



Mini-Circuits

SUSPENDED SUBSTRATE STRIPLINE COAXIAL

Diplexer

ZDSS-2R6G3R6GS+

50Ω DC to 8000 MHz (DC - 2600, 3600 - 8000 MHz) SMA Female

KEY FEATURES

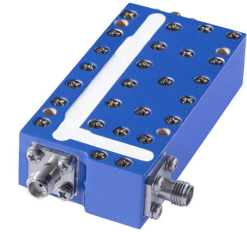
- Low passband Insertion Loss, 0.7 dB Typ.
- Fast Rejection Roll-off
- High Rejection Floor, 80 dB Typ.

APPLICATIONS

- Test & Measurement
- Radar
- Electronic Countermeasures

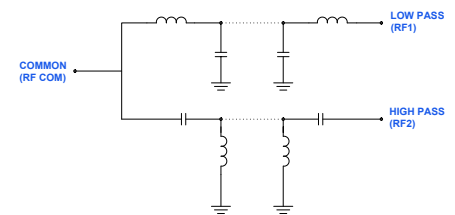
PRODUCT OVERVIEW

Mini-Circuits' Suspended Substrate Stripline filters offer low insertion loss combined with wide stopband, good power handling & temperature stability, small form factor with rugged build ideal for harsh operating environments making them an excellent choice for wideband instruments and systems like ECM, ECCM, ELINT and ultrabroadband receivers. Low pass, high pass, band pass, diplexer and multiplexer designs can be realized with this technology with passband, stopband up to 40GHz and stopband width greater than 6x cutoff frequency.



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



ELECTRICAL SPECIFICATIONS¹ AT +25°C

Parameter		Function (Port)	Frequency (MHz)	Min.	Typ.	Max.	Unit
Passband	Insertion Loss	Low Pass (RF COM-RF1)	DC -2600	—	0.7	1.6	dB
		High Pass (RF COM-RF2)	3600 - 8000	—	0.7	1.8	
	Return Loss	Low Pass (RF1)	DC - 2600	—	9	—	dB
		High Pass (RF2)	3600 - 8000	—	9	—	
		Common (RF COM)	DC - 2600 3600 - 8000	— —	9 9	— —	
Stopband Rejection		Low Pass (RF COM-RF1)	3600 - 8000	60	80	—	dB
		High Pass (RF COM-RF2)	DC - 2600	50	75	—	

1. RF COM & (RF1, RF2) can be used as input / output. See S-Parameters for actual performance.

ABSOLUTE MAXIMUM RATINGS²

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power (RF COM - RF1) ³	20 W @ +25°C
Input Power (RF COM - RF2) ³	20 W @ +25°C

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

3. Power rating applies only to signals within the passband.

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www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. OR
ECO-027795
ZDSS-2R6G3R6GS+
EDU5198
URJ
251120

