

Power Splitter/Combiner

ZN12PD-17-S

12 Way-0° 50Ω 800 to 1700 MHz

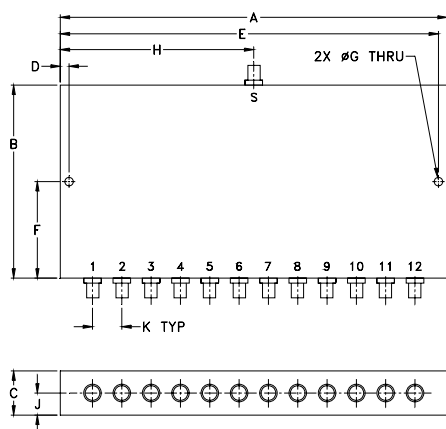
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	2W max.
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

SUM PORT	S(COM)
PORT 1,2,3,.....,12	1,2,3,.....,12

Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F
6.60	3.28	.75	.150	6.45	1.64
167.64	83.31	19.05	3.81	163.83	41.66
G	H	J	K	wt	
.144	3.30	.38	.500	grams	
3.66	83.82	9.65	12.70	370	

Features

- low insertion loss, 0.45 dB typ.
- high isolation, 30 dB typ.
- excellent VSWR, 1.1:1 typ.
- excellent amplitude unbalance, 0.2 dB typ.
- up to 5W power output as splitter
- rugged shielded case

Applications

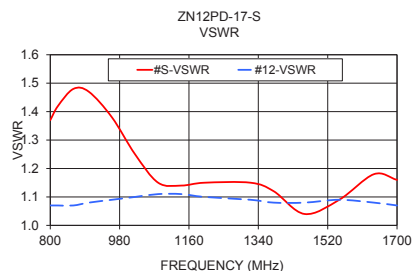
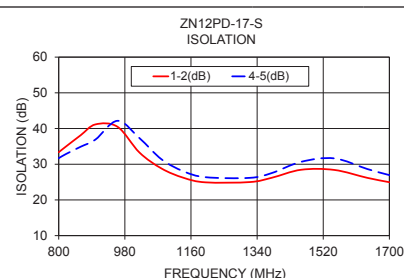
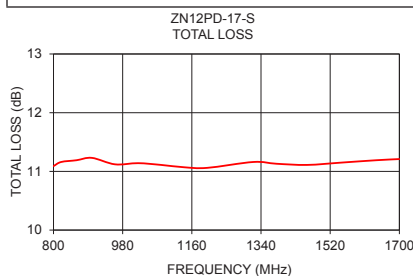
- instrumentation
- cellular
- PCN
- GPS
- satellite

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 10.8 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.	S OUT Typ. Max. Typ. Max.
800-1700	30 18	0.45 1.2	14	0.7	1.2 1.6 1.1 1.4

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 12
			1-2 4-5			
800.00	11.09	0.19	33.36	31.69	2.53	1.37
820.00	11.16	0.20	34.98	32.87	2.26	1.42
860.00	11.19	0.27	38.14	34.91	2.79	1.48
900.00	11.23	0.19	41.15	36.91	2.82	1.47
960.00	11.12	0.18	40.49	42.16	2.80	1.38
1020.00	11.14	0.14	33.25	37.29	2.91	1.25
1080.00	11.11	0.12	28.79	31.36	2.89	1.15
1140.00	11.07	0.11	26.19	28.00	3.13	1.14
1200.00	11.06	0.09	24.92	26.36	3.92	1.15
1320.00	11.16	0.12	25.00	26.18	4.11	1.15
1380.00	11.13	0.12	26.21	27.53	4.08	1.12
1460.00	11.11	0.18	28.45	30.68	4.06	1.04
1550.00	11.15	0.22	28.40	31.64	4.45	1.09
1640.00	11.19	0.21	26.18	28.65	4.61	1.18
1700.00	11.21	0.19	24.96	26.95	4.73	1.16



electrical schematic



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-Circuit's applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



