Coaxial

DC Block SMA

BLK-89-S+

50Ω 0.1 MHz to 8 GHz

CASE STYLE: FF888

SMA Connectors	Model
Female-Male	BLK-89-S+

+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
DC Input Voltage	50V Max.

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

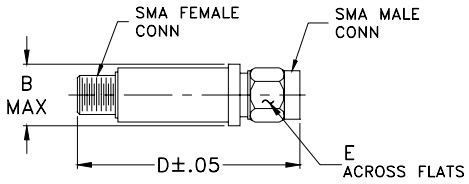
Features

- broadband performance
- low insertion loss
- rugged unibody construction
- off-the-shelf availability

Applications

- test and measurement instrumentation
- communication systems
- defense systems

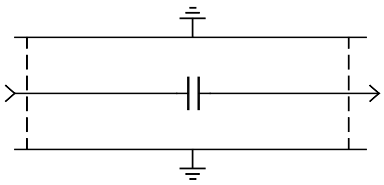
Outline Drawing



Outline Dimensions (inch / mm)

B	D	E	wt
.410	1.18	.312	grams
10.41	29.97	7.92	7.0

Electrical Schematic

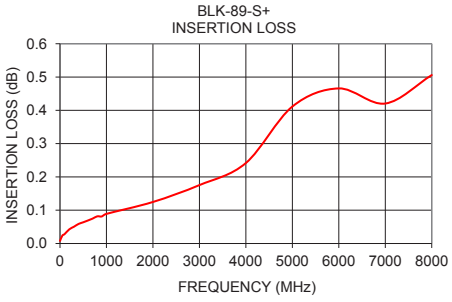


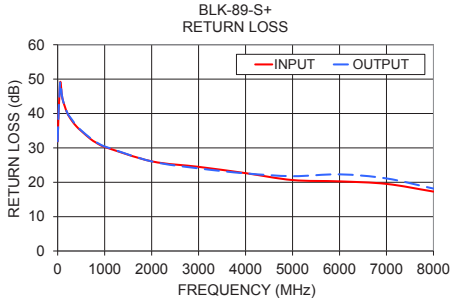
Electrical Specifications at 25°C

FREQUENCY (MHz)	INSERTION LOSS (dB)		RETURN LOSS (dB)	
	Typ.	Max.	Typ.	Min.
0.1 - 100	0.010	0.09	40	20
100 - 1000	0.10	0.3	36	25
1000 - 4000	0.15	0.8	24	18
4000 - 8000	0.5	0.9	20	13

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		Male	Female
0.3	0.01	31.86	31.89
0.6	0.01	32.19	32.23
0.9	0.01	32.52	32.58
1.0	0.01	32.63	32.69
50.0	0.02	48.75	48.76
100.0	0.03	44.40	44.44
200.0	0.04	40.26	40.33
300.0	0.05	37.96	38.27
400.0	0.06	36.24	36.45
500.0	0.06	34.94	35.08
700.0	0.07	32.57	32.78
800.0	0.08	31.67	31.84
900.0	0.08	30.86	31.04
1000.0	0.09	30.27	30.41
2000.0	0.12	26.09	26.06
3000.0	0.18	24.48	24.04
4000.0	0.24	22.65	22.58
5000.0	0.41	20.64	21.77
6000.0	0.47	20.26	22.30
7000.0	0.42	19.52	21.11
8000.0	0.51	17.29	18.16





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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.

Satellite MuxTee

Bias-Tee

50Ω 10 to 2150 MHz

Z3BT-2R15G+

CASE STYLE: CC1553

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)

