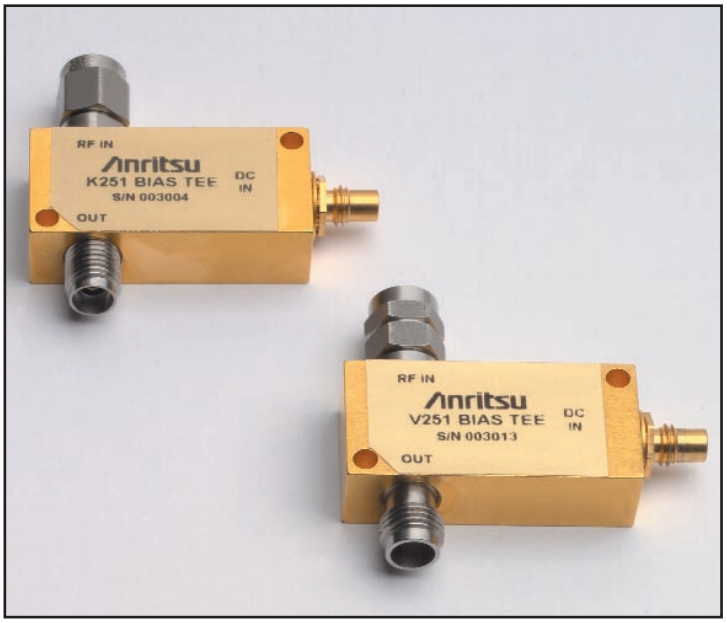
Ultra-Wideband Bias Tees

Models K251 and V251



Ideal for Optical Communications Applications

Low Insertion Loss

Risetime: <5 ps (V251)
<7 ps (K251)

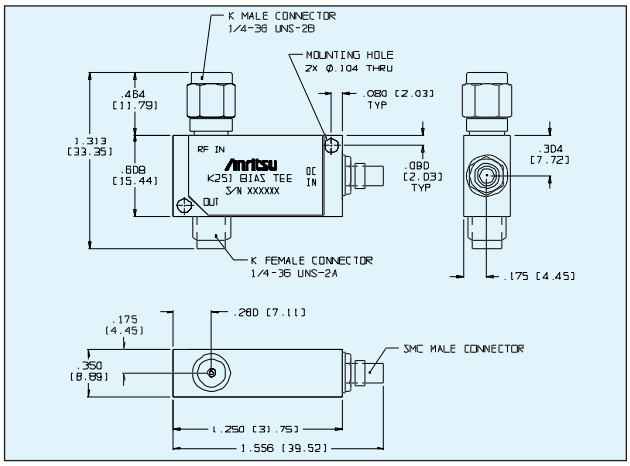
These ultra-wide bandwidth bias tees have been optimized for optical communications and other high-speed pulse, data or microwave applications. Designed to simultaneously apply both DC and RF drive signals to a device via a single input port, these bias tees feature fast rise times, excellent low frequency response, minimum insertion loss and flat group delay. Precision "K"™ and "V"™ connectors assure excellent impedance match across the wide bandwidths available. A one year warranty is provided.