CASE STYLE: UU589

Connectors	Model
SMA	ZN12PD-17-S

+RoHS Compliant

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

12 Way-0° Power Splitter/Combiner

ZN12PD-17

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)	AMP. UNBAL. (dB)	ISOLATION (dB)		PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)	
			ADJ 1-2	OPP 4-5			S	1
800.0	11.09	0.19	33.36	31.69	2.53	800.0	1.37	1.07
820.0	11.16	0.20	34.98	32.87	2.26	820.0	1.42	1.07
840.0	11.27	0.25	36.58	34.01	2.28	840.0	1.46	1.07
860.0	11.19	0.27	38.14	34.91	2.79	860.0	1.48	1.07
880.0	11.13	0.20	39.47	35.80	2.71	880.0	1.48	1.07
900.0	11.23	0.19	41.15	36.91	2.82	900.0	1.47	1.08
920.0	11.27	0.20	42.53	38.50	2.52	920.0	1.45	1.08
940.0	11.22	0.19	42.34	40.56	2.66	940.0	1.42	1.08
960.0	11.12	0.18	40.49	42.16	2.80	960.0	1.38	1.09
980.0	11.15	0.17	37.76	41.97	2.99	980.0	1.33	1.09
1000.0	11.19	0.19	35.33	40.08	2.73	1000.0	1.29	1.10
1020.0	11.14	0.14	33.25	37.29	2.91	1020.0	1.25	1.10
1040.0	11.05	0.12	31.47	34.82	2.70	1040.0	1.21	1.10
1060.0	11.12	0.14	30.08	32.97	2.88	1060.0	1.18	1.10
1080.0	11.11	0.12	28.79	31.36	2.89	1080.0	1.15	1.11
1100.0	11.08	0.14	27.81	29.99	3.16	1100.0	1.14	1.11
1120.0	11.06	0.08	26.94	28.89	3.46	1120.0	1.13	1.11
1140.0	11.07	0.11	26.19	28.00	3.13	1140.0	1.14	1.11
1160.0	11.13	0.12	25.74	27.42	2.87	1160.0	1.14	1.10
1180.0	11.09	0.14	25.30	26.83	3.34	1180.0	1.15	1.10
1200.0	11.06	0.09	24.92	26.36	3.92	1200.0	1.15	1.10
1220.0	11.14	0.11	24.72	26.07	3.98	1220.0	1.15	1.10
1240.0	11.12	0.12	24.58	25.88	3.78	1240.0	1.16	1.10
1260.0	11.07	0.09	24.58	25.83	3.62	1260.0	1.16	1.09
1280.0	11.10	0.08	24.66	25.87	4.15	1280.0	1.16	1.09
1300.0	11.11	0.10	24.74	25.90	4.25	1300.0	1.15	1.09
1320.0	11.16	0.12	25.00	26.18	4.11	1320.0	1.15	1.09
1340.0	11.08	0.09	25.34	26.54	4.07	1340.0	1.14	1.08
1360.0	11.07	0.11	25.71	26.95	4.11	1360.0	1.13	1.08
1380.0	11.13	0.12	26.21	27.53	4.08	1380.0	1.12	1.08
1400.0	11.18	0.15	26.75	28.21	3.92	1400.0	1.10	1.08
1430.0	11.07	0.11	27.72	29.45	4.30	1430.0	1.08	1.08
1460.0	11.11	0.18	28.45	30.68	4.06	1460.0	1.04	1.08
1490.0	11.16	0.13	29.05	31.88	3.95	1490.0	1.02	1.08
1520.0	11.11	0.12	29.03	32.26	4.43	1520.0	1.05	1.09
1550.0	11.15	0.22	28.40	31.64	4.45	1550.0	1.09	1.09
1580.0	11.12	0.14	27.70	30.74	4.08	1580.0	1.13	1.09
1610.0	11.16	0.16	26.94	29.69	4.39	1610.0	1.16	1.09
1640.0	11.19	0.21	26.18	28.65	4.61	1640.0	1.18	1.08
1670.0	11.15	0.24	25.62	27.83	4.02	1670.0	1.18	1.08
1700.0	11.21	0.19	24.96	26.95	4.73	1700.0	1.16	1.07