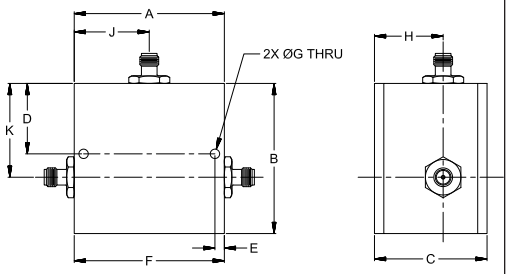
Features

- 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

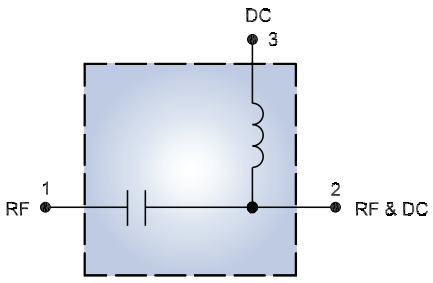
Electrical Specifications at 25°C

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



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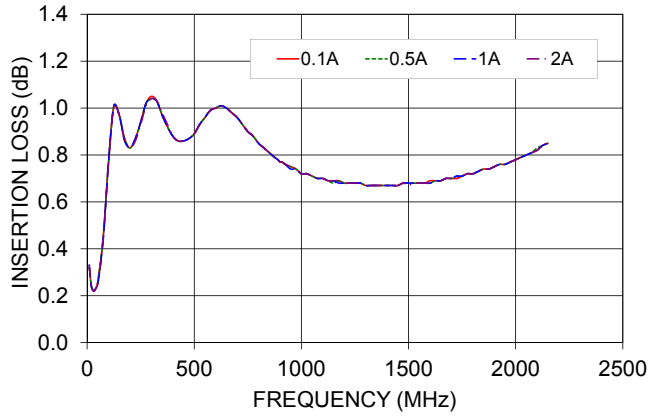
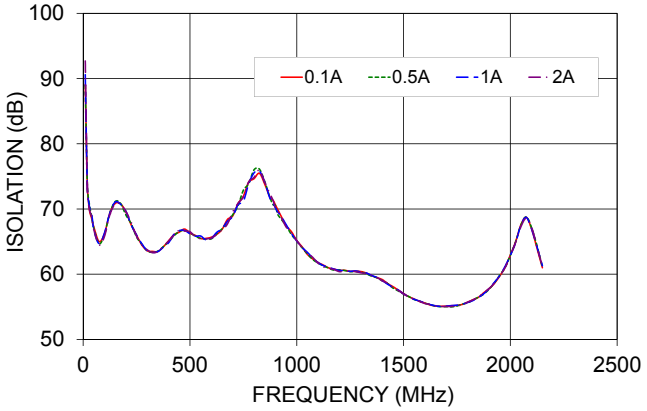
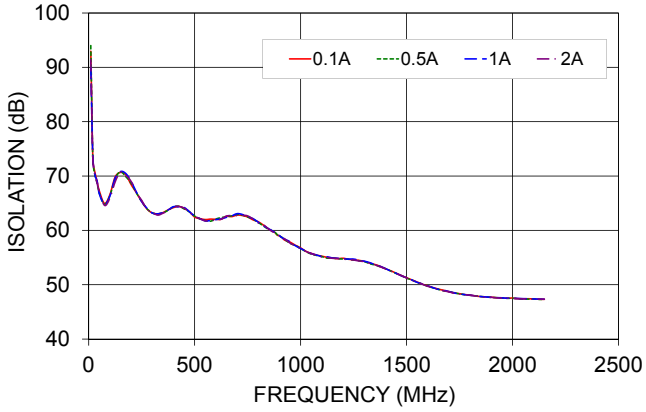
Z3BT-2R15G+
RF to RF&DC
INSERTION LOSS WITH CURRENT (P_{in}= 0dBm)



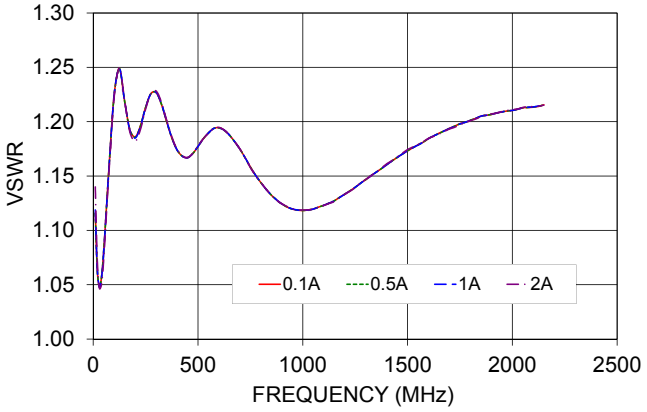
Z3BT-2R15G+
RF to DC port
ISOLATION WITH CURRENT (P_{in}= 0dBm)



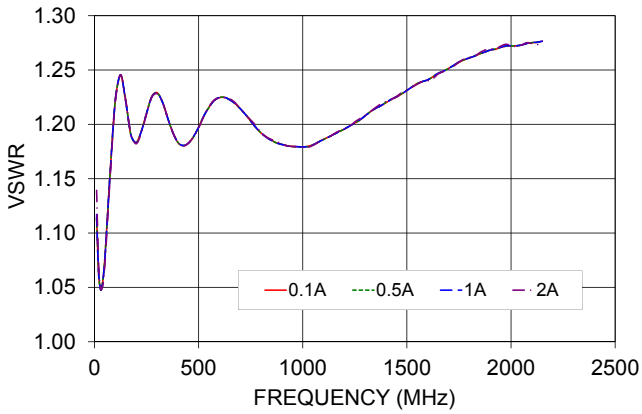
Z3BT-2R15G+
DC&RF to DC port
ISOLATION WITH CURRENT (P_{in}= 0dBm)



