPL5508

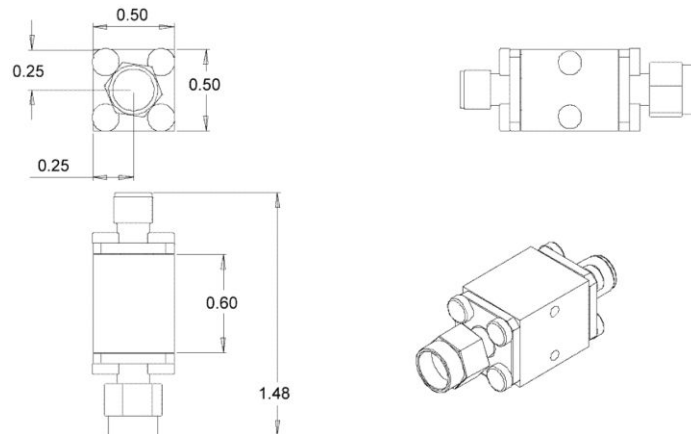


# Specifications

All specifications apply to all models unless noted otherwise.

Parameter <sup>1</sup>	PSPL5500A	PSPL5501A	PSPL5508
Capacitance	0.02 $\mu$ F	0.22 $\mu$ F	2.2 $\mu$ F
Tolerance	20 %	-50, +80%	-50, +80%
DC Voltage	50 V max.	50 V max.	16 V max.
Type	inner	inner	inner
BW (-3 dB) guaranteed	> 26 GHz 20 GHz min.	> 26 GHz 20 GHz min.	> 26 GHz 20 GHz min.
Low Freq -3 dB	80 kHz	7 kHz	0.7 kHz
Risetime	10 ps	10 ps	< 8 ps
Insertion Loss	See S <sub>21</sub> plots < 0.5 dB max. 100 MHz to 2 GHz is guaranteed		
Delay	155 ps, see S <sub>21</sub> group delay plots for typical responses		
Impedance	50 $\Omega$		
Return Loss	See S <sub>11</sub> plots for typical responses		
Temp. Range	-55 C to +125 C, operating and storage		
Dimensions	37.1 mm x 12.7 mm x 12.7mm sq. (1.46" x 0.5" x 0.5") including connectors		
Connectors	SMA jack (f) & plug (m)		
Warranty	One Year		

## Mechanical dimensions



<sup>1</sup> Parameters listed are typical values. Max/min limits for capacitance, bandwidth and insertion loss are guaranteed.

## Ordering information

### Models

PSPL5500A	50 V DC block, 80 kHz
PSPL5501A	50 V DC block, 7 kHz
PSPL5508	16 V DC block

**ASEAN / Australasia** (65) 6356 3900  
**Belgium** 00800 2255 4835\*  
**Central East Europe and the Baltics** +41 52 675 3777  
**Finland** +41 52 675 3777  
**Hong Kong** 400 820 5835  
**Japan** 81 (3) 6714 3086  
**Middle East, Asia, and North Africa** +41 52 675 3777  
**People's Republic of China** 400 820 5835  
**Republic of Korea** +822 6917 5084, 822 6917 5080  
**Spain** 00800 2255 4835\*  
**Taiwan** 886 (2) 2656 6688

**Austria** 00800 2255 4835\*  
**Brazil** +55 (11) 3759 7627  
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**France** 00800 2255 4835\*  
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**Balkans, Israel, South Africa and other ISE Countries** +41 52 675 3777  
**Canada** 1 800 833 9200  
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\* European toll-free number. If not accessible, call: +41 52 675 3777

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