

Surface Mount Bias-Tee

50Ω Wideband 0.1 to 4200 MHz

JEBT-4R2GW+ JEBT-4R2GW



CASE STYLE: BL301

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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	500mA
DC resistance from DC to RF&DC port	4.5 ohm typ.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

RF	15
RF&DC	10
DC	24
GROUND	all other pins

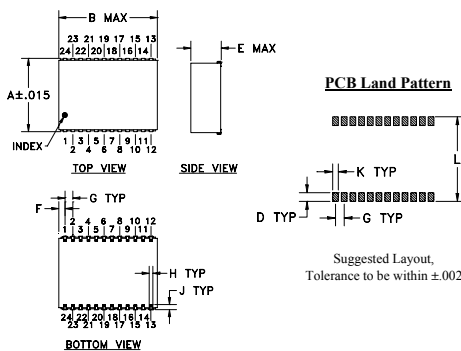
Features

- wideband, 0.1 to 4200 MHz
- low insertion loss, 0.6 dB typ.
- good isolation, 40 dB typ.

Applications

- biasing amplifiers, laser diodes, active antenna
- DC return
- DC blocking
- satellite communication

Outline Drawing

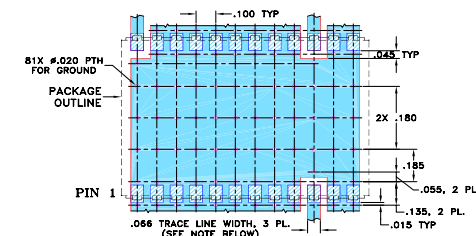


Outline Dimensions (inch)

A	B	C	D	E	F
.940	1.260	--	.100	.390	.080
23.88	32.00	--	2.54	9.91	2.03

G	H	J	K	L	wt
.100	.047	.065	.065	.970	grams
2.54	1.19	1.65	1.65	24.64	7.2

Demo Board MCL P/N: TB-359 Suggested PCB Layout (PL-216)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

Bias-Tee Electrical Specifications

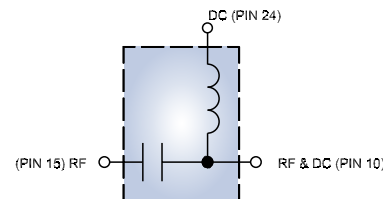
FREQUENCY (MHz)	INSERTION LOSS* (dB)						ISOLATION* (dB) (RF port to DC port) (RF&DC port to DC port)						
	L		M		U		L		M		U		
f _L	f _U	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.1	4200	0.15	0.8	0.6	1.2	0.6	1.6	25	15	40	20	40	20

L= low range (f_L to 10 f_L) M= mid range (10 f_L to f_U/2) U= upper range (f_U/2 to f_U)
* Insertion Loss and Isolation are guaranteed up to 20 dBm-RF power and 200mA DC current.

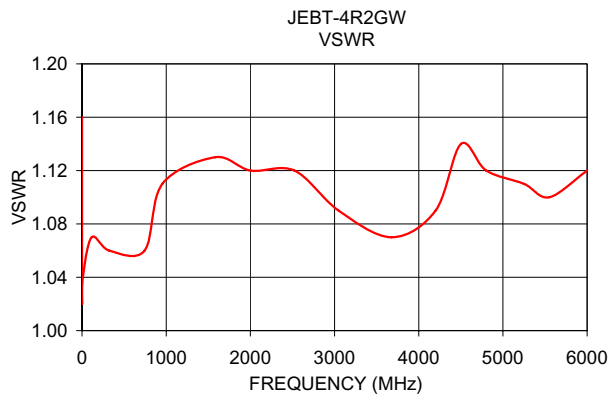
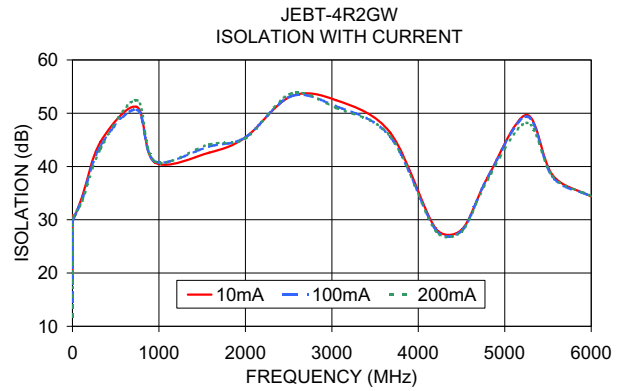
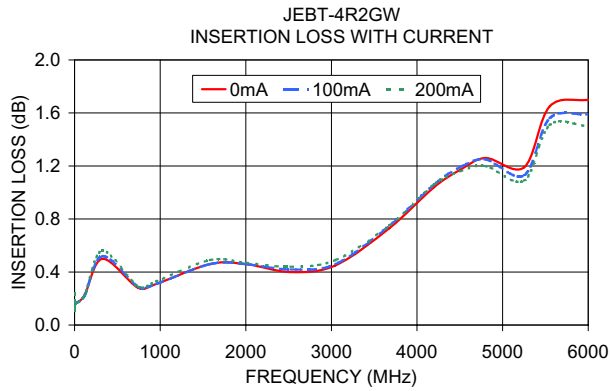
Typical Performance Data