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



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



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+10 to +20dBm

Limiter

VLM-52+

50Ω Broadband 10 to 500 MHz

CASE STYLE: FF704

Connectors	Model
SMA	VLM-52-S+

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power	100mW

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

Features

- wideband, 10 to 500 MHz

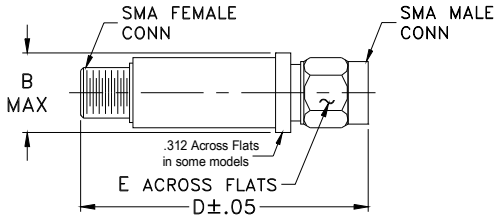
Applications

- military, hi-rel applications
- stabilizing generator outputs
- reducing amplitude variations

+RoHS Compliant

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

Outline Drawing



Outline Dimensions (inch / mm)

B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

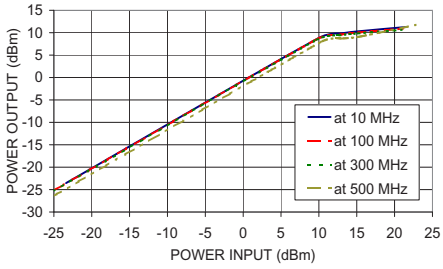
Electrical Specifications

Parameter	Condition	Min.	Typ.	Max.	Units
Frequency Range		10		500	MHz
Low Input Power Insertion Loss			0.5	1.9	dB
Input Power Limiting Range		+10		+20	dBm
Output Power			+9.5		dBm
Limiting Δ Output/1dB Δ Input	Input Power Range (dBm) 9.5 to 12.5 12.5 to 15 15 to 20		 0.30 0.20 0.14		dB/dB

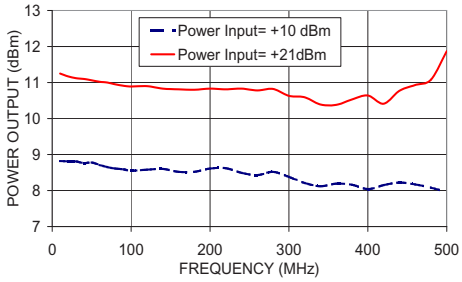
Typical Performance Data

Freq. (MHz)	Low drive Ins. Loss (dB)	Power Output (dBm)				Δ Output / 1dB Δ Input		
		+10 dBm Input	+13 dBm Input	+15.5 dBm Input	+21.3 dBm Input	+10 to +13 dBm Input	+13 to +15.5 dBm Input	+15.5 to +21 dBm Input
10.00	-0.15	8.82	9.86	10.37	11.25	0.34	0.20	0.15
30.00	-0.17	8.81	9.82	10.34	11.12	0.34	0.21	0.13
60.00	-0.15	8.71	9.70	10.23	11.02	0.33	0.21	0.14
70.00	-0.15	8.65	9.63	10.16	11.00	0.33	0.21	0.14
90.00	-0.16	8.59	9.50	10.07	10.91	0.31	0.22	0.14
100.00	-0.19	8.55	9.55	10.06	10.89	0.33	0.20	0.14
120.00	-0.25	8.58	9.60	10.10	10.90	0.34	0.20	0.14
180.00	-0.51	8.52	9.48	10.00	10.80	0.32	0.21	0.14
200.00	-0.57	8.61	9.54	10.05	10.83	0.32	0.20	0.13
220.00	-0.58	8.62	9.57	10.10	10.81	0.32	0.21	0.12
240.00	-0.55	8.49	9.45	10.02	10.83	0.32	0.22	0.14
260.00	-0.46	8.43	9.41	9.96	10.78	0.33	0.22	0.14
300.00	-0.30	8.38	9.42	9.83	10.63	0.34	0.17	0.14
360.00	-0.54	8.19	9.11	9.55	10.38	0.32	0.18	0.14
380.00	-0.77	8.16	9.08	9.48	10.53	0.32	0.17	0.17
400.00	-1.01	8.04	8.96	9.41	10.64	0.32	0.18	0.20
440.00	-1.42	8.22	8.89	9.32	10.77	0.25	0.18	0.22
480.00	-1.48	8.08	8.79	9.28	11.08	0.26	0.20	0.26
500.00	-1.35	7.96	8.70	9.17	11.87	0.27	0.19	0.35

