

Power Splitter/Combiner

ZAPD-2-272+

2 Way-0° 50Ω 800 to 2700 MHz

Maximum Ratings

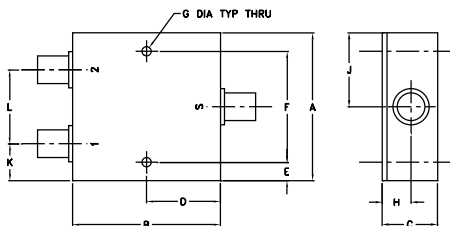
Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C
Power Input (as splitter)	10W max.
Internal Dissipation	0.125W max.
DC Current	80mA (40mA for each port)

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

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
2.00	2.00	.75	1.00	.13	1.750	.125
50.80	50.80	19.05	25.40	3.30	44.45	3.18
H	J	K	L	wt		
.39	1.00	.50	1.00	grams		
9.91	25.40	12.70	25.40	170.0		

Electrical Schematic



Features

- wideband, 800-2700 MHz
- low insertion loss, 0.3 dB typ.
- good isolation, 25 dB typ.
- good amplitude unbalance, 0.05 dB typ. and phase unbalance, 0.7 deg. typ.

Applications

- LMDS • UHF
- VSAT • PCS
- GPS • cellular



Generic photo used for illustration purposes only

CASE STYLE: F53

Connectors	Model
SMA	ZAPD-2-272-S+
N-TYPE	ZAPD-2-272-N+

+RoHS Compliant

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

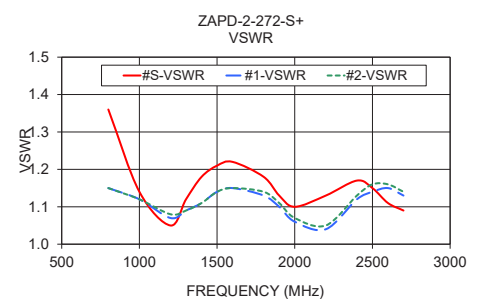
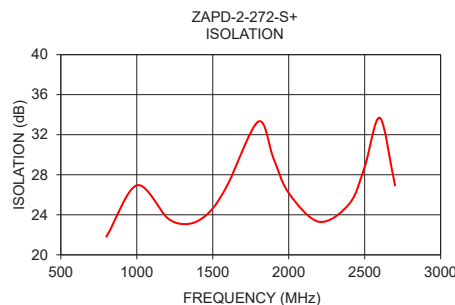
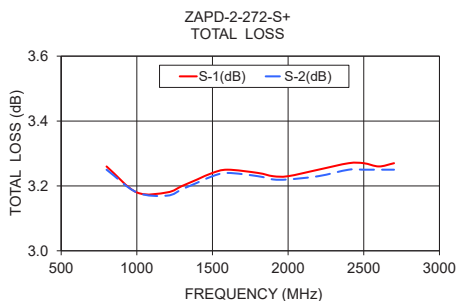
Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		800		2700	MHz
Insertion Loss Above 3.0 dB	800-2700	—	0.3	0.5	dB
Isolation	800-2700	18	22	—	dB
Phase Unbalance	800-2700	—	1.1	3.0	Degree
Amplitude Unbalance	800-2700	—	0.05	0.3	dB
VSWR (Port S)	800-2700	—	1.3	1.5	:1
VSWR (Port 1-2)	800-2700	—	1.2	1.3	:1

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amp. Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
800.00	3.26	3.25	0.01	21.81	0.14	1.36	1.15	1.15
1000.00	3.18	3.18	0.01	26.94	0.15	1.14	1.12	1.12
1200.00	3.18	3.17	0.01	23.70	0.16	1.05	1.07	1.08
1300.00	3.20	3.19	0.01	23.08	0.17	1.12	1.09	1.09
1400.00	3.22	3.21	0.01	23.37	0.18	1.18	1.11	1.11
1500.00	3.24	3.23	0.01	24.64	0.20	1.21	1.14	1.14
1600.00	3.25	3.24	0.01	27.07	0.21	1.22	1.15	1.15
1800.00	3.24	3.23	0.01	33.31	0.22	1.18	1.13	1.14
1900.00	3.23	3.22	0.01	29.63	0.23	1.13	1.10	1.11
2000.00	3.23	3.22	0.02	26.18	0.24	1.10	1.06	1.07
2200.00	3.25	3.23	0.01	23.30	0.26	1.13	1.04	1.05
2400.00	3.27	3.25	0.02	25.12	0.28	1.17	1.12	1.13
2500.00	3.27	3.25	0.02	28.78	0.29	1.15	1.14	1.16
2600.00	3.26	3.25	0.01	33.68	0.29	1.11	1.15	1.16
2700.00	3.27	3.25	0.01	26.93	0.30	1.09	1.13	1.14

