

# SMA Connectorized Power Splitter/Combiner

## ZX10Q-2-3-S+

2 Way-90° 50Ω 220 to 470 MHz

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.

\* Derate linearly to 7W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

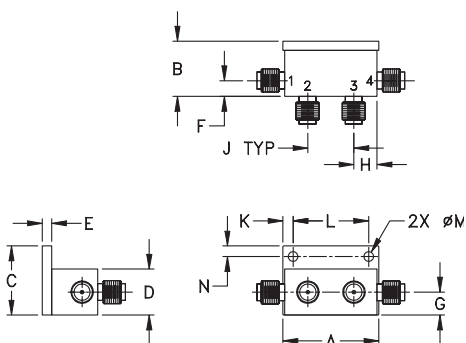
### Coaxial Connections

INPUT PORT	1
PORT 1 (+90°)	2
PORT 2 (0°)	3
50 OHM TERM EXTERNAL**	4



\*\* Recommended external termination  
Mini-Circuits Part. No. ANNE-50L

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
1.04	.60	.75	.50	.10	.17	.25
26.42	15.24	19.05	12.70	2.54	4.32	6.35
H	J	K	L	M	N	wt.
.25	.50	.11	.820	.106	.12	grams
6.35	12.70	2.79	20.83	2.69	3.05	21.0

### Features

- low insertion loss, 0.4 dB typ.
- excellent amplitude unbalance
- very good phase unbalance
- small size
- low cost
- protected by U.S Patent 6,790,049

### Applications

- balanced amplifiers
- modulators
- VHF
- defense communications



CASE STYLE: GW1052

Connectors	Model
SMA	ZX10Q-2-3-S+

+RoHS Compliant

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

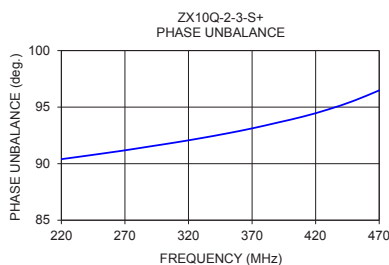
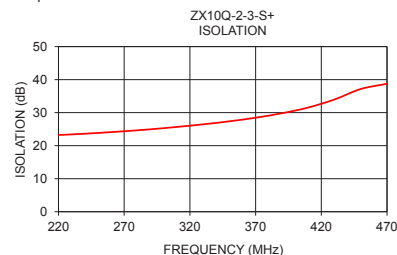
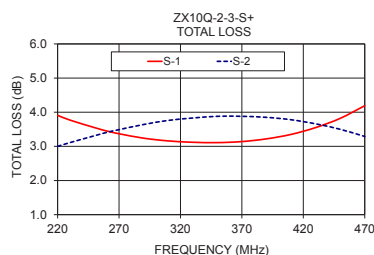
### Electrical Specifications (T<sub>AMB</sub>=25°C)

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.
f <sub>L</sub> -f <sub>U</sub>								
220-470	24	18	0.6	0.8	1	8	0.5	1.7
270-350	25	18	0.4	0.7	3	5	0.7	1.0
350-450	30	20	0.6	0.8	5	8	0.5	1.0

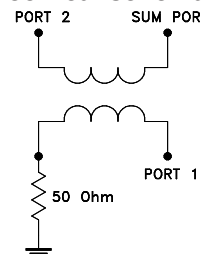
### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
220.00	3.91	3.00	0.91	23.23	90.40	1.07	1.12	1.07
230.00	3.77	3.11	0.67	23.41	90.55	1.06	1.12	1.06
250.00	3.55	3.31	0.23	23.85	90.86	1.05	1.11	1.06
260.00	3.45	3.41	0.05	24.11	91.02	1.05	1.11	1.05
270.00	3.37	3.49	0.12	24.37	91.18	1.04	1.10	1.05
290.00	3.24	3.64	0.39	24.96	91.53	1.04	1.10	1.04
310.00	3.16	3.76	0.60	25.67	91.88	1.03	1.09	1.03
330.00	3.12	3.83	0.72	26.46	92.26	1.03	1.08	1.03
350.00	3.11	3.88	0.77	27.38	92.67	1.04	1.08	1.02
370.00	3.14	3.88	0.74	28.47	93.12	1.05	1.07	1.02
390.00	3.22	3.85	0.63	29.82	93.63	1.07	1.07	1.02
410.00	3.35	3.78	0.42	31.55	94.16	1.09	1.07	1.01
430.00	3.55	3.66	0.11	33.99	94.80	1.11	1.07	1.01
450.00	3.82	3.50	0.32	37.16	95.56	1.14	1.07	1.02
470.00	4.19	3.29	0.90	38.74	96.48	1.17	1.08	1.02

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



### electrical schematic



### 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-Circuit's applicable established test performance criteria and measurement instructions.
- 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

