

Coaxial

Power Splitter/Combiner

ZX10-2-12-S+

2 Way-0° 50Ω 2 to 1200 MHz

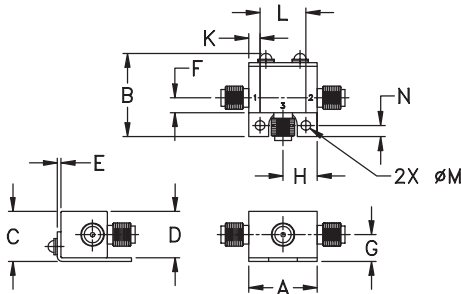
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation (as a combiner)	0.125W
Permanent damage may occur if any of these limits are	

Coaxial Connections

SUM PORT	3
PORT 1	1
PORT 2	2

Outline Drawing



Outline Dimensions (inch mm)

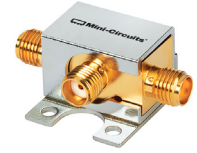
A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37
H	J	K	L	M	N	wt
.37	--	.122	.496	.106	.122	grams
9.40	--	3.10	12.60	2.69	3.10	20.0

Features

- low insertion loss, 0.5 dB typ.
- excellent amplitude unbalance
- very good phase unbalance
- small size
- low cost
- protected under U.S. Patent 6,790,049 & 6,963,255

Applications

- cellular
- VHF/UHF receivers/transmitters
- radio
- defense



Generic photo used for illustration purposes only

CASE STYLE:

Connectors	Model
SMA	ZX10-2-12-S+

+RoHS Compliant

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

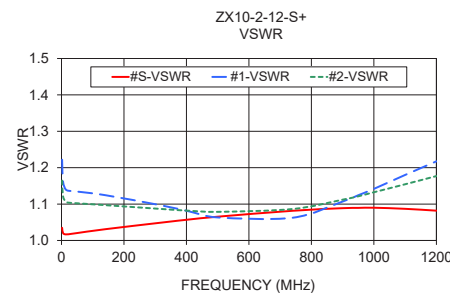
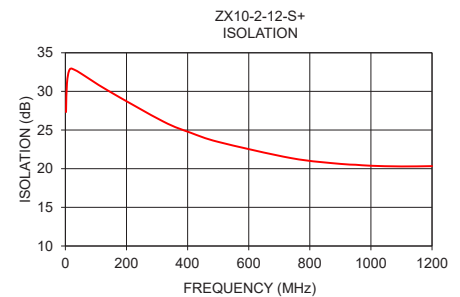
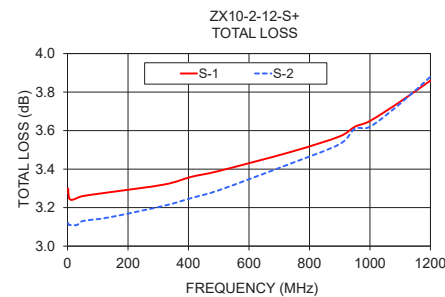
Electrical Specifications (T_{AMB} = 25°C)

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
2-1200	21	16	0.5	1.5	5.0	0.5
2-20	29	21	0.3	0.7	3.0	0.5
20-600	25	18	0.3	0.8	4.0	0.4
600-1000	21	16.5	0.5	1.2	4.5	0.5

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2.00	3.30	3.12	0.18	27.33	0.75	1.03	1.22	1.16
5.00	3.25	3.11	0.14	31.03	0.34	1.02	1.16	1.12
14.00	3.24	3.11	0.13	32.84	0.11	1.02	1.14	1.11
32.00	3.25	3.11	0.13	32.75	0.02	1.02	1.14	1.10
50.00	3.26	3.13	0.13	32.34	0.01	1.02	1.13	1.10
140.00	3.28	3.15	0.13	30.09	0.17	1.03	1.12	1.10
320.00	3.32	3.21	0.12	26.11	0.34	1.05	1.10	1.09
410.00	3.36	3.25	0.11	24.65	0.39	1.06	1.08	1.08
500.00	3.39	3.29	0.10	23.47	0.48	1.07	1.06	1.08
740.00	3.49	3.43	0.06	21.36	0.43	1.08	1.06	1.09
900.00	3.57	3.53	0.04	20.62	0.32	1.09	1.11	1.11
950.00	3.62	3.61	0.01	20.51	0.29	1.09	1.12	1.12
1000.00	3.65	3.62	0.03	20.38	0.27	1.09	1.14	1.13
1100.00	3.75	3.74	0.01	20.29	0.07	1.09	1.18	1.15
1200.00	3.86	3.88	0.02	20.33	0.02	1.08	1.22	1.18