1. Total Loss = Insertion Loss + 3dB splitter theoretical loss.



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-Circuits' applicable established test performance criteria and measurement instructions.
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2 Way-0° Power Splitter/Combiner

ZAPD-2-272+

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (deg.)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
800.0	3.26	3.25	0.01	21.81	0.14	800.0	1.36	1.15	1.15
900.0	3.21	3.20	0.01	25.68	0.13	900.0	1.25	1.14	1.14
1000.0	3.18	3.18	0.01	26.94	0.15	1000.0	1.14	1.12	1.12
1100.0	3.17	3.17	0.01	25.22	0.14	1100.0	1.05	1.09	1.09
1200.0	3.18	3.17	0.01	23.70	0.16	1200.0	1.05	1.07	1.08
1300.0	3.20	3.19	0.01	23.08	0.17	1300.0	1.12	1.09	1.09
1350.0	3.21	3.20	0.01	23.09	0.18	1350.0	1.15	1.10	1.10
1400.0	3.22	3.21	0.01	23.37	0.18	1400.0	1.18	1.11	1.11
1450.0	3.23	3.22	0.01	23.87	0.19	1450.0	1.20	1.12	1.13
1500.0	3.24	3.23	0.01	24.64	0.20	1500.0	1.21	1.14	1.14
1600.0	3.25	3.24	0.01	27.07	0.21	1600.0	1.22	1.15	1.15
1700.0	3.25	3.23	0.01	30.94	0.21	1700.0	1.21	1.15	1.16
1800.0	3.24	3.23	0.01	33.31	0.22	1800.0	1.18	1.13	1.14
1900.0	3.23	3.22	0.01	29.63	0.23	1900.0	1.13	1.10	1.11
2000.0	3.23	3.22	0.02	26.18	0.24	2000.0	1.10	1.06	1.07
2100.0	3.24	3.22	0.01	24.16	0.25	2100.0	1.10	1.03	1.03
2200.0	3.25	3.23	0.01	23.30	0.26	2200.0	1.13	1.04	1.05
2300.0	3.26	3.24	0.02	23.56	0.27	2300.0	1.15	1.09	1.09
2400.0	3.27	3.25	0.02	25.12	0.28	2400.0	1.17	1.12	1.13
2500.0	3.27	3.25	0.02	28.78	0.29	2500.0	1.15	1.14	1.16
2600.0	3.26	3.25	0.01	33.68	0.29	2600.0	1.11	1.15	1.16
2700.0	3.27	3.25	0.01	26.93	0.30	2700.0	1.09	1.13	1.14

