

# Coaxial Bias-Tee

50Ω Wideband 300 to 3500 MHz

## ZFBT-352-FT+



Generic photo used for illustration purposes only

CASE STYLE: Y460

Connectors Model

SMA ZFBT-352-FT+  
BRACKET (OPTION "B")

**+RoHS Compliant**

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

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	30 dBm max.
Voltage at DC port	30V max.
Input Current	4A
DC resistance from DC to RF&DC port	0.11 ohm typ.

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

### Coaxial Connections

RF	in (SMA female)
RF&DC	out (SMA male)
DC	(feed-through pin)
GROUND	GROUND

### Features

- wideband, 300 to 3500 MHz
- low insertion loss, 0.5 dB typ.
- high DC current, 4A
- feed through terminal per DC port
- good return loss

### Applications

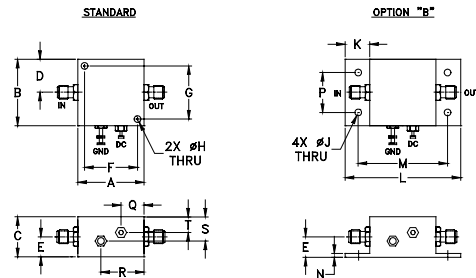
- biasing amplifiers
- biasing of laser diodes
- biasing of active antennas
- DC return
- DC blocking
- test accessory

### Bias-Tee Electrical Specifications

FREQUENCY (MHz)		INSERTION LOSS (dB)		ISOLATION (RF port to DC port) (RF&DC port to DC port)		VSWR* (:1)	
$f_L$	$f_U$	Typ.	Max.	Typ.	Min.	Typ.	Max.
300	700	0.4	0.9	18	15	1.13	1.4
700	3500	0.5	1.1	23	19	1.10	1.4

\*VSWR measured with open and short at DC port.

### Outline Drawing



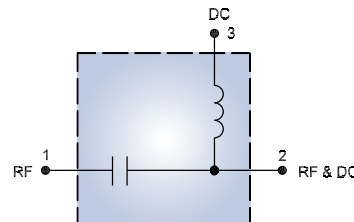
### Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K
1.25	1.25	.75	.63	.36	1.000	1.000	.125	.125	.46
31.75	31.75	19.05	16.00	9.14	25.40	25.40	3.18	3.18	11.68
L	M	N	P	Q	R	S	T	wt.	
2.18	1.688	.06	.750	.50	.80	.45	.29	grams	
55.37	42.88	1.524	19.05	12.7	20.32	11.43	7.366	38	

### Typical Performance Data

Freq. (MHz)	PIN (dBm)	INSERTION LOSS (dB)		ISOLATION (dB) DC-RF&DC	VSWR (:1)
		0A	4A		
300.00	-8.74	0.53	0.59	17.67	1.14
450.00	-8.90	0.54	0.55	19.46	1.12
600.00	-8.81	0.44	0.39	20.53	1.11
700.00	-8.72	0.41	0.35	21.08	1.09
800.00	-8.86	0.60	0.76	21.50	1.09
1000.00	-8.89	0.53	0.49	22.45	1.10
1100.00	-8.97	0.59	0.54	22.94	1.06
1400.00	-9.15	0.46	0.41	24.22	1.08
1500.00	-9.14	0.45	0.40	24.73	1.09
1800.00	-8.85	0.49	0.44	25.97	1.10
1900.00	-8.90	0.50	0.45	26.45	1.10
2100.00	-9.02	0.52	0.47	27.30	1.09
2200.00	-9.11	0.50	0.44	27.68	1.10
2400.00	-9.19	0.52	0.44	27.99	1.09
2500.00	-9.20	0.50	0.45	28.42	1.09
2600.00	-9.27	0.52	0.47	28.46	1.08
2800.00	-9.40	0.56	0.55	28.20	1.06
3000.00	-9.48	0.63	0.63	27.73	1.04
3200.00	-9.50	0.72	0.67	27.24	1.04
3500.00	-9.58	0.82	0.77	26.95	1.12