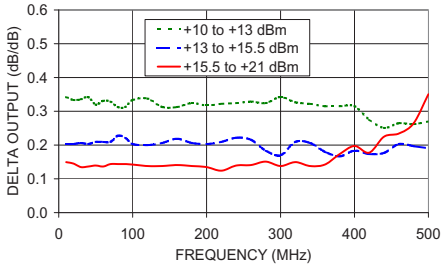
VLM-52+
POWER OUTPUT vs. POWER INPUT



VLM-52+
POWER OUTPUT vs. FREQUENCY



VLM-52+
DELTA OUTPUT/ DELTA 1dB INPUT



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Coaxial

Power Splitter/Combiner

ZFRSC-4-842+

4 Way-0° Resistive 50Ω DC to 8400 MHz

CASE STYLE: G15

Connectors	Model
SMA	ZFRSC-4-842-S+
BRACKET (OPTION "B")	

+RoHS Compliant

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

Maximum Ratings

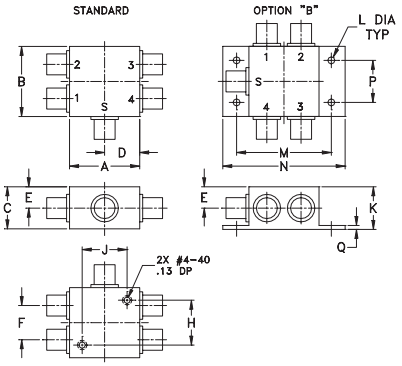
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.16W max.
Internal Dissipation	0.12W max.

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

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4

Outline Drawing

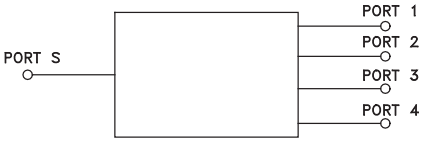


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	.61	--	.80
31.75	31.75	19.05	16.00	9.65	15.49	--	20.32

J	K	L	M	N	P	Q	wt
.80	.76	.125	1.688	2.18	.75	.07	grams
20.32	19.30	3.18	42.88	55.37	19.05	1.78	85.0

Electrical Schematic



Features

- wideband, DC to 8400 MHz
- good VSWR, 1.15:1 typ.
- excellent amplitude unbalance, 0.3 dB typ.
- rugged shielded case

Applications

- laboratory
- test set-ups

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		8400	MHz
Insertion Loss, above 12dB	DC - 3000	—	0.05	0.4	dB
	3000 - 6000	—	0.3	0.8	
	6000 - 8400	—	0.6	1.0	
Isolation	DC - 3000	—	6.0	—	dB
	3000 - 6000	—	6.4	—	
	6000 - 8400	—	6.4	—	
Phase Unbalance	DC - 3000	—	1.5	5.0	Degree
	3000 - 6000	—	4.0	9.0	
	6000 - 8400	—	5.0	10.0	
Amplitude Unbalance	DC - 3000	—	0.1	0.3	dB
	3000 - 6000	—	0.3	0.5	
	6000 - 8400	—	0.4	0.8	
VSWR (Port S)	DC - 3000	—	1.05	1.12	:1
	3000 - 6000	—	1.05	1.15	
	6000 - 8400	—	1.20	1.35	
VSWR (Port 1-4)	DC - 3000	—	1.08	1.20	:1
	3000 - 6000	—	1.15	1.25	
	6000 - 8400	—	1.25	1.45	

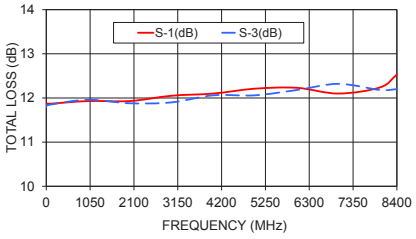
This is a resistive power divider to enable frequency coverage from DC to the highest rated frequency. Since resistive power divider do not provide a high degree of isolation (basically isolation equals the insertion loss between ports).

Typical Performance Data

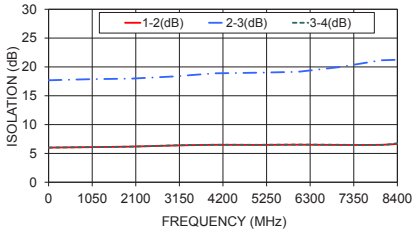
Freq. (MHz)	Total Loss[1] (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
0	11.83	11.86	11.80	11.85	0.06	6.00	17.68	5.99	0.39	1.04	1.04	1.04	1.03	1.04
10	11.87	11.88	11.83	11.87	0.04	6.01	17.71	6.00	0.04	1.04	1.03	1.03	1.03	1.03
50	11.87	11.88	11.84	11.87	0.04	6.01	17.70	6.01	0.08	1.04	1.03	1.03	1.03	1.03
100	11.87	11.89	11.85	11.88	0.04	6.02	17.71	6.02	0.16	1.04	1.03	1.03	1.03	1.03
1000	11.93	11.91	11.96	11.91	0.05	6.09	17.87	6.09	1.07	1.04	1.04	1.04	1.06	1.04
2000	11.93	11.88	11.88	11.90	0.05	6.18	17.97	6.18	1.05	1.03	1.05	1.06	1.09	1.05
3000	12.05	12.01	11.90	12.00	0.15	6.37	18.34	6.39	2.23	1.02	1.04	1.08	1.11	1.06
4000	12.10	12.12	12.06	12.01	0.11	6.49	18.89	6.50	2.63	1.02	1.08	1.14	1.15	1.09
5000	12.21	12.25	12.06	12.13	0.19	6.47	18.99	6.49	4.52	1.05	1.15	1.18	1.15	1.12
6000	12.23	12.23	12.18	12.31	0.13	6.51	19.15	6.53	6.33	1.10	1.15	1.14	1.09	1.07
7000	12.10	12.05	12.32	12.33	0.28	6.47	19.96	6.50	6.41	1.08	1.12	1.04	1.06	1.06
8000	12.24	12.05	12.18	12.48	0.43	6.49	21.15	6.46	4.82	1.16	1.20	1.12	1.16	1.23
8400	12.53	12.26	12.20	12.55	0.35	6.66	21.24	6.76	5.48	1.26	1.27	1.17	1.23	1.28

