



Mini-Circuits

Satellite MuxTee

# Bias Tee

# ZABT-2150-5AFT+

50Ω 10-2150 MHz (10 to 100 MHz, 800 to 2150MHz)

## THE BIG DEAL

- Simple installation in a Satellite System
- Integrated L-Band + DC Bias-Tee
- Low RF Insertion Loss: 0.5 dB Typ 800-2150 MHz
- High DC current, 5A
- Feed through terminal for DC port



Generic photo used for illustration purposes only

## APPLICATIONS

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

<b>Model No.</b>	ZABT-2150-5AFT+
<b>Case Style</b>	JU1387
<b>Connectors</b>	SMA Female

### +RoHS Compliant

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

## PRODUCT OVERVIEW

The ZABT-2150-5AFT+ is a bias tee designed specifically for satellite communications and wireless infrastructure applications. Built in a rugged shielded case, the ZABT-2150-5AFT+ is equipped with SMA connectors for the L-Band ports and feed through terminal for DC port.

The ZABT-2150-5AFT+ is ideally suited for powering Satellite up converters and LNBS where IF and DC are all injected on a single coax cable.

## KEY FEATURES

Feature	Advantages
Low passband insertion loss	Very low insertion loss ensures less signal loss through the device, suitable for high performance applications.
DC Feed	Capable of handling up to 5 Amps and 30 V, the ZABT-2150-5AFT+ can power a wide range of remote amplifiers and converters.
Connectors	RF: SMA Female RF+DC: SMA Female DC: Feed through terminal Ground: Ground



# Satellite MuxTee Bias Tee

## ZABT-2150-5AFT+

### MAXIMUM RATINGS

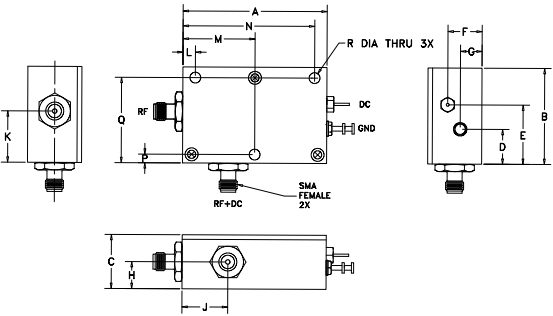
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	27 dBm max.
Voltage at DC port	+30 V max.
Input Current	5A
DC resistance from DC to RF&DC port	0.50Ohm Typ.

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

### COAXIAL CONNECTIONS

RF	SMA Female
RF + DC	SMA Female
DC	feed-through terminal
GROUND	GROUND

### OUTLINE DRAWING

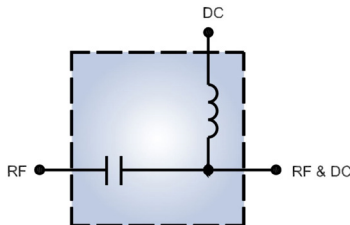


### OUTLINE DIMENSIONS (Inch/mm)

A	B	C	D	E	F	G	H	J
2.000	1.333	.750	.484	.823	.475	.300	.375	.635
50.80	33.86	19.05	12.29	20.90	12.07	7.62	9.53	16.13
K	L	M	N	P	Q	R	Wt.	
.713	.172	1.000	1.828	.120	1.186	.140	grams	
18.11	4.37	25.40	46.43	3.05	30.12	3.56		38

Note: Please refer to case style drawing for details

### ELECTRICAL SCHEMATIC

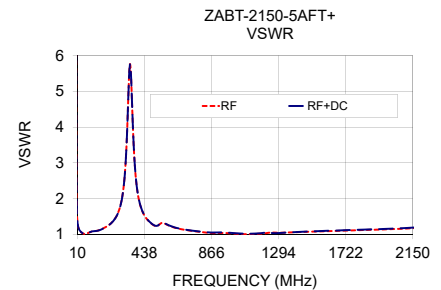
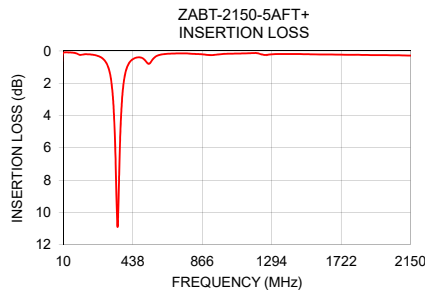


### ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Port	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency			10		2150	MHz
Insertion Loss	RF to RF+DC	10 - 100	-	0.4	0.7	dB
		800 - 2150	-	0.5	1.2	
VSWR	RF to RF+DC	10 - 100	-	1.4	1.6	:1
		800 - 2150	-	1.2	1.6	

### TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	
		RF	RF + DC
10	0.1	1.33	1.33
20	0.1	1.14	1.14
50	0.1	1.02	1.02
100	0.2	1.08	1.08
300	1.5	2.18	2.17
500	0.4	1.25	1.25
700	0.2	1.12	1.13
800	0.2	1.07	1.07
1000	0.2	1.02	1.04
1200	0.1	1.02	1.04
1400	0.2	1.06	1.06
1600	0.2	1.09	1.10
1800	0.2	1.12	1.13
2000	0.3	1.14	1.16
2150	0.3	1.17	1.19



### NOTES

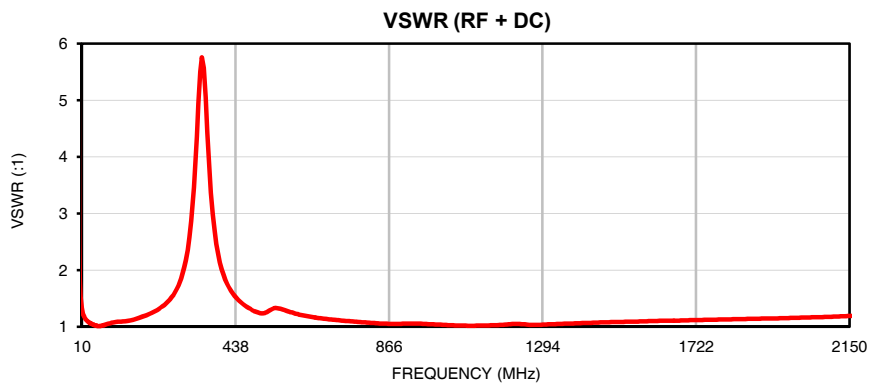
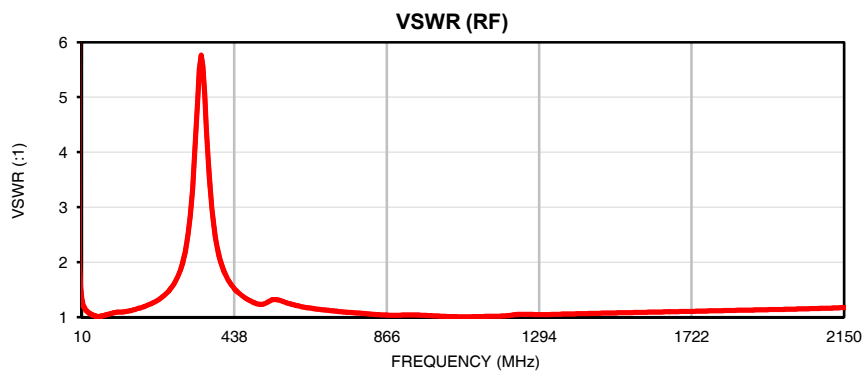
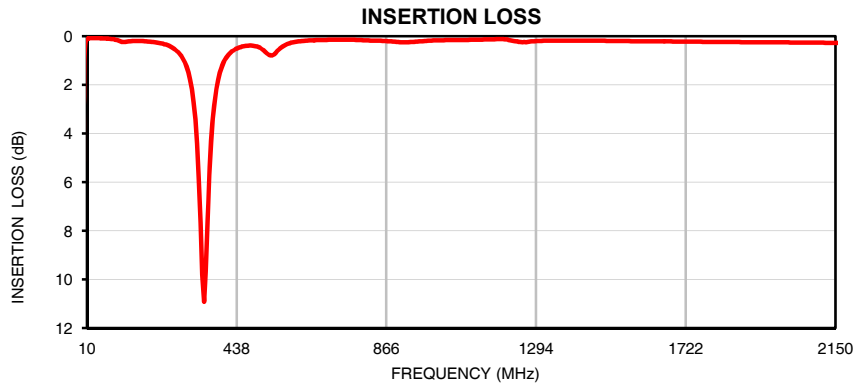
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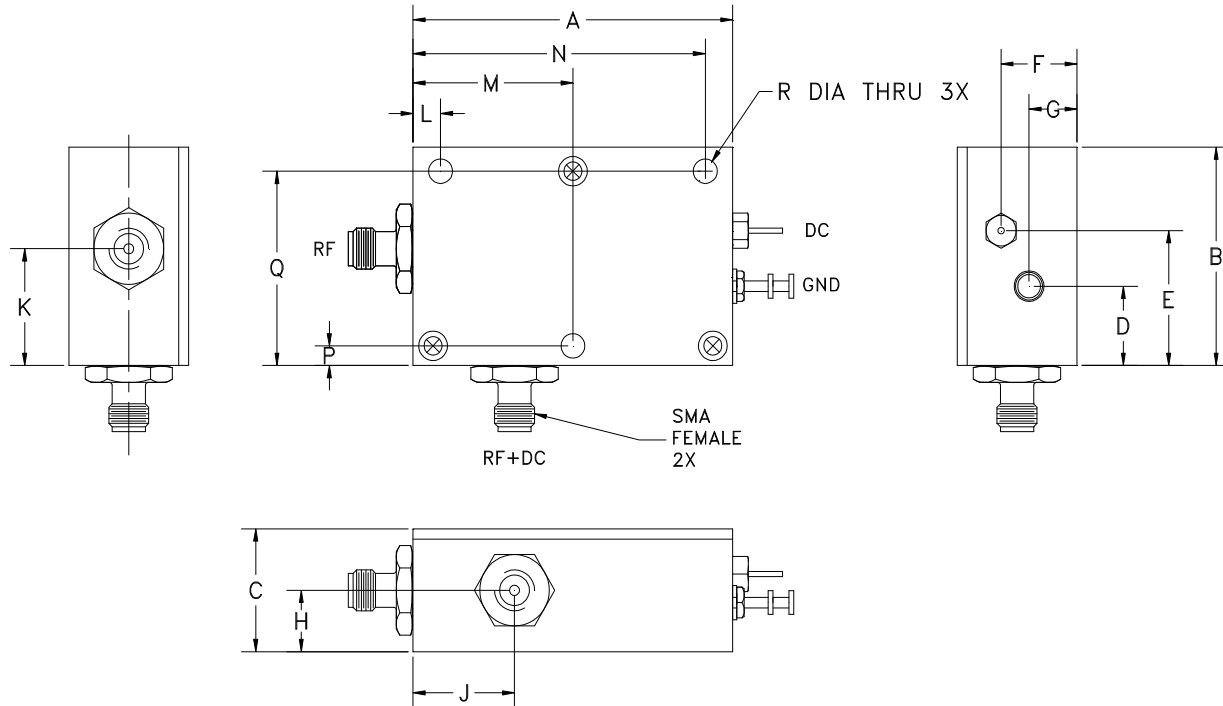
## Typical Performance Data

FREQ.	INSERTION LOSS	VSWR	
		RF	RF + DC
(MHz)	(dB)	(:1)	(:1)
10	0.1	1.33	1.33
20	0.1	1.14	1.14
30	0.1	1.08	1.08
40	0.1	1.04	1.04
50	0.1	1.02	1.02
60	0.1	1.01	1.01
70	0.1	1.03	1.02
80	0.1	1.04	1.04
90	0.1	1.06	1.06
100	0.2	1.08	1.08
120	0.2	1.09	1.09
150	0.2	1.12	1.12
200	0.2	1.23	1.23
250	0.4	1.45	1.44
300	1.5	2.18	2.17
350	9.7	5.57	5.57
400	1.1	2.00	2.01
450	0.4	1.44	1.45
500	0.4	1.25	1.25
550	0.7	1.32	1.33
600	0.3	1.23	1.24
650	0.2	1.16	1.17
700	0.2	1.12	1.13
750	0.1	1.09	1.10
800	0.2	1.07	1.07
850	0.2	1.04	1.05
900	0.2	1.03	1.05
950	0.2	1.04	1.05
1000	0.2	1.02	1.04
1050	0.2	1.01	1.02
1100	0.2	1.01	1.02
1150	0.1	1.01	1.02
1200	0.1	1.02	1.04
1250	0.2	1.05	1.04
1300	0.2	1.05	1.04
1350	0.2	1.05	1.05
1400	0.2	1.06	1.06
1450	0.2	1.07	1.07
1500	0.2	1.08	1.08
1550	0.2	1.08	1.09
1600	0.2	1.09	1.10
1650	0.2	1.10	1.11
1700	0.2	1.10	1.11
1750	0.2	1.11	1.12
1800	0.2	1.12	1.13
1850	0.2	1.12	1.14
1900	0.2	1.13	1.14
1950	0.2	1.14	1.15
2000	0.3	1.14	1.16
2030	0.3	1.15	1.16
2050	0.3	1.15	1.17
2080	0.3	1.16	1.17
2100	0.3	1.16	1.18
2150	0.3	1.17	1.19

*Typical Performance Curves*



### Outline Dimensions



CASE #	A	B	C	D	E	F	G	H	J	K	L	M	N	P
JU1387	2.000 (50.80)	1.333 (33.86)	.750 (19.05)	.484 (12.29)	.823 (20.90)	.475 (12.07)	.300 (7.62)	.375 (9.53)	.635 (16.13)	.713 (18.11)	.172 (4.37)	1.000 (25.40)	1.828 (46.43)	0.120 (3.05)

CASE #	Q	R	WT. GRAMS
JU1387	1.186 (30.12)	0.140 (3.56)	38

Dimensions are in inches (mm). Tolerances: 2 Pl.  $\pm .03$ ; 3 Pl.  $\pm .015$

#### Notes:

- Case material: Aluminum alloy.
- Case finish:  
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I