Satellite MuxTee

Bias-Tee

Z3BT-2R15G+

50Ω 10 to 2150MHz

CASE STYLE: CC1553

The Big Deal

- Low RF Insertion Loss:1.4 dB Typ. over 10-2150 MHz
- DC pass through: 2A, 48V
- Simple installation in Satellite System

Product Overview

The Z3BT-2R15G+ is a Low loss bias tee designed for use with L-Band systems, cabable of injecting up to 2A, this Bias tee is ideal for satellite communications applications. Built in a rugged shielded case, the Z3BT-2R15G+ is equipped with SMA Female connectors for all ports. The Z3BT-2R15G+ is ideally suited for powering Satellite up converters and LNBs where RF and DC are injected on a single coax cable.

Key Features

Feature	Advantages
Low insertion loss. 1.4 dB typ. to 100 MHz. 0.8 dB typ. to 2150 MHz.	Low insertion loss of Z3BT-2R15G+ is useful in very critical satellite and wireless applications.
Excellent mating 1.3:1 typ. over entire band.	Good VSWR ensures better matching when used with other devices.
DC pass through / DC Feed	Enables remote powering of antenna mounted amplifiers while spliting the RF signal. Eliminates additional cable runs. Designed to handle up to 2 Amp at 48 Volts, the Z3BT-2R15G+ can also support a wide variety of remotely powered RF equipment.
Connectors	All connectors are SMA Female.

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Connectors	Model
SMA FEMALE	Z3BT-2R15G+

+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	+48V Max.
Input Current	2A
DC resistance from DC to RF&DC port	0.5Ohm Typ.

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

Coaxial Connections

RF	Port-1 (SMA female)
COMMON (RF&DC MHz)	Port-2 (SMA female)
DC	Port-S (SMA female)

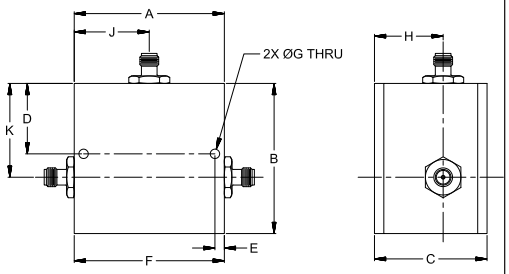
Features

- DC pass through: 2A, 48V
- Low insertion loss, 1.4dB Typ.
- Good Isolation, 40dB Typ.

Applications

- Satellite IF band
- Satellite Receivers / Transmitters
- Test accessory

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	
2.000	**2.000**	**1.500**	**.938**	**.125**	
50.80	50.80	38.10	23.83	3.18	
F	**G**	**H**	**J**	**J**	**Wt.**
1.750	**.125**	**.915**	**1.000**	**1.250**	grams
44.45	3.18	23.24	25.4	31.75	154

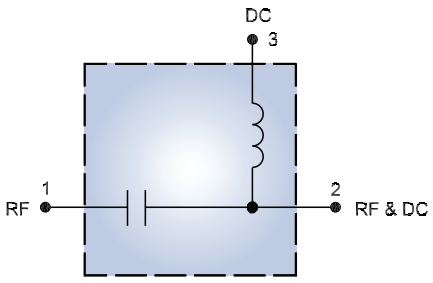
Electrical Specifications at 25°C

Parameter		Port	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	RF to RF&DC	10-2150	-	1.4	1.8	dB
	VSWR	RF	10-2150	-	1.3	1.6	:1
		RF & DC	10-2150	-	1.3	1.6	
Stop Band Isolation		RF to DC	10-2150	40	55	-	dB
		DC to RF & DC	10-2150	35	47	-	

Typical Performance Data

FREQ. (MHz)	INSERTION LOSS (dB) (P_{IN}= 0dBm) with Current RF Port to Common Port				ISOLATION (dB) (P_{IN}= 0dBm) with 2A Port		VSWR (:1) (Pin=0dBm) With 2A Port	
	0.1A	0.5A	1A	2A	1 to S	S to 2	RF	RF&DC
1	1.10	1.10	1.14	1.40	41.32	41.27	2.17	2.18
5	0.46	0.45	0.46	0.48	67.11	67.18	1.25	1.25
10	0.32	0.32	0.33	0.33	92.69	91.41	1.14	1.14
20	0.24	0.24	0.24	0.24	72.37	72.93	1.07	1.07
50	0.26	0.26	0.25	0.24	66.83	67.18	1.07	1.07
100	0.77	0.77	0.77	0.76	65.82	65.93	1.22	1.22
500	0.89	0.89	0.89	0.89	66.51	62.63	1.18	1.20
900	0.77	0.77	0.77	0.77	70.15	58.97	1.12	1.18
950	0.75	0.75	0.74	0.74	67.26	57.67	1.12	1.18
1000	0.72	0.72	0.72	0.72	65.15	56.62	1.12	1.18
1100	0.70	0.70	0.70	0.70	61.68	55.09	1.12	1.19
1250	0.68	0.68	0.68	0.68	60.47	54.55	1.14	1.20
1400	0.67	0.67	0.67	0.67	58.99	52.93	1.16	1.22
1500	0.68	0.68	0.68	0.68	56.97	51.25	1.17	1.23
1700	0.70	0.70	0.70	0.70	55.04	48.68	1.19	1.25
1800	0.72	0.72	0.72	0.72	55.72	48.07	1.20	1.26
1900	0.75	0.75	0.75	0.75	57.79	47.67	1.21	1.27
2000	0.78	0.78	0.78	0.78	62.84	47.48	1.21	1.27
2100	0.82	0.83	0.82	0.83	67.15	47.35	1.21	1.27
2150	0.85	0.85	0.85	0.85	61.18	47.35	1.22	1.28