1. Total Loss = Insertion Loss + 12dB splitter loss.

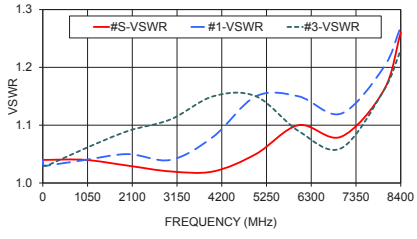
ZFRSC-4-842+
TOTAL LOSS



ZFRSC-4-842+
ISOLATION



ZFRSC-4-842+
VSWR



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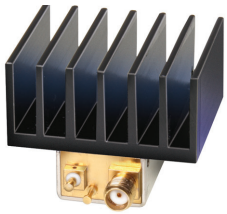
Coaxial

Amplifier

ZX60-100VH+

50Ω Medium High Power 0.3 to 100 MHz



The Big Deal

- Miniature Shielded Rugged Case
- Wide frequency range
- Excellent Gain Flatness

Product Overview

This product could be used as a driver amplifier with 1W typical output power. The gain of this amplifier has an excellent flatness over a very wide frequency range. This amplifier has a high dynamic range and therefore can be used as RF front end or IF amplifier.

Feature	Advantages
Frequency range: 0.3-100MHz	Covers HF and partially VHF frequency bands, could be used in FM broadcast up to 110MHz. Great for the radio amateur enthusiasts.
Excellent Gain Flatness: +/- 0.3dB, typ.	Excellent gain flatness minimizes distortion of amplified signals, including multi-tone, complex modulation, very wide frequency range and noise-like signals
Output Power 1W (+30dBm, typ)	High output power in very small package
Noise Figure	Low noise figure, 4dB typ. and high OIP3, +43dBm typ. defines the high dynamic range of the amplifier.

Coaxial

Amplifier

ZX60-100VH+

50Ω Medium High Power 0.3 to 100 MHz

Model No.	ZX60-100VH+	▲ZX60-100VHX+
Case Style	MM1750	GA955
Connectors	SMA	

+RoHS Compliant

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

Features

- single +12V operation
- wide bandwidth, 0.3 to 100 MHz, usable to 110 MHz
- excellent gain flatness: ±0.3dB, typ.
- low noise figure, 4 dB typ.
- output power, up to +30 dBm typ.
- small size

Applications

- buffer amplifier
- driver amplifier
- HF communication
- lab
- instrumentation
- test equipment

Product Description

ZX60-100VH+ is a Class-A, high dynamic range, unconditionally stable amplifier. It features a very small ruggedized case, the ability to withstand accidental open or short at output and reverse bias protection for added reliability under difficult conditions.

Electrical Specifications at 25°C

Parameter	Condition (MHz)	ZX60-100VH+ ▲ZX60-100VHX+ Min.	Typ.	Max.	Units
Frequency Range		0.3	—	100	MHz
Gain	0.3-100	33	36	—	dB
Gain Flatness	0.3-100	—	±0.3	—	dB
Output Power at 1dB compression	0.3-100	—	+30	—	dBm
Output third order intercept point	0.3-100	—	+43	—	dBm
Noise Figure	10-100	—	4	—	dB
Input VSWR	0.3-100	—	1.6	—	:1
Output VSWR	0.3-100	—	1.5	—	:1
Active Directivity *(Isolation-Gain)*	0.3-100	—	14	—	dB
DC Supply Voltage		—	12*	—	V
Supply Current		—	320	370	mA

* Recommended Operating Voltage.

▲Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 85°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 3.3°C/W max.