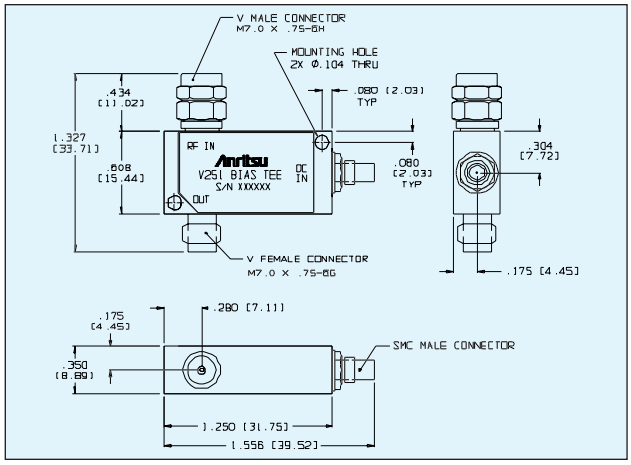
Specifications

Model	K251	V251
Freq. Range: 3dB BW	50 kHz to 40 GHz	100kHz to 65 GHz
Insertion Loss	<2 dB typical	< 2.5 dB typical
Return Loss	See Plot	See Plot
Rise Time	< 7 ps typical	< 5 ps typical
Group Delay	110 +/- 2 ps typical	113 +/-2 ps typical
Max DC Current	100mA	100 mA
Max DC Voltage	16VDC	16VDC
Max RF Power	1 W	1 W
Connectors	RF In: K(m) RF Out: K(f) Bias: SMC(m)	RF In: V(m) RF Out: V(f) Bias: SMC(m)

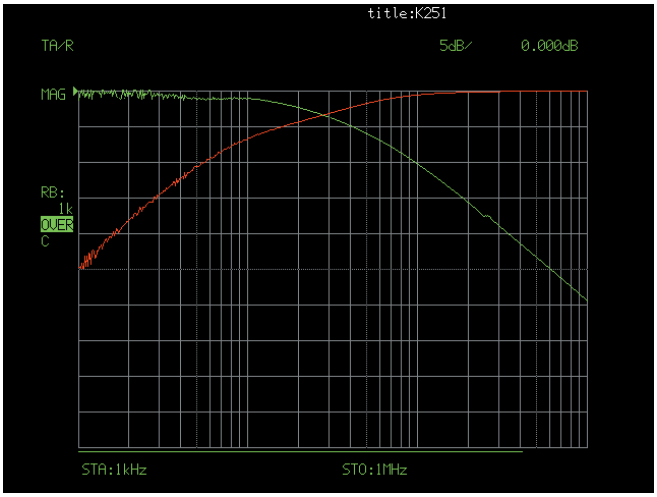
Specifications apply over the full DC Bias current range and over the temperature range of 0 C to +70 C.