Functional Block Diagram



Notes

A. 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.
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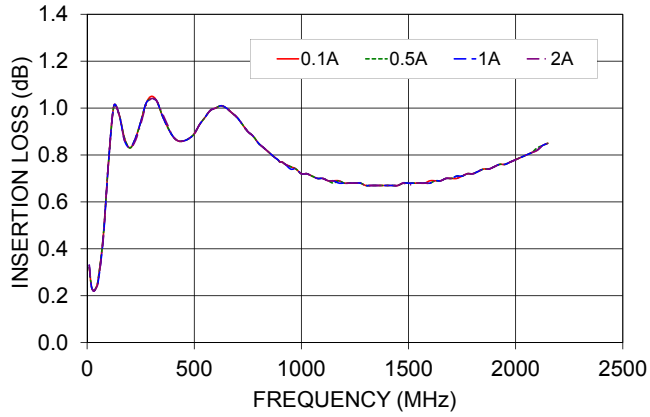
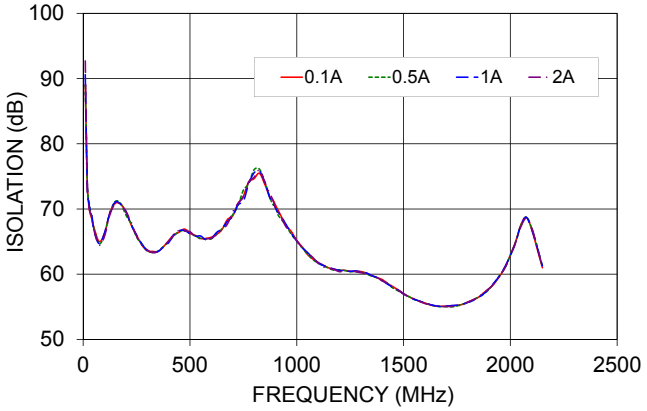
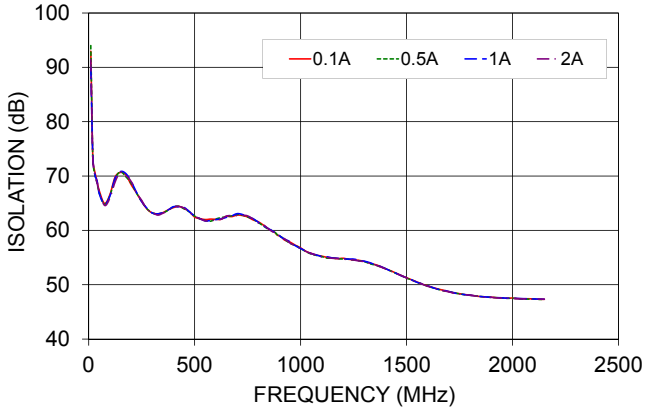
Z3BT-2R15G+
RF to RF&DC
INSERTION LOSS WITH CURRENT (P_{in}= 0dBm)



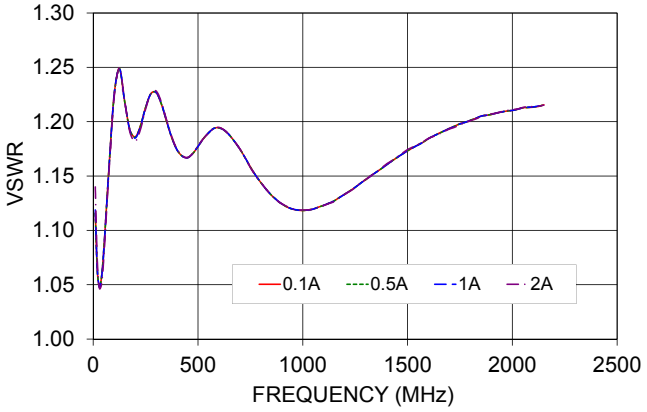
Z3BT-2R15G+
RF to DC port
ISOLATION WITH CURRENT (P_{in}= 0dBm)



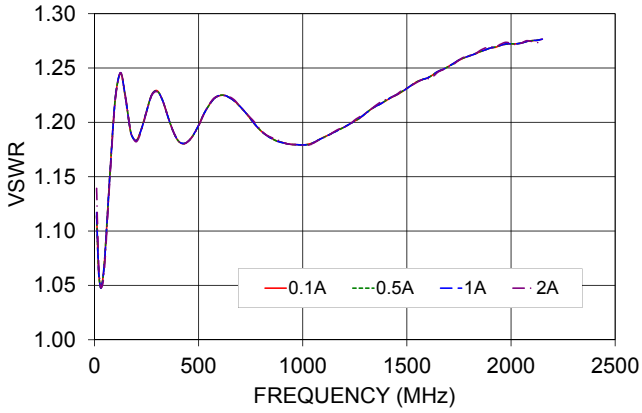
Z3BT-2R15G+
DC&RF to DC port
ISOLATION WITH CURRENT (P_{in}= 0dBm)



Z3BT-2R15G+
RF port
VSWR (P_{in}= 0dBm)



Z3BT-2R15G+
RF&DC
VSWR (P_{in}= 0dBm)



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