Maximum Ratings

Parameter	Ratings
Operating Temperature (base plate)	-40°C to 85°C
Storage Temperature	-55°C to 100°C
DC Voltage	13V
Input RF Power (no damage)	+15 dBm
Power Dissipation	4.4W

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

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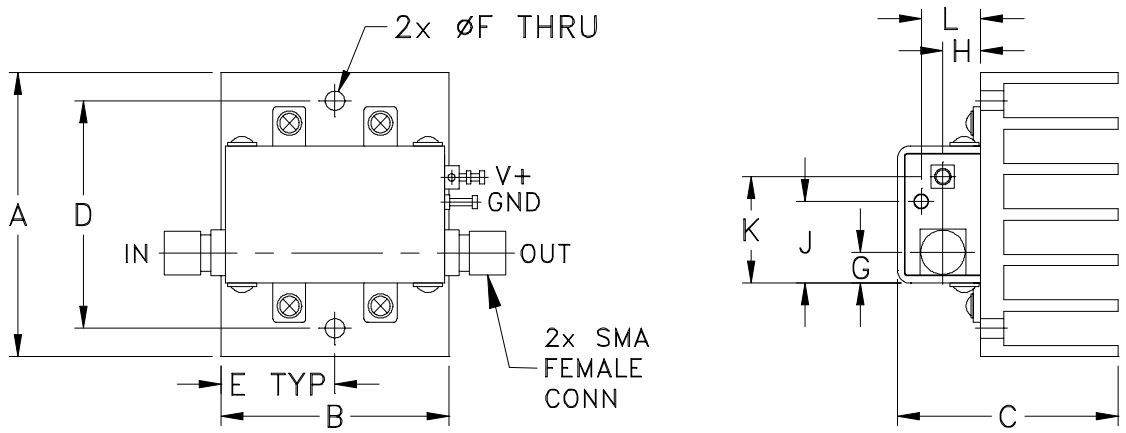
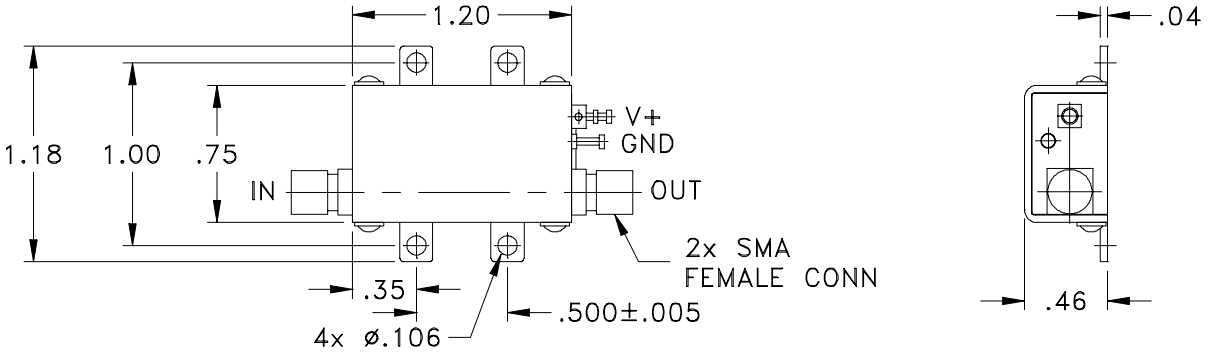
Outline Drawing for models with heatsink



Outline Drawing for models without heatsink



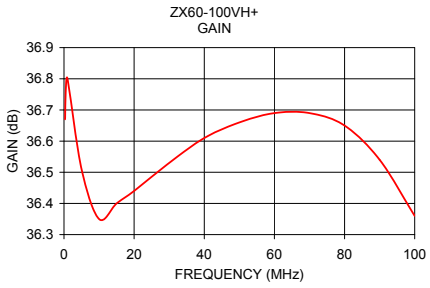
NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminal. See Application Note. AN-40-010.

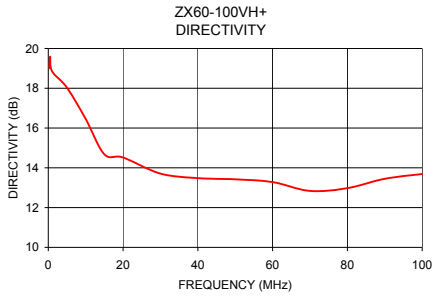
Outline Dimensions (inch / mm)