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



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.
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 REV. K
 ECO-016902
 ZX10-2-12+
 ED-10145/1
 HY/RS/CP/AM
 230221

2 Way-0° Power Splitter/Combiner

ZX10-2-12+

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
2.0	3.27	3.10	0.16	28.12	0.68	2.0	1.03	1.20	1.15
4.0	3.24	3.10	0.14	31.25	0.32	4.0	1.02	1.16	1.12
6.0	3.23	3.10	0.14	32.60	0.19	6.0	1.02	1.14	1.11
8.0	3.23	3.10	0.13	33.22	0.17	8.0	1.02	1.14	1.10
10.0	3.23	3.10	0.13	33.52	0.20	10.0	1.02	1.14	1.10
12.0	3.23	3.10	0.13	33.68	0.04	12.0	1.02	1.13	1.10
14.0	3.23	3.10	0.13	33.71	0.15	14.0	1.02	1.13	1.10
16.0	3.24	3.10	0.13	33.71	0.05	16.0	1.02	1.13	1.10
18.0	3.24	3.11	0.13	33.67	0.08	18.0	1.02	1.13	1.10
20.0	3.24	3.11	0.13	33.60	0.05	20.0	1.02	1.13	1.10
100.0	3.28	3.14	0.13	31.01	0.10	100.0	1.03	1.13	1.10
150.0	3.30	3.16	0.13	29.47	0.14	150.0	1.04	1.12	1.09
200.0	3.31	3.19	0.12	28.11	0.19	200.0	1.04	1.11	1.09
250.0	3.33	3.20	0.13	26.92	0.22	250.0	1.05	1.10	1.08
300.0	3.34	3.22	0.12	25.87	0.25	300.0	1.06	1.09	1.08
350.0	3.37	3.25	0.12	24.93	0.26	350.0	1.06	1.08	1.07
400.0	3.37	3.26	0.11	24.11	0.33	400.0	1.07	1.07	1.07
450.0	3.39	3.30	0.10	23.41	0.35	450.0	1.08	1.06	1.06
500.0	3.41	3.31	0.10	22.80	0.39	500.0	1.08	1.05	1.06
550.0	3.43	3.34	0.09	22.25	0.44	550.0	1.09	1.04	1.06
600.0	3.45	3.37	0.08	21.81	0.44	600.0	1.09	1.04	1.06
640.0	3.47	3.41	0.07	21.47	0.47	640.0	1.09	1.04	1.06
680.0	3.49	3.43	0.06	21.23	0.41	680.0	1.10	1.05	1.06
720.0	3.51	3.46	0.05	20.99	0.46	720.0	1.10	1.06	1.07
760.0	3.53	3.49	0.04	20.81	0.44	760.0	1.11	1.07	1.07
800.0	3.56	3.52	0.04	20.68	0.48	800.0	1.11	1.09	1.08
840.0	3.58	3.55	0.03	20.57	0.38	840.0	1.11	1.10	1.09
880.0	3.62	3.60	0.02	20.52	0.47	880.0	1.11	1.12	1.10
920.0	3.64	3.62	0.02	20.47	0.30	920.0	1.11	1.14	1.11
960.0	3.66	3.66	0.00	20.51	0.33	960.0	1.11	1.16	1.13
1000.0	3.73	3.72	0.00	20.58	0.32	1000.0	1.11	1.17	1.14
1020.0	3.72	3.72	0.00	20.59	0.20	1020.0	1.10	1.19	1.15
1040.0	3.71	3.73	0.02	20.64	0.21	1040.0	1.10	1.20	1.16
1060.0	3.75	3.78	0.03	20.73	0.27	1060.0	1.10	1.21	1.16
1080.0	3.81	3.84	0.02	20.83	0.28	1080.0	1.10	1.22	1.17
1100.0	3.83	3.84	0.01	20.90	0.16	1100.0	1.10	1.23	1.18
1120.0	3.81	3.83	0.02	20.98	0.11	1120.0	1.09	1.24	1.18
1140.0	3.81	3.85	0.04	21.06	0.07	1140.0	1.09	1.25	1.19
1160.0	3.84	3.88	0.04	21.20	0.01	1160.0	1.09	1.26	1.20
1180.0	3.88	3.93	0.05	21.32	0.04	1180.0	1.08	1.27	1.20
1200.0	3.92	3.97	0.05	21.48	0.02	1200.0	1.08	1.28	1.21