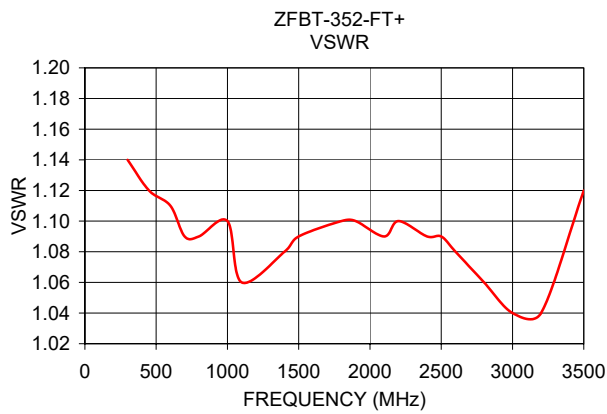
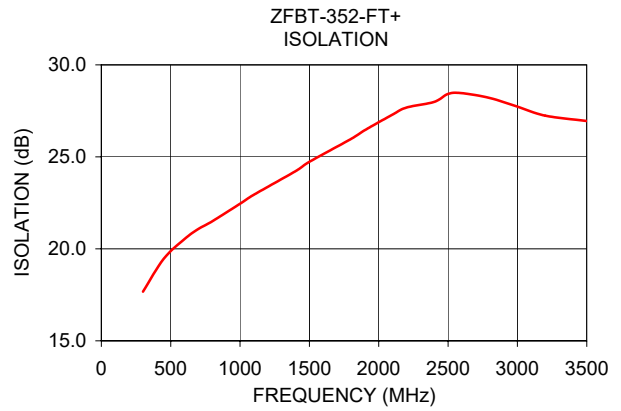
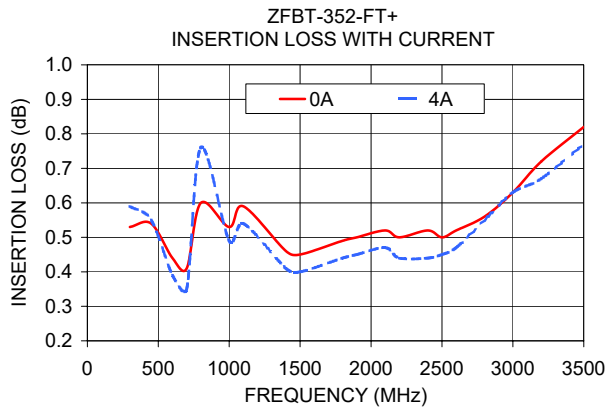
### Electrical Schematic