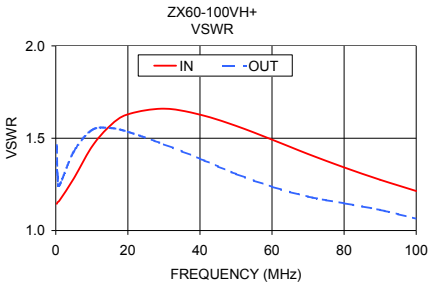
A	B	C	D	E	F	G	H	J	K	L	wt*
1.560	1.25	1.21	1.25	0.63	0.106	0.17	0.21	0.45	0.59	0.33	grams
39.62	31.75	30.73	31.75	16.00	2.69	4.32	5.33	11.43	14.99	8.38	61.4

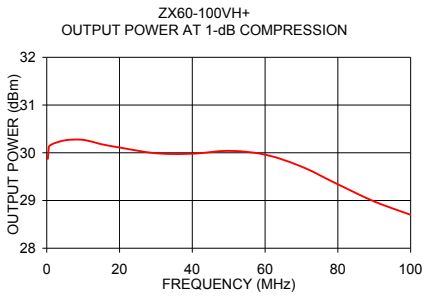
*35.0 grams without heatsink

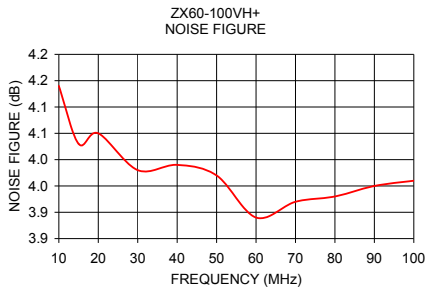
FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1)		POUT at 1 dB COMPR. (dBm)	NOISE FIGURE (dB)	IP3 (dBm)
	12V	12V	IN	OUT	12V	12V	12V
0.30	36.67	19.01	1.14	1.46	29.87	—	40.86
0.50	36.76	19.59	1.15	1.30	30.05	—	42.65
1.00	36.80	18.86	1.16	1.25	30.16	—	44.39
5.00	36.51	18.03	1.28	1.43	30.26	—	44.51
10.00	36.35	16.46	1.45	1.54	30.27	4.14	43.98
15.00	36.40	14.68	1.57	1.56	30.18	4.03	43.65
20.00	36.44	14.52	1.63	1.53	30.11	4.05	43.45
30.00	36.53	13.71	1.66	1.47	29.99	3.98	43.33
40.00	36.61	13.48	1.63	1.39	29.98	3.99	43.23
50.00	36.66	13.42	1.57	1.31	30.04	3.97	43.21
60.00	36.69	13.28	1.49	1.24	29.96	3.89	43.21
70.00	36.69	12.84	1.41	1.18	29.71	3.92	43.11
80.00	36.65	12.98	1.34	1.15	29.34	3.93	42.94
90.00	36.54	13.45	1.27	1.11	28.98	3.95	42.64
100.00	36.36	13.69	1.21	1.06	28.70	3.96	42.38

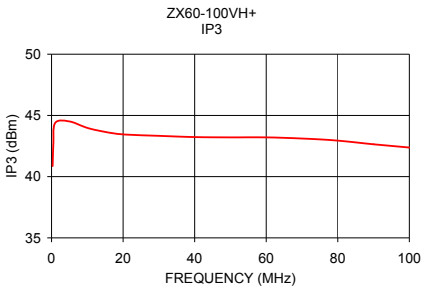












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Surface Mount

Low Pass Filter

LPF-B35+

50Ω DC to 35 MHz

The Big Deal

- Good passband Insertion loss, 0.85 dB typical
- High rejection, 40 dB from 48-2000 MHz
- Fast roll-off
- Miniature shielded package

CASE STYLE: HZ1198

Product Overview

The LPF-B35+ is a lowpass filter in a shielded package (size of 0.472" x 0.826" x .22") fabricated using SMT technology. Covering DC-50 MHz band width, these units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Low frequency and good passband Insertion loss, 0.85 dB typical	Low insertion loss will be used in designs optimized for high performance applications.
Fast roll-off	Fast roll-off, this will attenuate frequencies closer to the passband with good rejection value of 72 dB.
Good ultimate rejection	This enables the filters to attenuate spurious signals and reject harmonics for broadband frequency.

Surface Mount

Low Pass Filter

LPF-B35+

50Ω DC to 35 MHz

CASE STYLE: HZ1198

Features

- High rejection, 30 dB typical
- Sharp insertion loss roll-off
- Shielded case
- Aqueous washable

Applications

- Defence communications
- Transmitters / receivers
- Harmonic rejection

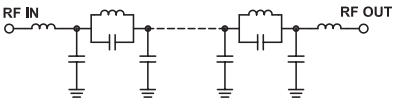
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-35	—	0.85	2	dB
	Freq. Cut-Off	F2	40	—	3	—	dB
	VSWR	DC-F1	DC-35	—	1.5	2	:1
Stop Band	Rejection Loss	F3-F4	45-2500	20	30	—	dB
	VSWR	F3-F4	45-2500	—	15	—	:1

Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W max.