Freq. (MHz)	Pin (dBm)	INSERTION LOSS (dB) with Current						ISOLATION (dB) (Pin= -10dBm) with current						VSWR (:1)
		0mA	20mA	50mA	100mA	150mA	200mA	10mA	20mA	50mA	100mA	150mA	200mA	
0.10	19.80	0.17	0.17	0.16	0.17	0.20	0.24	19.46	19.04	17.83	14.58	12.66	11.75	1.16
0.27	19.80	0.13	0.13	0.13	0.14	0.14	0.15	25.86	25.53	24.52	21.43	19.31	18.16	1.07
0.53	19.80	0.12	0.12	0.12	0.11	0.11	0.11	29.17	28.98	28.36	26.18	24.40	23.37	1.04
1.06	19.80	0.13	0.13	0.12	0.11	0.12	0.12	30.81	30.74	30.56	29.62	28.62	27.92	1.02
10.00	18.50	0.16	0.17	0.17	0.16	0.16	0.16	30.06	30.07	30.07	30.20	30.38	30.56	1.04
114.75	19.50	0.22	0.25	0.24	0.22	0.22	0.22	34.45	34.49	34.27	33.99	33.83	33.59	1.07
324.25	19.70	0.50	0.55	0.53	0.52	0.53	0.56	44.65	44.61	44.25	43.90	43.91	43.34	1.06
743.25	18.70	0.28	0.31	0.30	0.29	0.29	0.29	51.19	50.50	50.16	50.65	51.69	52.47	1.06
952.75	18.20	0.31	0.33	0.33	0.31	0.32	0.33	40.75	40.80	40.97	40.97	40.93	40.95	1.11
1581.25	18.00	0.46	0.48	0.47	0.46	0.48	0.49	42.58	42.59	43.94	43.77	44.36	44.17	1.13
2000.25	17.10	0.46	0.48	0.47	0.46	0.46	0.47	45.46	45.57	45.73	45.48	46.14	45.28	1.12
2524.00	14.40	0.40	0.42	0.41	0.42	0.43	0.44	53.15	53.72	52.19	53.17	52.67	53.67	1.12
3047.75	14.20	0.45	0.48	0.47	0.46	0.46	0.49	52.46	52.25	51.55	51.33	51.46	50.99	1.09
3676.25	15.10	0.73	0.74	0.75	0.75	0.75	0.75	46.32	47.19	46.36	45.53	46.19	45.65	1.07
4200.00	17.90	1.04	1.07	1.07	1.06	1.05	1.06	28.42	28.36	28.24	28.14	28.01	27.92	1.09
4502.50	-0.60	1.17	1.19	1.18	1.19	1.17	1.16	28.15	28.10	28.05	27.96	27.84	27.87	1.14
4802.00	-0.70	1.26	1.26	1.27	1.25	1.22	1.20	37.95	38.01	38.19	37.93	37.58	37.51	1.12
5251.75	-1.10	1.19	1.17	1.16	1.13	1.11	1.09	49.68	51.04	49.12	49.37	49.13	48.19	1.11
5550.75	-2.00	1.65	1.63	1.60	1.56	1.54	1.51	38.44	38.56	38.36	38.07	37.85	38.19	1.10
6000.00	-2.40	1.70	1.71	1.65	1.59	1.54	1.50	34.37	34.36	34.23	34.40	34.49	34.48	1.12

Electrical Schematic



Performance Charts



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