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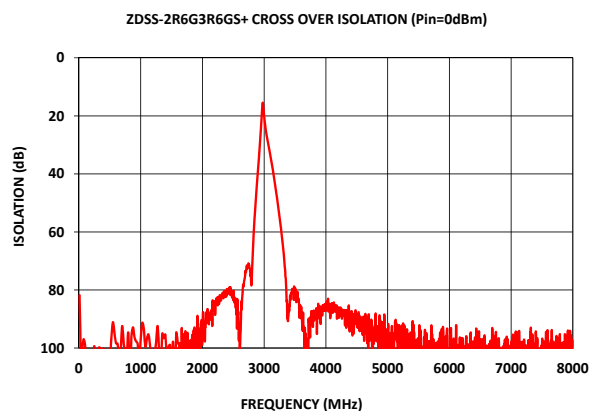
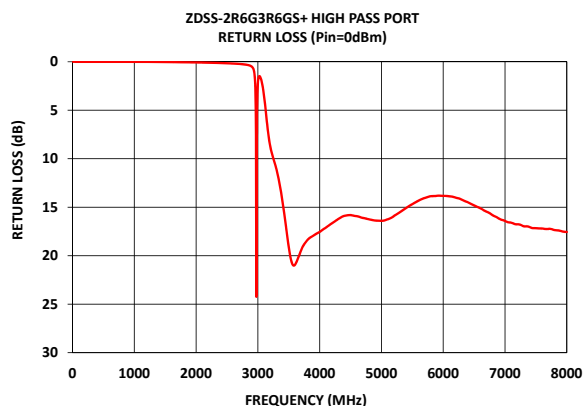
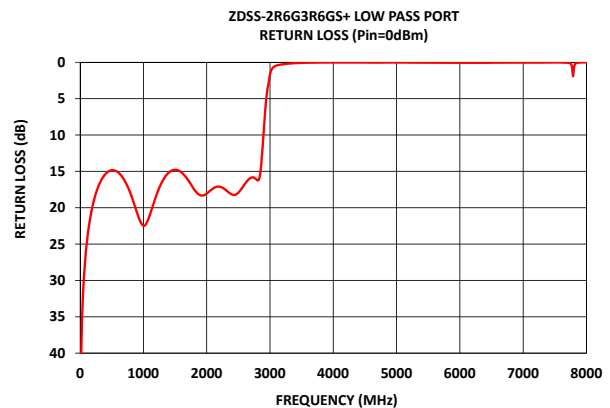
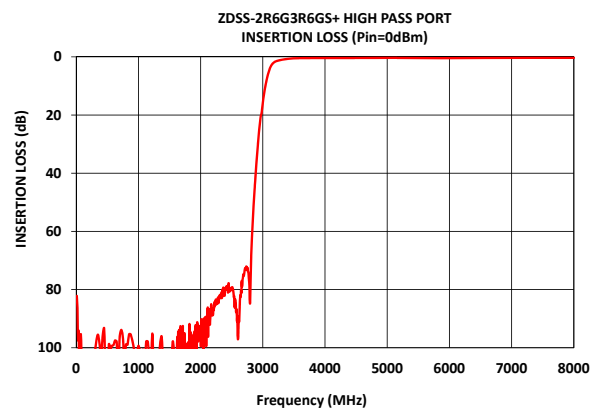
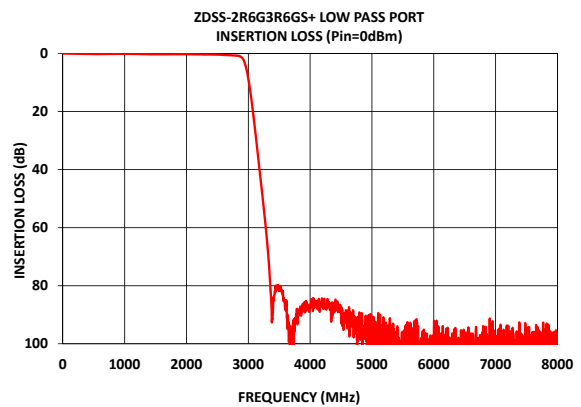
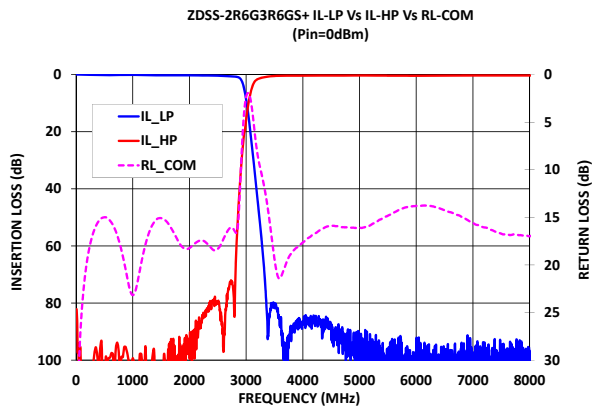
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TYPICAL PERFORMANCE GRAPHS AT +25°C





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SUSPENDED SUBSTRATE STRIPLINE COAXIAL

