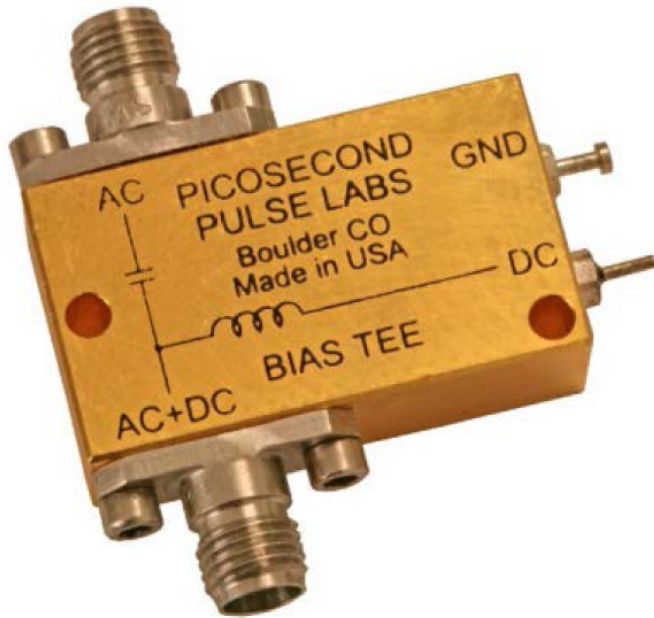


100 V Bias Tee

PSPL5543 Datasheet



The PSPL5543 is an ultra-broadband, 500 mA current, coaxial bias insertion tee and 100 V DC blocking capacitor that passes high bandwidth pulses with very low waveform distortion. Its rise time is only 7 ps and its frequency response is flat over many decades from 20 kHz to beyond 50 GHz.

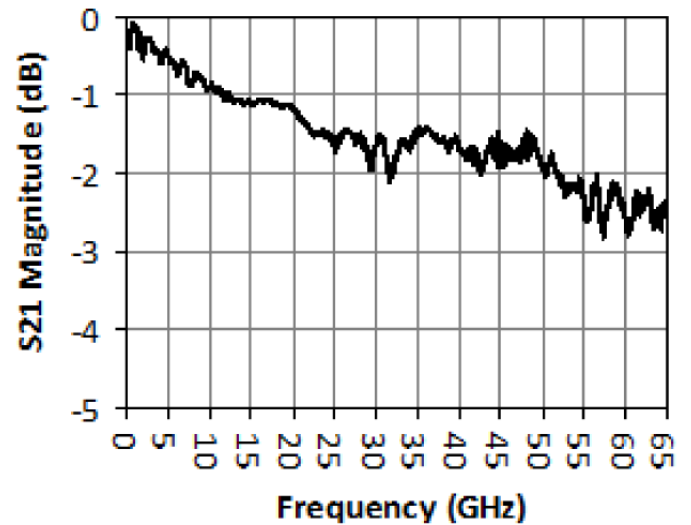
Key performance specifications

- 25 kHz to >50 GHz
- 7 ps rise time
- 100 V, 500 mA

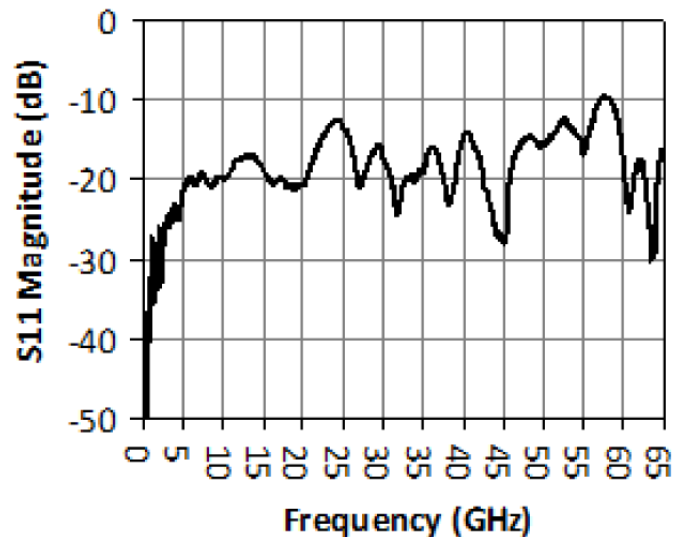
Typical performance

The following figures show the linear sweep from 40 MHz to 65 GHz. The AC connector is input (port 1) and the AC + DC connector is output (port 2).

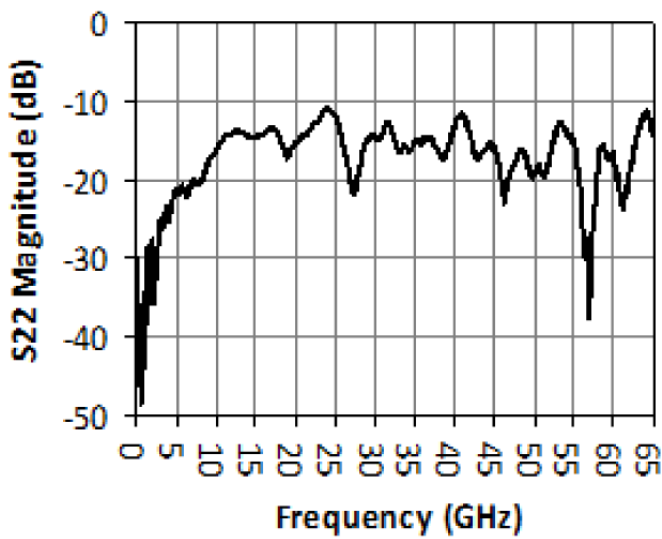
The following figure shows the S21 insertion loss.