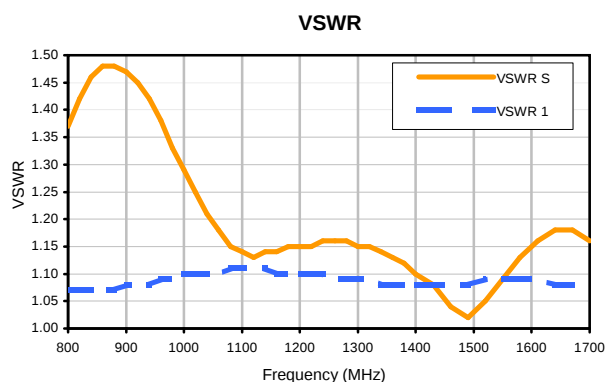
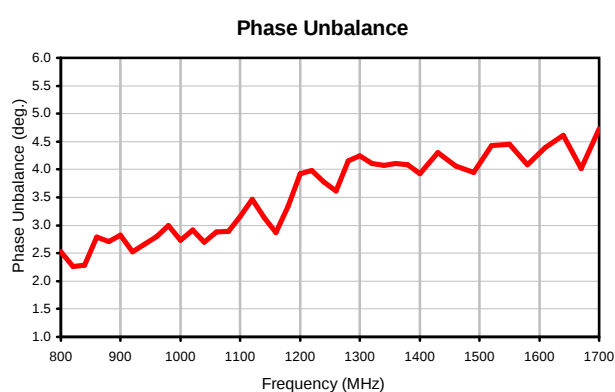
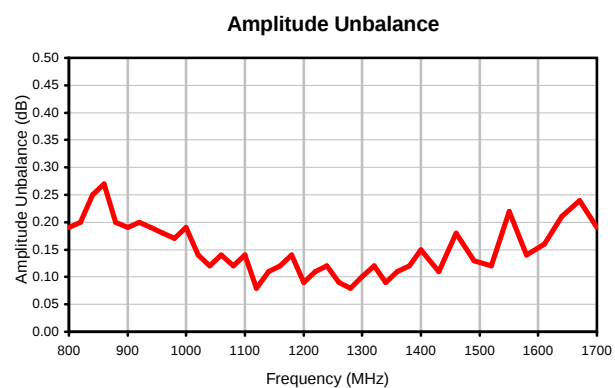
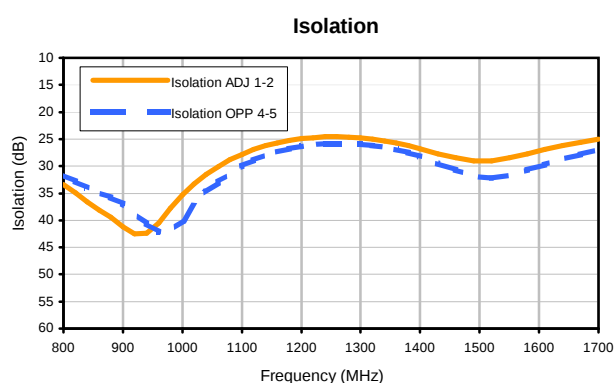
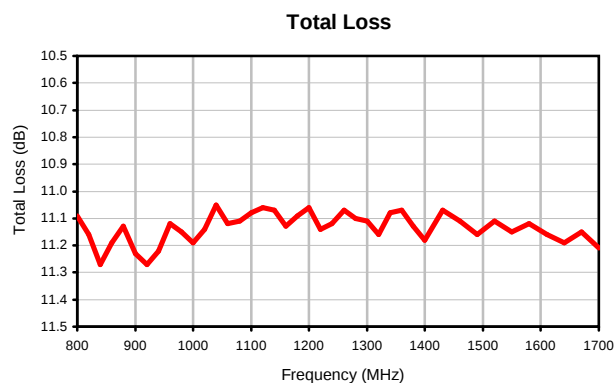
¹ Total Loss = Insertion Loss + 10.8dB Splitter Loss

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12 Way-0° Power Splitter/Combiner

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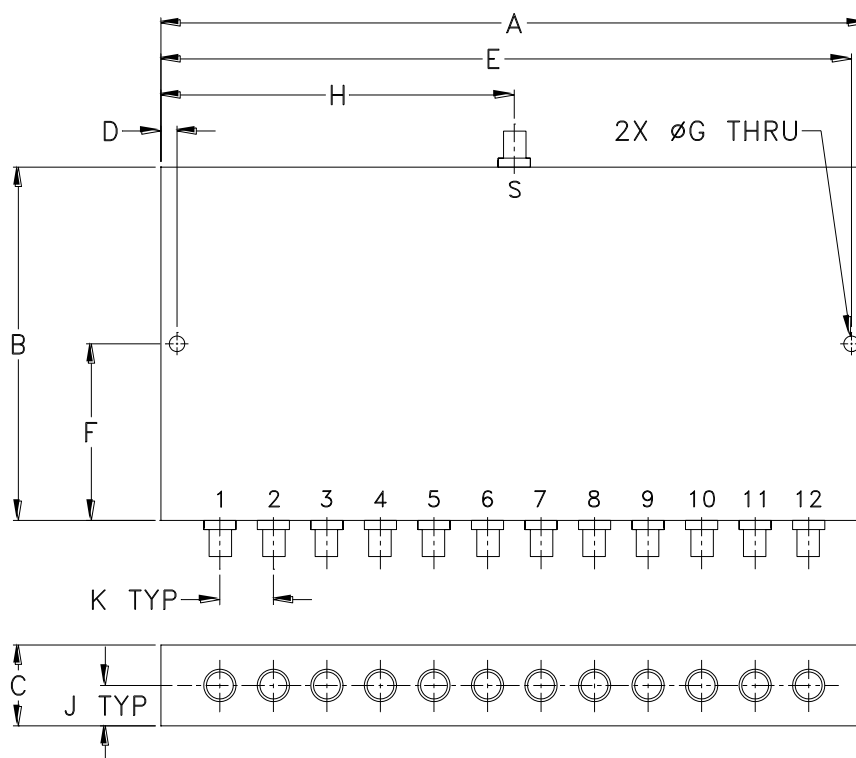
Typical Performance Curves



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Outline Dimensions

UU589



CASE#	A	B	C	D	E	F	G	H	J	K	WT. GRAMS
UU589	6.60 (167.64)	3.28 (83.31)	.75 (19.05)	.150 (3.81)	6.45 (163.83)	1.64 (41.66)	.144 (3.66)	3.30 (83.82)	.38 (9.53)	.500 (12.70)	370

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.
- 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



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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