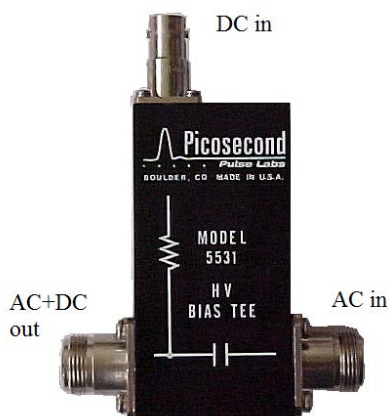


10 GHz Bias Tee

PSPL5531 Datasheet

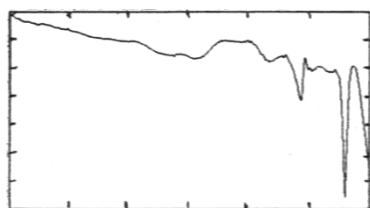


The Model PSPL5531 is a broadband coaxial bias insertion tee for low current applications such as biasing photodetectors. It is rated for 1.5 kV. It is designed to pass fast rise time pulses with minimum waveform distortion. The rise time is 35 ps with a -3 dB bandwidth extending from 750 kHz to 10 GHz.

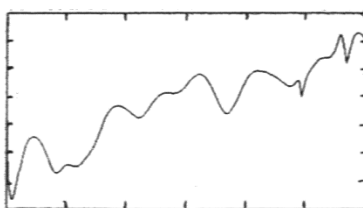
Key performance specifications

- 750 kHz to 10 GHz
- 35 ps rise time
- 1.5k V, 20 mA

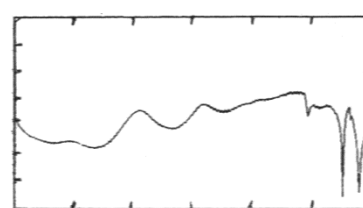
Microwave frequency response



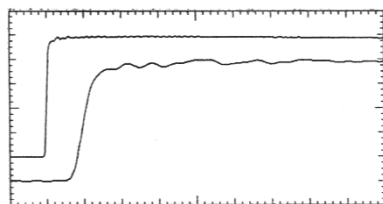
Insertion Loss, AC to AC+DC
1 dB/div and 2 GHz/div



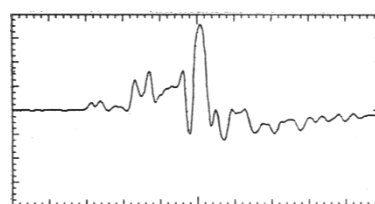
Return Loss, AC Port
5 dB/div and 2 GHz/div



Isolation, AC to DC
10 dB/div and 2 GHz/div



20%/div, 500 ps/div and 50 ps/div
Response to 20 ps rise time input step



2.5% rho/div and 200 ps/div
35 ps TDR of AC port

Specifications

Parameter	Symbol	Units	Min	Typical	Max	Comments
Impedance	Z	Ohms		50		
Upper 3 dB frequency	$f_{c,h}$	GHz		10		
Lower 3 dB frequency	$f_{c,l}$	kHz		750		
Rise time	t_r	ps		35	45	10 – 90%
Insertion loss	S_{21}	dB		0.3	0.8	(0.01 – 1 GHz)
Return loss	S_{11}	dB	RL > 15 dB -1 dB / GHz * f(GHz)			0.1 < f < 8 GHz
Refl. Coefficient (35 ps TDR)	Γ	%		+/-8 -2		t < 200 ps t > 200 ps
DC voltage	V	Volts			1.5k	
DC current	I	mA			20	
Capacitance	C	nF		2.2		-20%, +80%
Resistance	R	k Ohm		3		
RF power	P	W			20	Average power
Isolation	S_{13}	dB		20		
DC path bandwidth	$f_{c,DC}$	MHz		1		
RF Connectors	N jacks (f)					
DC Connector	SHV jack (f)					
Dimensions	3" x 3.8" x 1" (7.6 x 9.7 x 2.5 cm)					
Warranty	One Year					

Ordering information

Model	Description
PSPL5531	BIAS TEE, 10GHz, 1.5kV, TYPE N, J-J, SHV

PSPL5531 10GHz Bias Tee

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Updated 10 April 2013

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29 May 2014



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