Diplexer

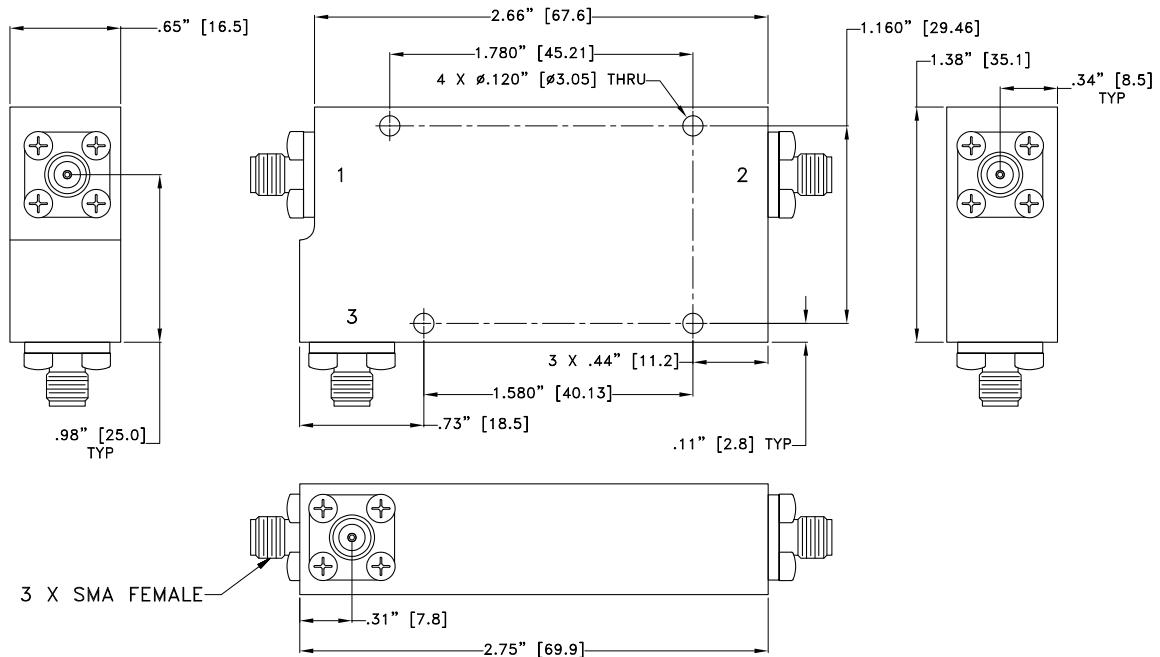
ZDSS-2R6G3R6GS+

50Ω DC to 8000 MHz (DC - 2600, 3600 - 8000 MHz) SMA Female

CONNECTOR DESCRIPTION

Function	Marking on Unit	Connector
RF COM	1	SMA Female
RF1	2	SMA Female
RF2	3	SMA Female

CASE STYLE DRAWING



UNIT WEIGHT: 150 GRAMS

DIMENSIONS ARE IN INCHES [MM]. TOLERANCES: 2 PL. ± 0.06 [1.52]; 3 PL. ± 0.015 [0.381]

PRODUCT MARKING*: ZDSS-2R6G3R6GS+

*Marking may contain other features or characters for internal lot control.





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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data
	Graphs
	S-Parameter (S3P Files) Data Set (.zip file)
Case Style	BBA3697
RoHS Status	Compliant
Environmental Ratings	ENV46