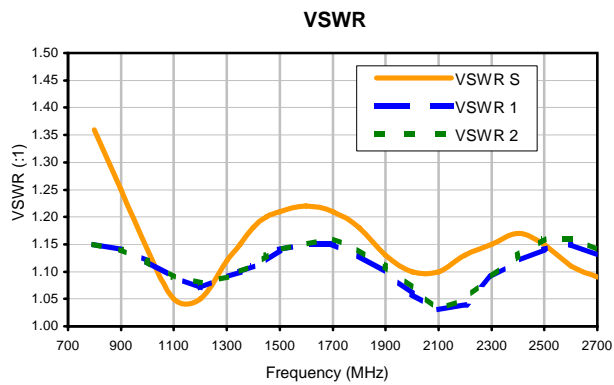
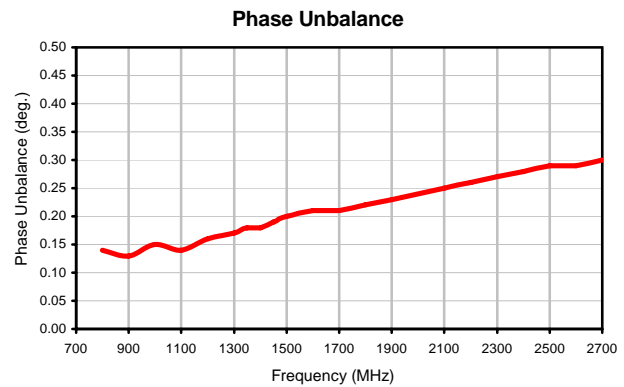
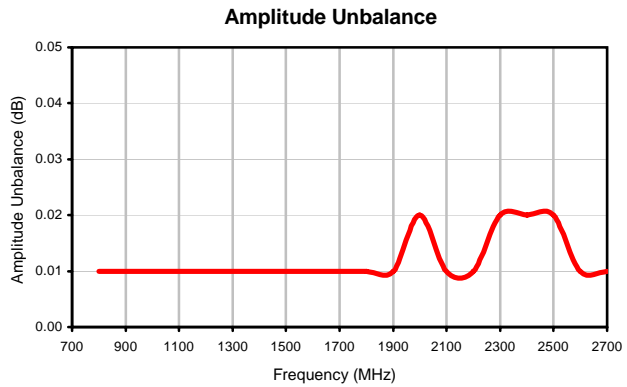
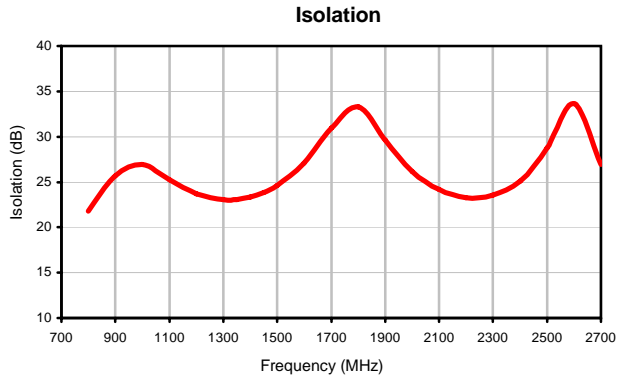
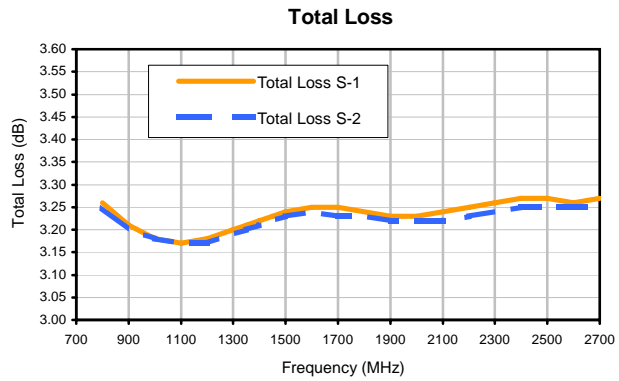
¹Total Loss = Insertion Loss + 3dB Splitter Loss



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Typical Performance Curves

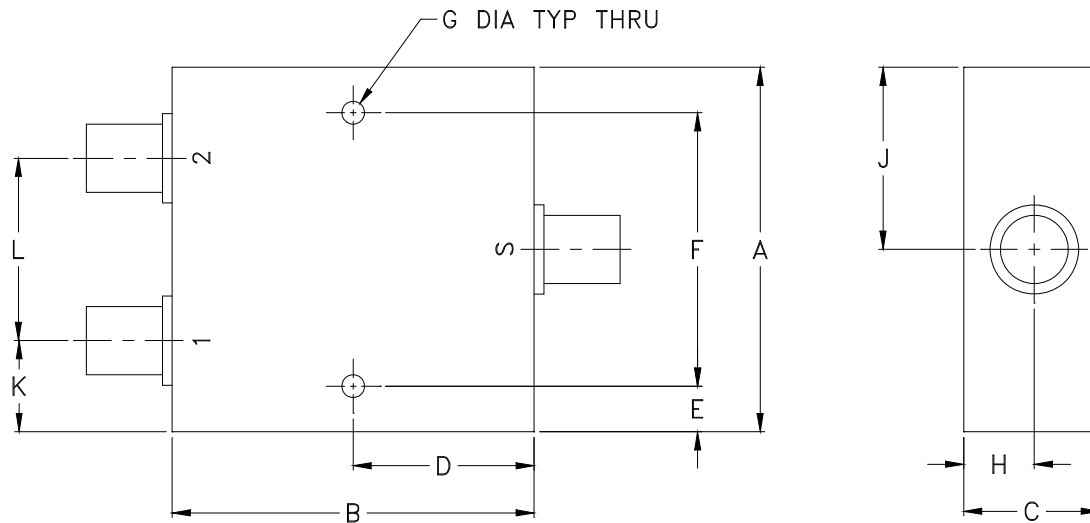


Case Style

F

Outline Dimensions

F53



CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
F53	2.00 (50.80)	2.00 (50.80)	.75 (19.05)	1.00 (25.40)	.13 (3.30)	1.750 (44.45)	.125 (3.18)	.39 (9.91)	1.00 (25.40)	.50 (12.70)	1.00 (25.40)	170.0

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

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Refer to the individual model data sheet for the type of connectors available.

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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