Outline Drawings

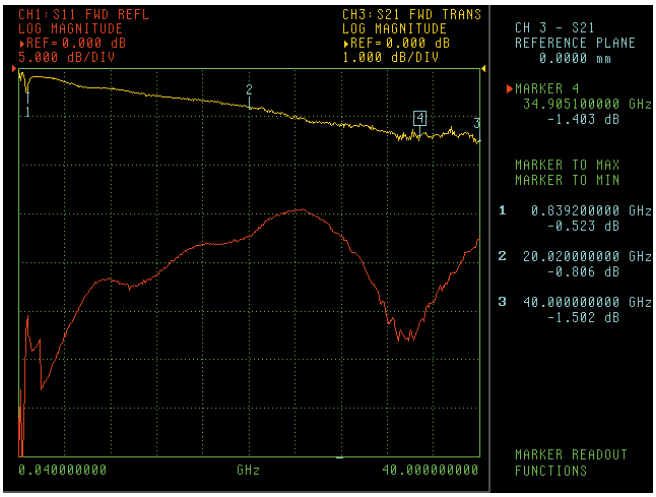




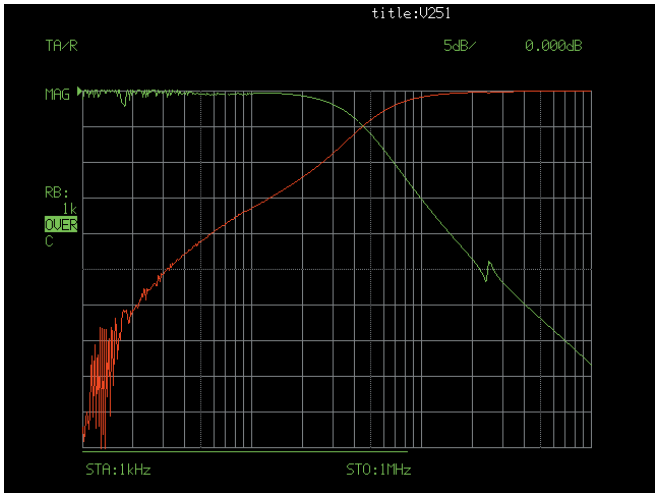
Linking the World



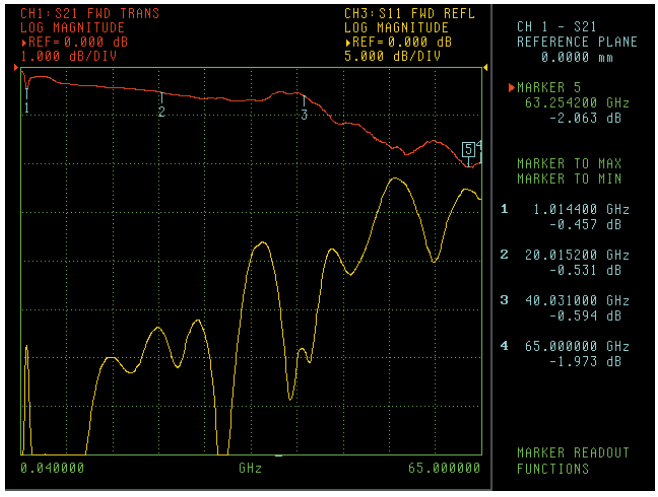
Typical Low Frequency Insertion Loss (red) and Return Loss (green) measured on K251 over the range of 1kHz to 1 MHz.



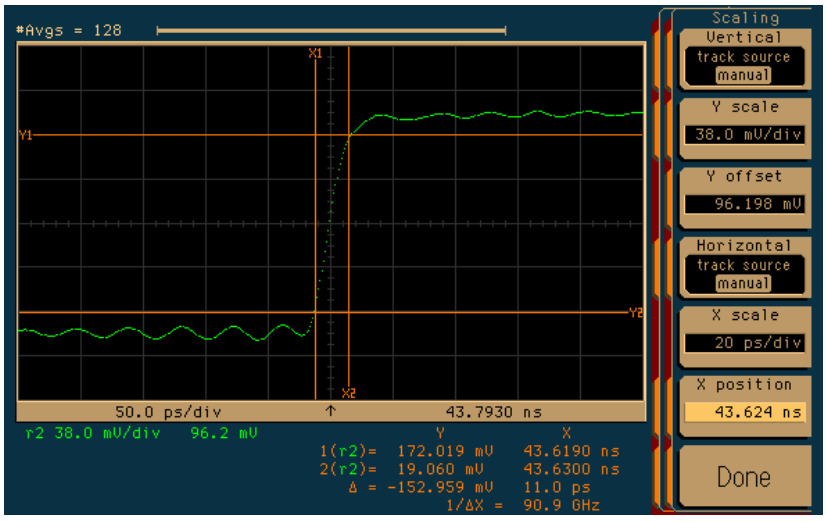
Typical Low Frequency Insertion Loss (yellow) and Return Loss (red) measured on K251 over the range of 40 MHz to 40 GHz.



Typical Low Frequency Insertion Loss (red) and Return Loss (green) measured on V251 over the range of 1 kHz to 1 MHz.



Typical Low Frequency Insertion Loss (red) and Return Loss (yellow) measured on V251 over the range of 40 MHz to 65 GHz.



Typical Uncorrected Pulse Response for V251. Absolute risetime for the Bias Tee is derived from this measured data by applying the RSS method to compensate for the risetime of the input pulse.

$$\sqrt{T_{BT}^2 + T_{PG}^2} = T_{meas.}$$

$T_{meas.}$ = uncorrected risetime
T_{BT} = absolute Bias Tee risetime
T_{PG} = risetime of input pulse

Certificate No. 6495

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