NOTES

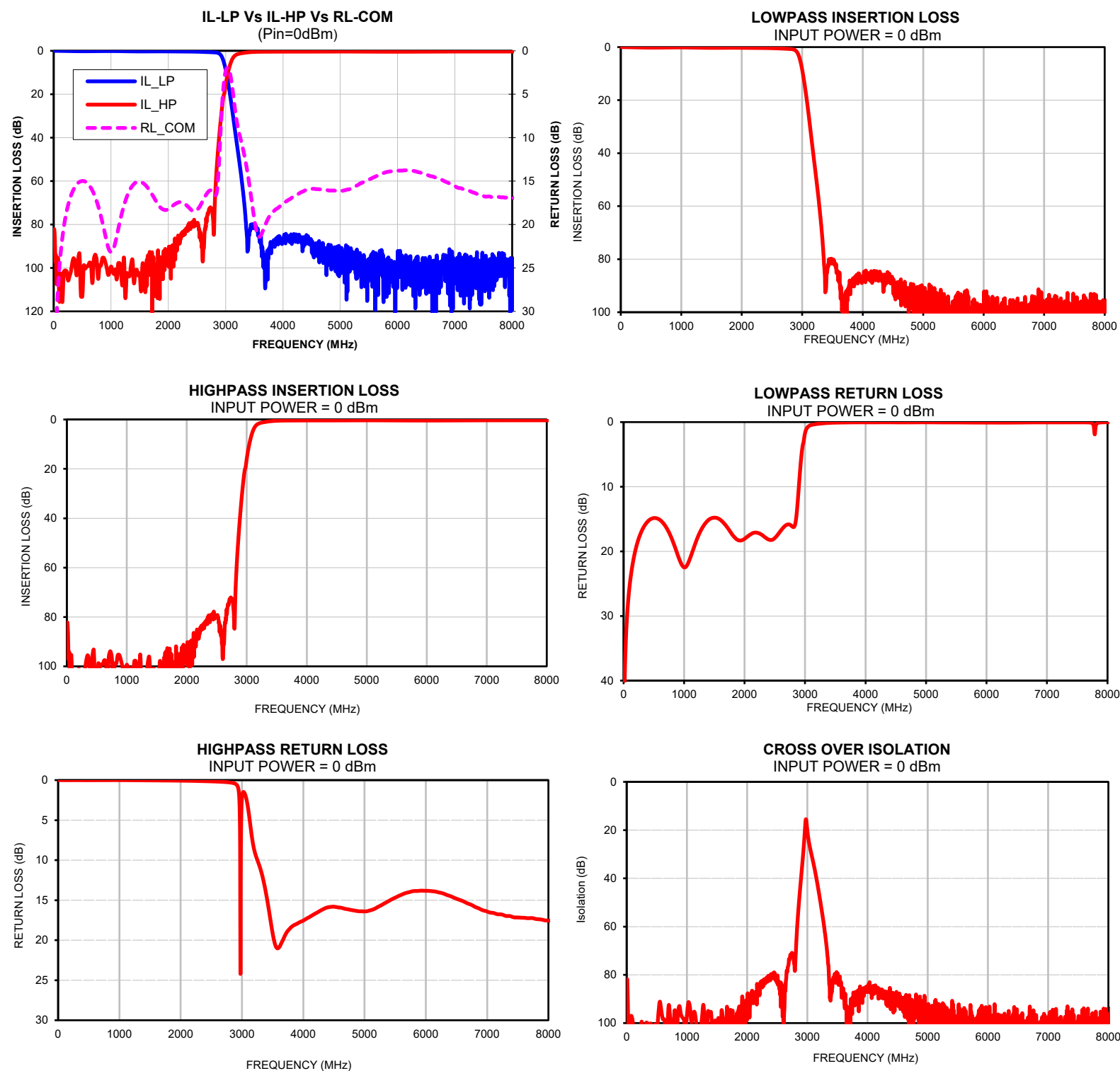
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. 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/terms/viewterm.html