The following figure shows the S11 return loss.



The following figure shows the S22 return loss.

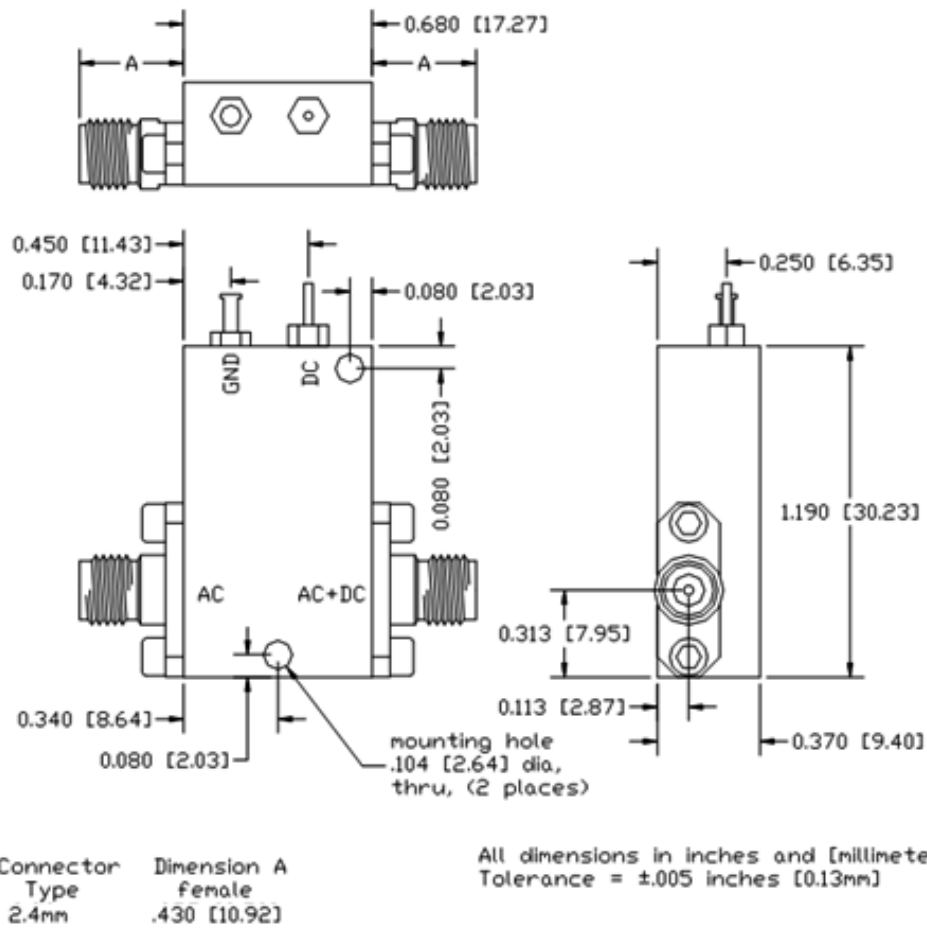


Specifications

Parameter	Symbol	Units	Minimum ¹	Typical	Maximum ¹	Comments
Impedance	Z	ohms		50		
Upper 3 dB frequency	f _{c,h}	GHz	50			
Lower 3 dB frequency	f _{c,l}	kHz		20		
Rise time	t _r	ps		7		10 – 90%
Insertion loss (see S21 plot)	S ₂₁	dB		See plot	3	2.4 mm f < 50 GHz
Input (AC), Return Loss	S ₁₁	dB	10	See plot		2.4 mm f < 50 GHz
Output (AC+DC), Return Loss	S ₂₂	dB	8	See plot		2.4 mm f < 50 GHz
DC voltage	V	V			100	
DC current	I	mA			500	
Capacitance	C	µF		0.2		
Inductance	L	mH		0.5		
Resistance	R	ohms		1.5		
RF power	P	W			5	Average power
Isolation	S ₁₃	dB		> 30		f > 100 MHz
DC path bandwidth	f _{c,DC}	kHz		22		
RF Connectors	2.4 mm jacks (f)					
DC Connector	Solder pin					
Warranty	One year					

¹ Maximum and minimum values are based on manufacturing test limits at 25 °C.

Mechanical dimensions



Ordering information

Models

PSPL5543 BIAS TEE, 100 V, 500 mA

Options

PSPL5543 240JJ 2.4 mm connectors on AC and AC + DC ports, solder pin on DC port

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

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France 00800 2255 4835*
India 000 800 650 1835
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The Netherlands 00800 2255 4835*
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Sweden 00800 2255 4835*
United Kingdom & Ireland 00800 2255 4835*

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Norway 800 16098
Portugal 80 08 12370
South Africa +41 52 675 3777
Switzerland 00800 2255 4835*
USA 1 800 833 9200

* European toll-free number. If not accessible, call: +41 52 675 3777

For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tek.com.

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