MODEL SM100
SURFACE MOUNT BIAS TEE

PRODUCT SPECIFICATION

- **14 kHz to 13 GHz**
- **21 ps Risetime**
- **16V, 500 mA**

The Model SM100 Surface Mount Bias Tee is an ultra-broadband surface mount bias tee with DC blocking capacitor, designed for use in 10 Gb/s systems. It passes very fast risetime pulses with a minimum of waveform distortion. The risetime is only 21 ps, and the -3 dB bandwidth extends over many decades, from 14 kHz to 13 GHz. The small size and low cost enables system designers to achieve their increasingly stringent package size and cost goals. As a leadless solder-mount electrical component, it can be connected to microstrip lines on a circuit board, facilitating automation of the assembly process. A product guide, PG-3041, with additional information is available at the time of order.

SM100 Specifications

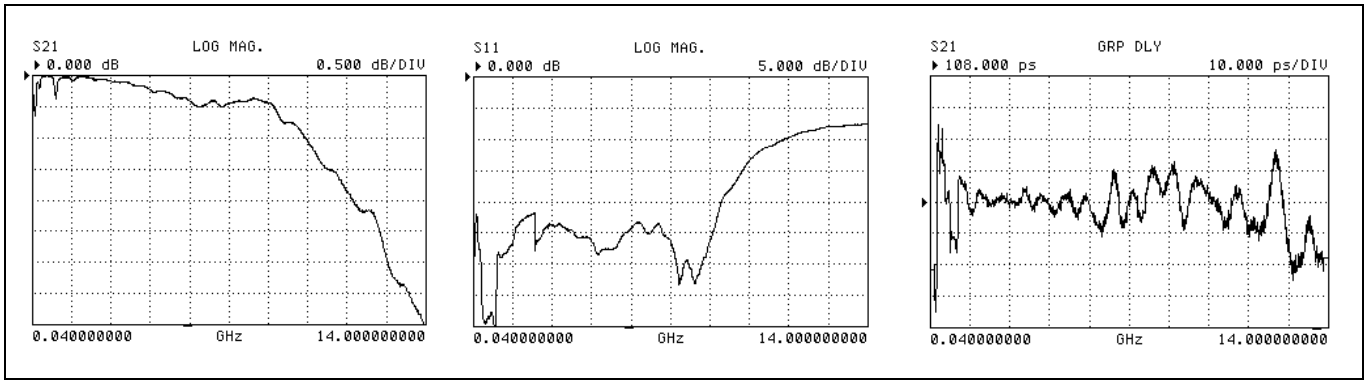
Bandwidth (-3 dB)	13 GHz typical > 10.5 GHz guaranteed	**Capacitance**	0.22 µF, -50%, +80%
Low Frequency (-3 dB)	14 kHz	**DC Voltage**	16 V max
Risetime (10% - 90%)	21 ps	**Inductance**	470 µH ± 25%
Insertion Loss	0.2 dB mid-band	**DC Resistance**	2.8 Ω
Guaranteed limits	< 1 dB 10 MHz to 4 GHz to < 3 dB at 10.5 GHz	**RF Power**	3 W avg. max. f > 10 MHz 2 W avg. max. f < 10 MHz
Impedance	50 Ω	**Size**	See drawing
DC Current	500 mA max	**Warranty**	One year. See Terms and Conditions of Sale.
Mounting	Surface Mount. Solder pads on bottom of part.	**Temperature Range** Operating Storage	 -25 C to +85 C case temp -25 C to +85 C

Ordering Information

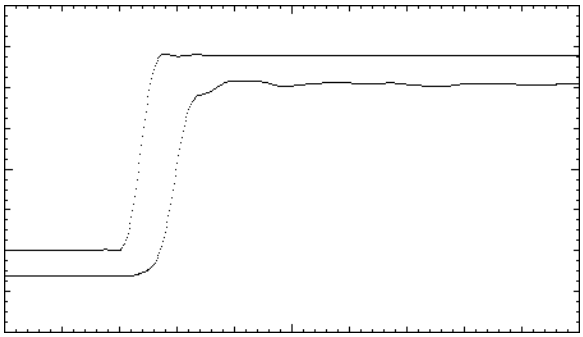
Model Number	Description
SM100-801	Surface Mount Bias Tee: 14 kHz to 13 GHz, 500 mA DC current, 16 V DC max.
SM100-802	SM100 on tape and reel; 44mm-wide tape, 24mm pitch, leaders on full reels of 400 parts

Microwave Frequency Response

Linear Sweep from 40 MHz to 14 GHz (1.4 GHz/div)
AC connector is input (port 1); AC+DC connector is output (port 2).

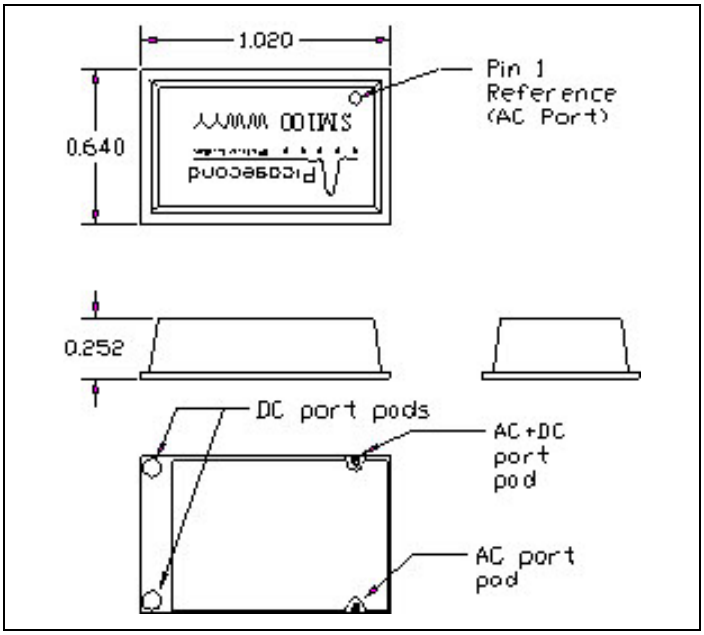


Step Response, 50 ps/div



Upper trace is 20 ps risetime input, lower trace is output.

SM100 Mechanical Drawing



Dimensions given are in inches