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

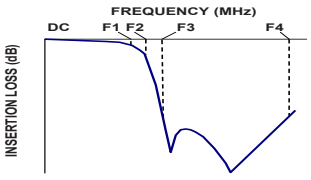
Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
0.5	0.13	1.04	1.00	22.33
5.0	0.21	1.20	5.00	22.33
10.0	0.25	1.23	10.00	22.85
20.0	0.36	1.21	15.00	24.45
30.0	0.50	1.12	18.00	25.65
35.0	0.78	1.34	20.00	26.58
40.0	1.82	1.67	22.00	27.74
42.0	10.39	9.33	23.00	28.50
44.0	24.43	19.54	24.00	29.39
45.0	31.15	22.29	25.00	30.44
46.0	37.80	24.48	26.00	31.70
48.0	51.90	28.03	27.00	33.05
50.0	70.55	31.60	28.00	34.52
70.0	81.69	62.05	29.00	36.19
100.0	73.91	108.58	30.00	37.85
500.0	75.80	217.15	31.00	39.69
1000.0	79.89	91.43	32.00	41.73
1500.0	69.55	64.35	33.00	44.33
2000.0	73.28	51.10	34.00	47.77
2500.0	48.48	46.96	35.00	52.47

Typical Frequency Response



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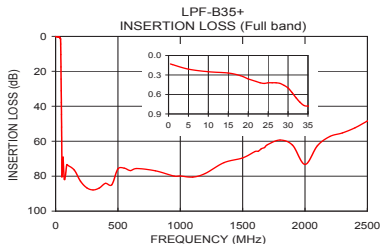

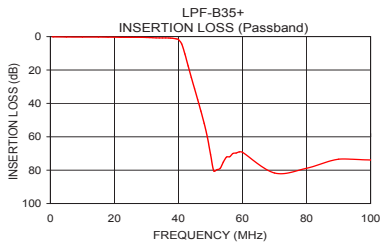

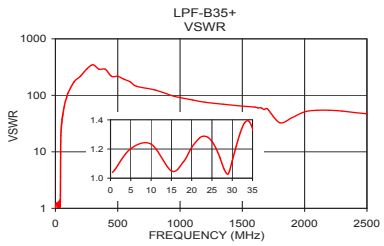

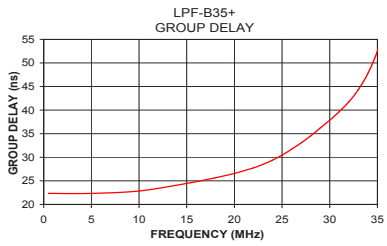

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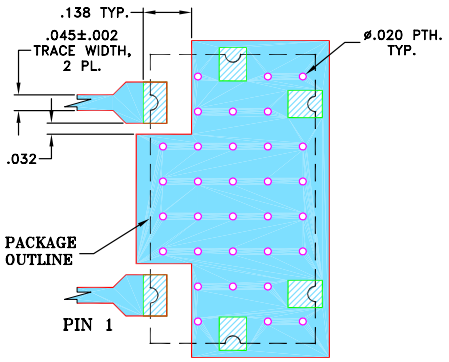
Pad Connections

INPUT	1
OUTPUT	2
GROUND	3,4,5,6

Demo Board MCL P/N: TB-400+
Suggested PCB Layout (PL-247)

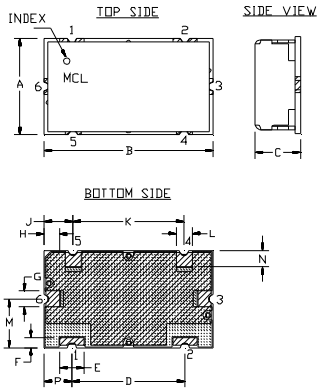


NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

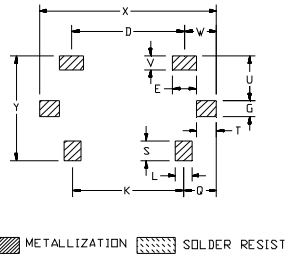
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Outline Drawing



PCB Land Pattern



METALLIZATION SOLDER RESIST

Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M
.472	.826	.220	.551	.118	.047	.078	.076	.142	.543	.078	.236
11.99	20.98	5.59	14.00	3.00	1.19	1.98	1.93	3.61	13.79	1.98	5.99

N	P	Q	S	T	U	V	W	X	Y	wt
.079	.138	.162	.098	.096	.217	.067	.157	.866	.512	grams
2.01	3.51	4.11	2.49	2.44	5.51	1.70	3.99	22.00	13.00	6.0