¹ Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2
ZX10-2-12+
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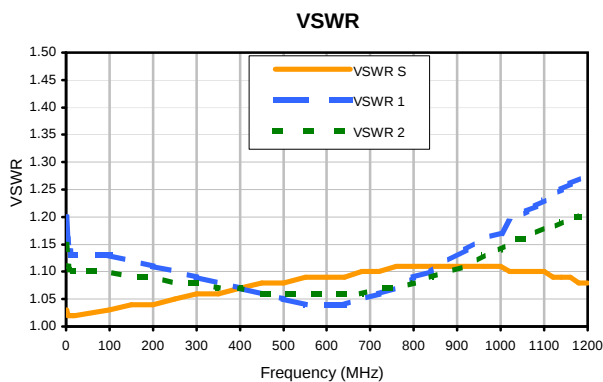
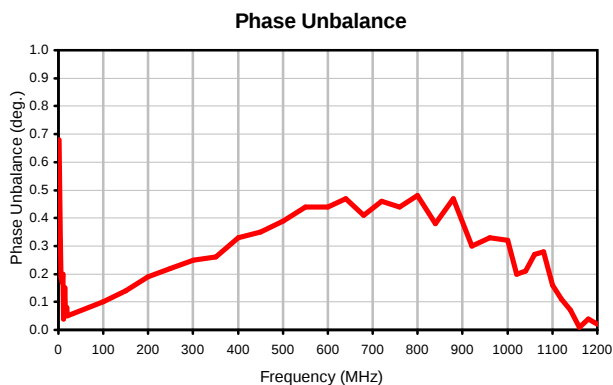
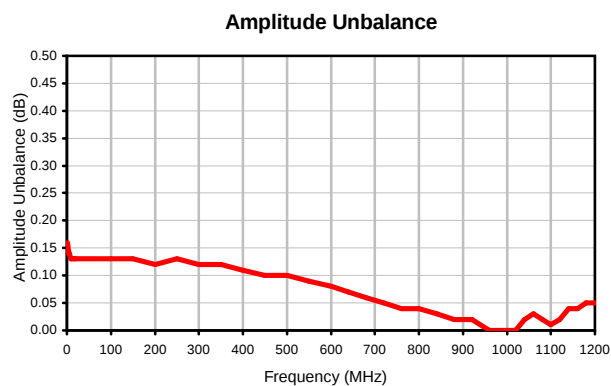
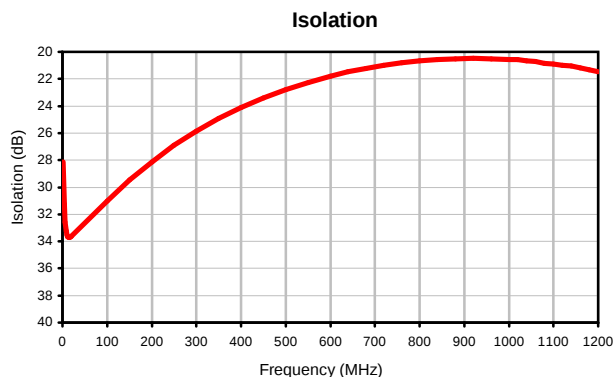
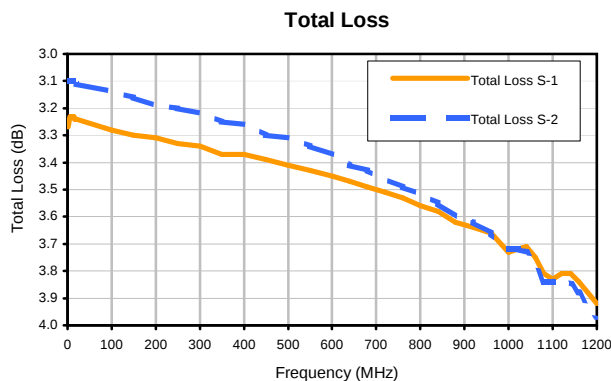
Patent Pending