Typical Performance Data

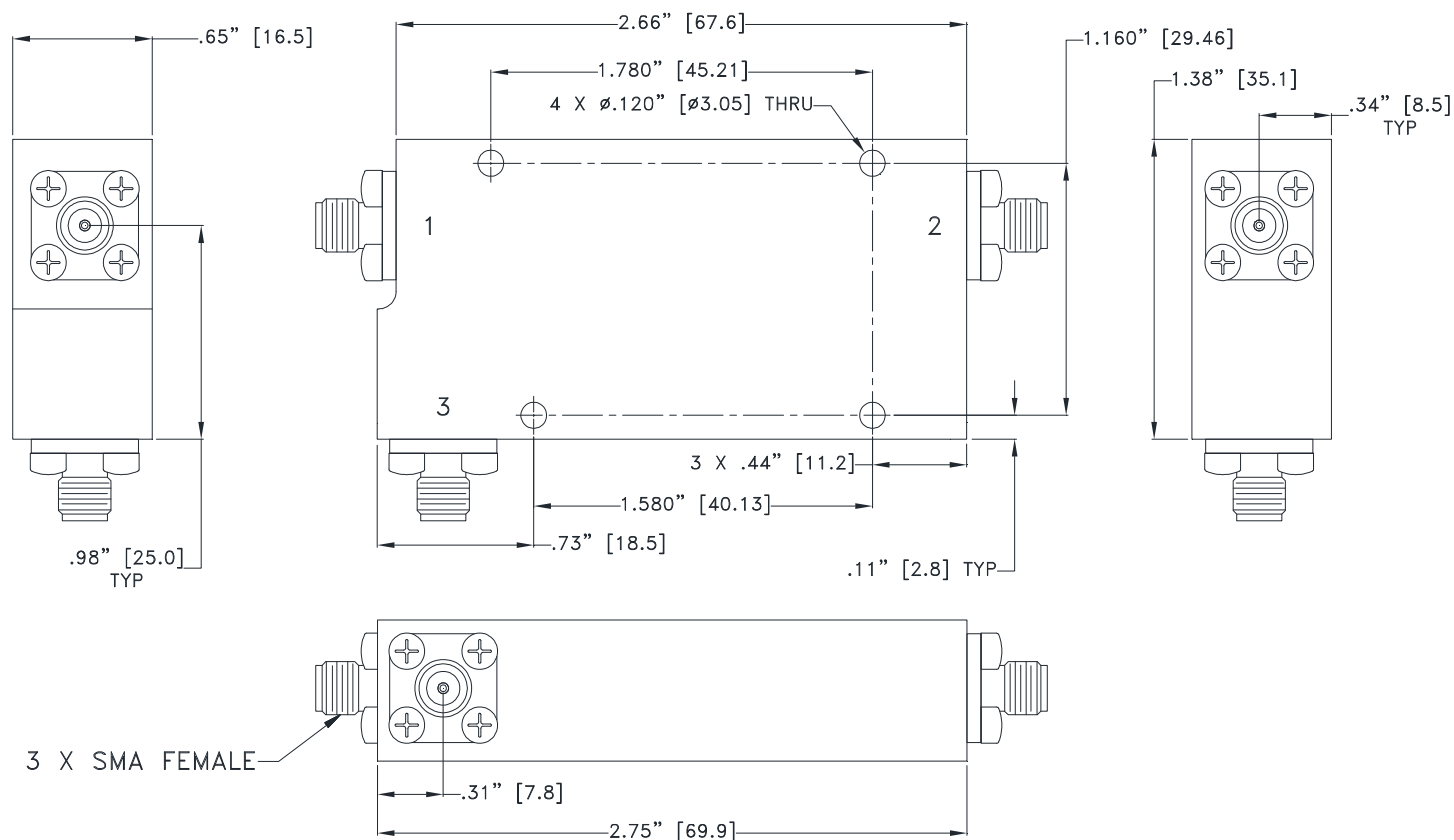
FREQUENCY (MHz)	INSERTION LOSS (dB)		Cross over isolation (dB) (between LPF and HPF)	RETURN LOSS (dB)		
	Lowpass port	Highpass port		Common port	Lowpass port	Highpass port
10	0.01	82.17	81.82	44.37	45.18	0.00
20	0.01	86.55	92.13	38.74	38.91	0.00
50	0.02	107.53	101.83	30.73	31.15	0.00
75	0.02	95.40	96.98	27.29	27.67	0.01
100	0.03	115.64	99.22	24.88	25.26	0.01
125	0.04	102.57	109.86	23.05	23.42	0.01
150	0.05	115.76	106.05	21.57	21.92	0.01
175	0.07	101.86	113.77	20.34	20.68	0.01
200	0.08	101.15	102.78	19.33	19.63	0.01
225	0.09	101.58	106.22	18.50	18.75	0.01
250	0.10	105.79	99.44	17.78	18.00	0.00
275	0.12	103.88	111.12	17.20	17.37	0.00
300	0.13	101.59	114.05	16.69	16.82	0.01
325	0.14	97.47	99.85	16.27	16.36	0.01
350	0.15	95.52	100.11	15.91	15.96	0.01
375	0.16	98.64	101.49	15.63	15.64	0.01
400	0.17	103.41	100.28	15.39	15.36	0.01
425	0.18	96.04	110.41	15.21	15.15	0.01
450	0.18	93.48	101.42	15.09	15.00	0.01
475	0.19	113.10	100.61	15.02	14.90	0.01
500	0.19	113.19	104.71	14.99	14.84	0.01
525	0.19	98.85	96.59	15.00	14.85	0.01
550	0.19	100.32	91.12	15.06	14.89	0.01
575	0.19	99.32	94.74	15.19	14.99	0.01
600	0.19	99.04	98.34	15.36	15.14	0.01
625	0.19	97.49	98.54	15.55	15.34	0.01
650	0.18	97.88	102.98	15.79	15.58	0.01
675	0.18	107.02	101.05	16.09	15.88	0.01
700	0.17	96.06	92.46	16.45	16.22	0.01
800	0.14	98.87	94.93	18.44	18.13	0.01
900	0.13	97.33	96.29	21.24	20.71	0.00
950	0.12	103.19	98.45	22.62	21.87	0.00
1000	0.12	99.33	97.07	23.16	22.48	0.00
1050	0.13	102.80	93.21	22.67	22.13	0.01
1100	0.14	105.32	96.99	21.33	21.04	0.01
1150	0.16	97.86	98.79	19.80	19.72	0.01
1200	0.18	107.93	105.51	18.43	18.41	0.01