#### 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](http://www.minicircuits.com/MCLStore/terms.jsp)





**Notes**

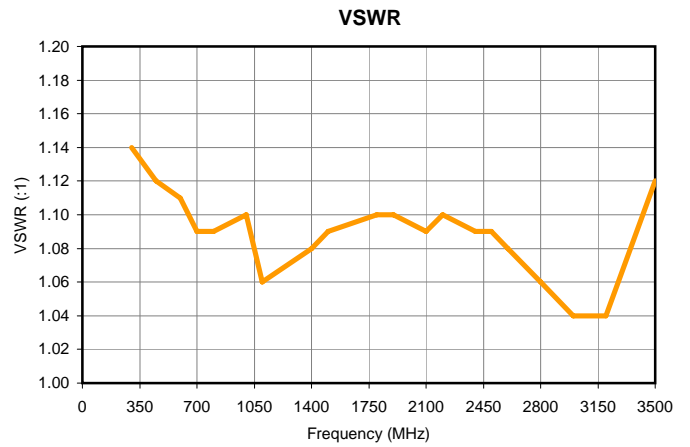
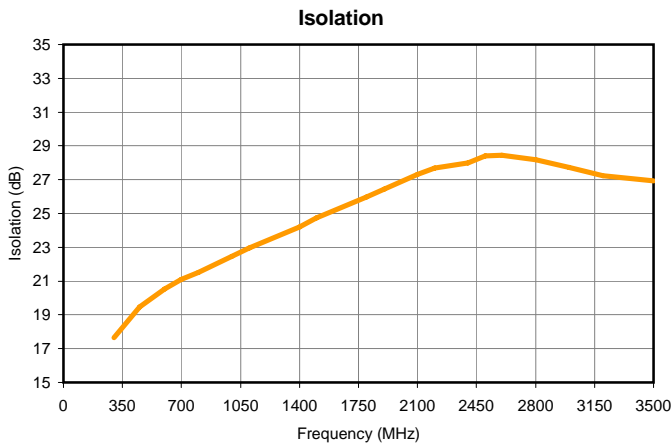
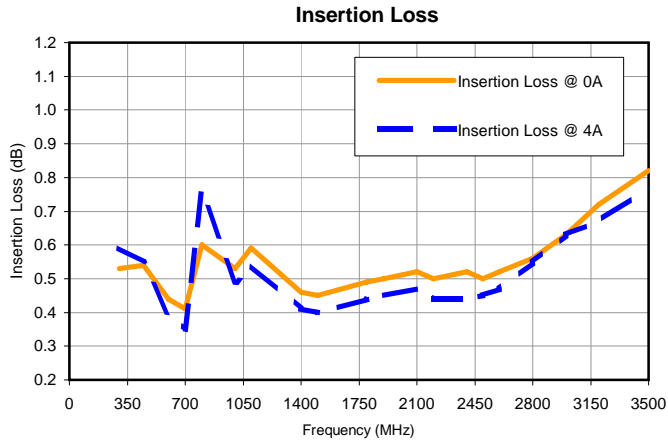
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## Typical Performance Data

FREQ. (MHz)	PIN (dBm)	INSERTION LOSS with Current (RF port to RF&DC port) (dB)		ISOLATION (RF port to DC port) (RF&DC port to DC port) (dB)	VSWR (:1)
		0A	4A		
300.0	-8.74	0.53	0.59	17.67	1.14
450.0	-8.90	0.54	0.55	19.46	1.12
600.0	-8.81	0.44	0.39	20.53	1.11
700.0	-8.72	0.41	0.35	21.08	1.09
800.0	-8.86	0.60	0.76	21.50	1.09
1000.0	-8.89	0.53	0.49	22.45	1.10
1100.0	-8.97	0.59	0.54	22.94	1.06
1400.0	-9.15	0.46	0.41	24.22	1.08
1500.0	-9.14	0.45	0.40	24.73	1.09
1800.0	-8.85	0.49	0.44	25.97	1.10
1900.0	-8.90	0.50	0.45	26.45	1.10
2100.0	-9.02	0.52	0.47	27.30	1.09
2200.0	-9.11	0.50	0.44	27.68	1.10
2400.0	-9.19	0.52	0.44	27.99	1.09
2500.0	-9.20	0.50	0.45	28.42	1.09
2600.0	-9.27	0.52	0.47	28.46	1.08
2800.0	-9.40	0.56	0.55	28.20	1.06
3000.0	-9.48	0.63	0.63	27.73	1.04
3200.0	-9.50	0.72	0.67	27.24	1.04
3500.0	-9.58	0.82	0.77	26.95	1.12

## Typical Performance Curves



### Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
Y460	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.0)	.36 (9.15)	1.000 (25.4)	1.000 (25.4)	.125 (3.2)	.125 (3.2)	.46 (11.7)	2.18 (55.4)	1.688 (42.9)	.06 (1.5)

CASE#	P	Q	R	S	T	WT. GRAMS
Y460	.750 (19.0)	.50 (12.7)	.80 (20.3)	.45 (11.4)	.29 (7.4)	38

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

#### Notes:

1. Case material: Aluminum alloy.
2. Case finish:  
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Mounting bracket available on request. Add suffix B to part number



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