The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

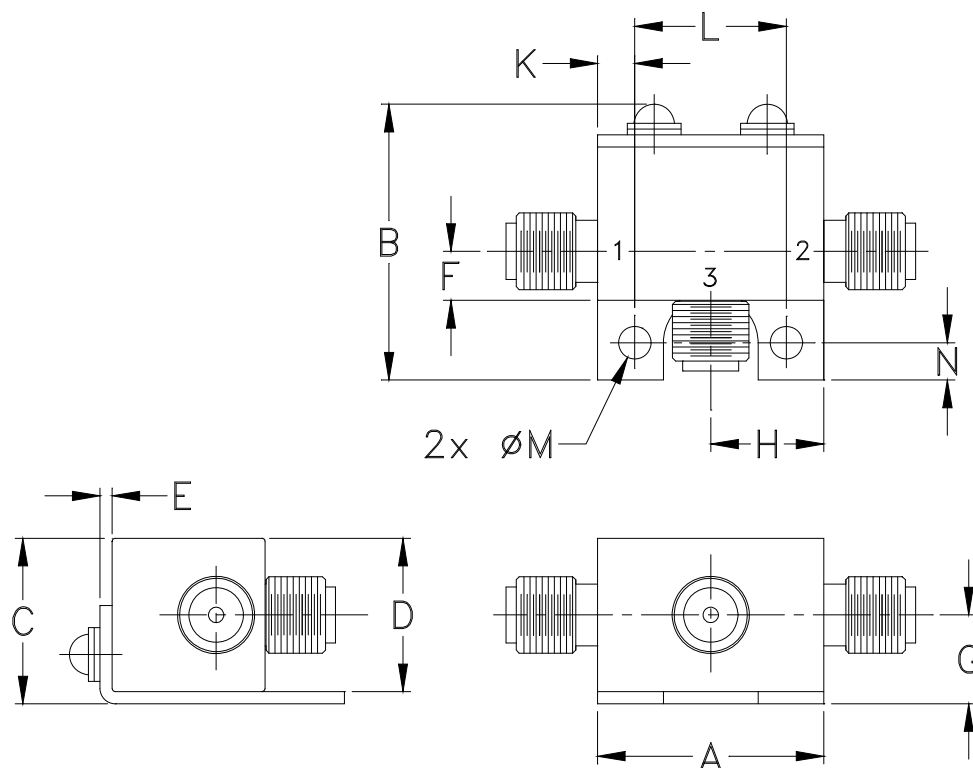
2 Way-0° Power Splitter/Combiner

ZX10-2-12+

Typical Performance Curves



Outline Dimensions



CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N	WT, GRAM
FL905	.74 (18.80)	.90 (22.86)	.54 (13.72)	.50 (12.70)	.04 (1.02)	.16 (4.06)	.29 (7.37)	.37 (9.40)	- -	.122 (3.10)	.496 (12.60)	.106 (2.69)	.122 (3.10)	20.0

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

Tolerance on hole size and interaxes dimensions to be $\pm .005$.

Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.



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Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C	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