

Bias-Tee

50Ω Wideband 20 to 2500 MHz

Maximum Ratings

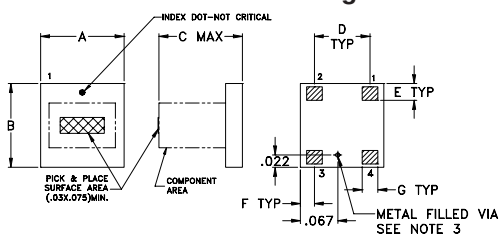
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	30dBm max.
Voltage at DC port	25V max.
Input Current	200mA

Permanent damage may occur if any of these limits are exceeded

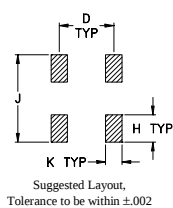
Pad Terminations

RF	4
RF&DC	3
DC	1
ISOLATE(see PCB Layout)	2

Outline Drawing



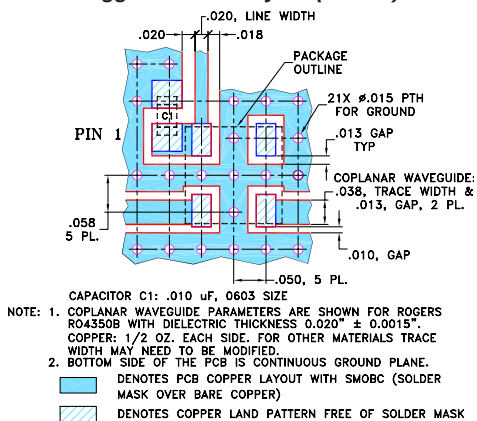
PCB Land Pattern



Outline Dimensions (inch)

A	B	C	D	E	F	G
.150	.150	.150	.100	.030	.025	.028
3.81	3.81	3.81	2.54	0.76	0.64	0.71
H	J	K	wt			
.050	.160	.030	grams			
1.27	4.06	0.76	0.10			

Demo Board MCL P/N: TB-268
Suggested PCB Layout (PL-146)



Features

- wideband, 20 to 2500 MHz
- low insertion loss, 0.4 dB typ.
- miniature surface mount 0.15"x0.15"
- aqueous washable
- protected by US Patent 7,012,486

Applications

- biasing amplifiers
- biasing of laser diodes
- biasing of active antennas

Bias-Tee Electrical Specifications

FREQUENCY (MHz)		INSERTION LOSS (dB)						ISOLATION (dB)						VSWR (:1)					
								(RF port to DC port)						(RF&DC port to DC port)					
		L		M		U		L		M		U		L		M		U	
f _L	f _U	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.
20	2500	0.2	0.8	0.35	0.8	0.7	1.2	65	40	44	25	40	20	1.05	1.5	1.05	1.2	1.1	1.25

L= 20-200 MHz M=200-1250 MHz U=1250-2500 MHz
External C1(0.01μF) is required. See functional schematic and PCB layout.

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB) with current			VSWR (:1) with current		
	0mA	50mA	100mA	0mA	50mA	100mA
20.00	0.24	0.22	0.27	1.09	1.03	1.17
30.00	0.22	0.22	0.24	1.08	1.03	1.09
50.00	0.20	0.21	0.21	1.11	1.08	1.02
100.00	0.20	0.24	0.32	1.01	1.03	1.07
250.00	0.21	0.23	0.31	1.02	1.01	1.02
400.00	0.21	0.22	0.30	1.01	1.02	1.03
500.00	0.23	0.24	0.31	1.04	1.03	1.04
750.00	0.26	0.28	0.35	1.04	1.03	1.04
900.00	0.29	0.31	0.37	1.02	1.02	1.03
1000.00	0.32	0.34	0.40	1.03	1.02	1.03
1450.00	0.51	0.51	0.56	1.10	1.09	1.11
1900.00	0.70	0.68	0.75	1.02	1.03	1.05
2350.00	0.73	0.76	0.85	1.08	1.09	1.09
2800.00	0.69	0.74	0.83	1.08	1.09	1.08
3250.00	0.71	0.76	0.85	1.07	1.09	1.07

Functional Schematic