1250	0.20	113.88	97.97	17.30	17.27	0.02
1300	0.22	103.86	102.06	16.40	16.37	0.02
1350	0.24	98.55	95.10	15.76	15.67	0.02
1400	0.26	107.06	95.44	15.33	15.17	0.03
1450	0.27	100.85	99.63	15.10	14.88	0.03
1500	0.28	102.55	108.13	15.08	14.79	0.03
1550	0.28	98.09	118.83	15.20	14.86	0.04
1600	0.28	111.15	98.12	15.46	15.13	0.04
2000	0.27	94.66	92.49	18.23	18.06	0.07
2600	0.49	97.09	95.47	17.28	16.78	0.19
2900	1.50	35.74	38.72	10.91	9.59	0.49
2950	3.76	23.33	23.64	5.10	4.30	1.59
3000	8.66	15.79	20.09	2.36	1.67	2.19
3600	85.72	0.44	85.75	21.37	0.06	20.94
4000	86.98	0.38	85.90	17.64	0.04	17.55
5000	96.95	0.34	95.64	16.09	0.03	16.41
5500	99.98	0.39	97.92	14.83	0.05	14.68
6000	100.95	0.42	101.59	13.80	0.07	13.83
6500	111.95	0.38	105.72	14.25	0.07	14.82
7000	100.50	0.34	111.38	15.58	0.04	16.41
7200	97.80	0.34	97.76	16.06	0.04	16.76
7500	98.92	0.33	100.83	16.71	0.04	17.16
8000	119.32	0.33	103.95	16.98	0.02	17.55

Typical Performance Curves



Outline Dimensions

BBA3697



Dimensions are in inches [mm]. Tolerances: 2 Pl. ± 0.06 [1.52]; 3 Pl. ± 0.015 [0.381]

Notes:

1. Case material: Aluminum.
2. Case Finish: Powder coated.
3. Unit Weight: 150 grams.
4. Refer to the individual model data sheet for the type of connectors available.



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



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

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
Humidity	90 to 95% RH, 40°C, 96 hours; Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103, Condition B
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
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	50g, 11ms half-sine, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition A