Coaxial

Power Splitter/Combiner

ZSPQW-100A-1+

2 Way-90° 50Ω 30 to 100 MHz

CASE STYLE: F14

Connectors	Model	Price	Qty.
SMA	ZSPQW-100A-1+	Consult Sales Dept.	

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

Pin Connections

SUM PORT	S
PORT 1 (+90°)	1
PORT 2 (0°)	2

Features

- low insertion loss, 0.5 dB typ.
- excellent isolation, 38 dB typ.
- rugged shielded case

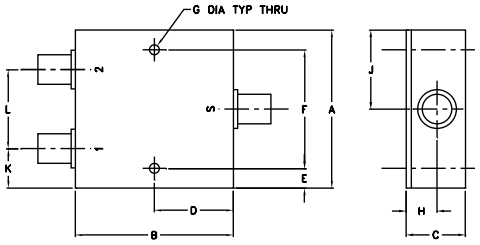
Applications

- VHF
- signal processing
- modulators
- instrumentation
- balanced amplifiers

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs above 3 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.
30-100	38	30	0.5	1.1	4.0	0.6

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
2.00	2.00	0.75	1.00	0.25	1.500	0.125
50.80	50.80	19.05	25.40	6.35	38.10	3.18

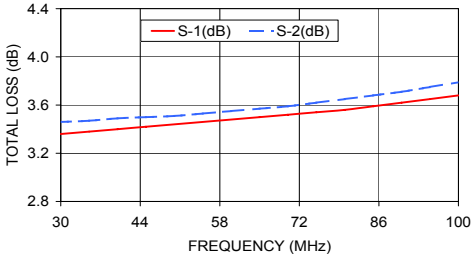
H	J	K	L	wt
0.39	1.00	0.50	1.00	grams
9.91	25.40	12.70	25.40	170.0

Typical Performance Data

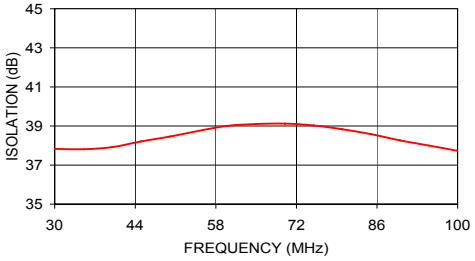
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
30.00	3.36	3.46	0.10	37.83	91.31	1.08	1.19	1.33
35.00	3.38	3.47	0.09	37.81	91.09	1.07	1.19	1.32
40.00	3.40	3.49	0.08	37.92	91.05	1.06	1.18	1.31
45.00	3.42	3.50	0.08	38.21	91.12	1.04	1.17	1.28
50.00	3.44	3.51	0.07	38.46	91.24	1.02	1.15	1.26
55.00	3.46	3.53	0.07	38.75	91.36	1.01	1.14	1.24
60.00	3.48	3.55	0.07	39.01	91.43	1.03	1.13	1.22
65.00	3.50	3.57	0.07	39.10	91.44	1.06	1.13	1.21
70.00	3.52	3.59	0.08	39.12	91.36	1.09	1.14	1.20
75.00	3.54	3.62	0.08	39.03	91.20	1.13	1.15	1.21
80.00	3.56	3.65	0.09	38.83	90.96	1.16	1.17	1.22
85.00	3.59	3.68	0.09	38.58	90.64	1.19	1.19	1.25
90.00	3.62	3.71	0.10	38.26	90.25	1.23	1.22	1.27
95.00	3.65	3.75	0.10	38.00	89.80	1.27	1.25	1.31
100.00	3.68	3.79	0.11	37.73	89.29	1.30	1.29	1.34

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

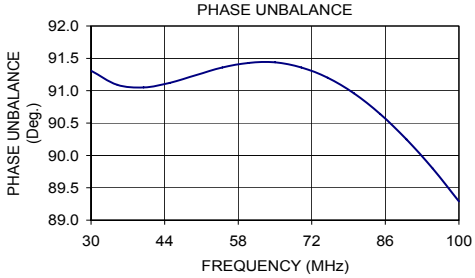
ZSPQW-100A-1+
TOTAL LOSS



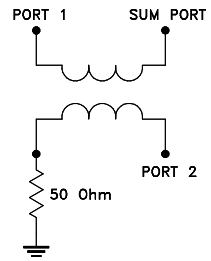
ZSPQW-100A-1+
ISOLATION



ZSPQW-100A-1+
PHASE UNBALANCE



electrical schematic



For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. **2.** Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. **3.** The parts covered by this specification sheet 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.

REV. OR
M126491
ZSPQQ-100A-1+
HY/CP
100519

2 Way-90° Power Splitter/Combiner ZSPQW-100A-1+

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS[1] (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (deg.)
	S-1	S-2		1-2	
30.0	3.36	3.46	0.10	37.83	91.31
35.0	3.38	3.47	0.09	37.81	91.09
40.0	3.40	3.49	0.08	37.92	91.05
45.0	3.42	3.50	0.08	38.21	91.12
50.0	3.44	3.51	0.07	38.46	91.24
55.0	3.46	3.53	0.07	38.75	91.36
60.0	3.48	3.55	0.07	39.01	91.43
65.0	3.50	3.57	0.07	39.10	91.44
70.0	3.52	3.59	0.08	39.12	91.36
75.0	3.54	3.62	0.08	39.03	91.20
80.0	3.56	3.65	0.09	38.83	90.96
85.0	3.59	3.68	0.09	38.58	90.64
90.0	3.62	3.71	0.10	38.26	90.25
95.0	3.65	3.75	0.10	38.00	89.80
100.0	3.68	3.79	0.11	37.73	89.29

FREQUENCY (MHz)	VSWR (:1)		
	S	1	2
30.0	1.08	1.19	1.33
35.0	1.07	1.19	1.32
40.0	1.06	1.18	1.31
45.0	1.04	1.17	1.28
50.0	1.02	1.15	1.26
55.0	1.01	1.14	1.24
60.0	1.03	1.13	1.22
65.0	1.06	1.13	1.21
70.0	1.09	1.14	1.20
75.0	1.13	1.15	1.21
80.0	1.16	1.17	1.22
85.0	1.19	1.19	1.25
90.0	1.23	1.22	1.27
95.0	1.27	1.25	1.31
100.0	1.30	1.29	1.34

[1]Total Loss = Insertion Loss + 3dB Splitter Loss

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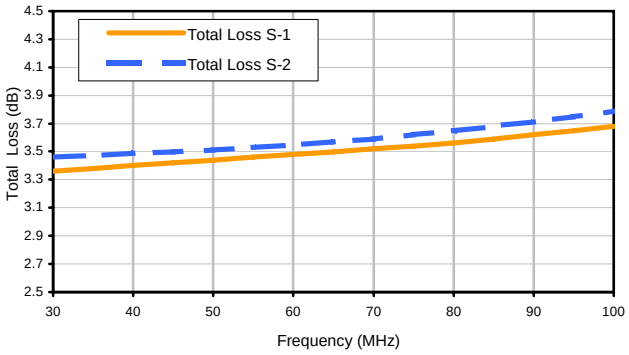
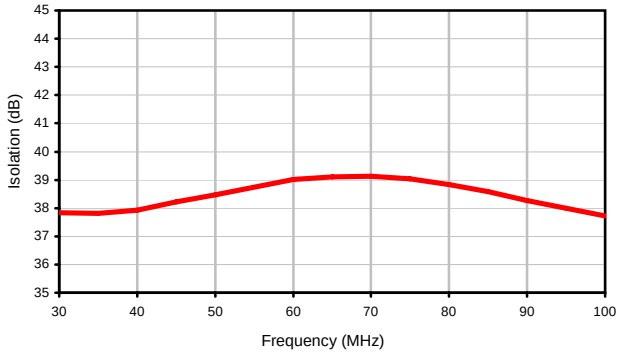
Typical Performance Curves

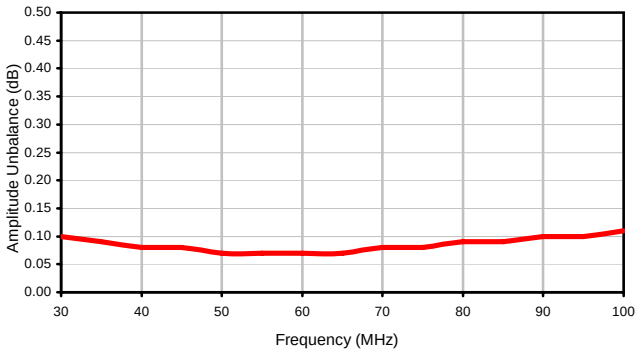
Total Loss



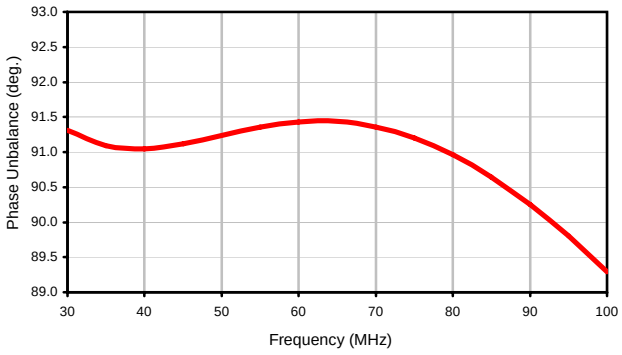
Isolation



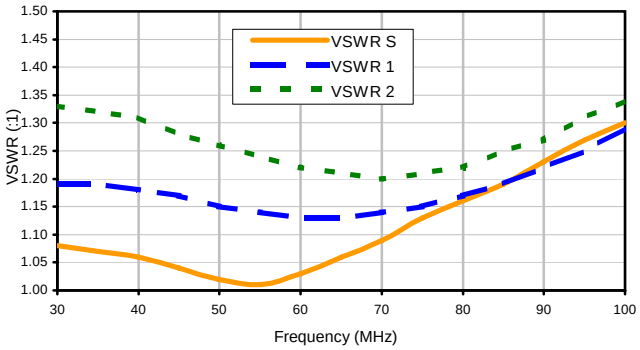
Amplitude Unbalance



Phase Unbalance



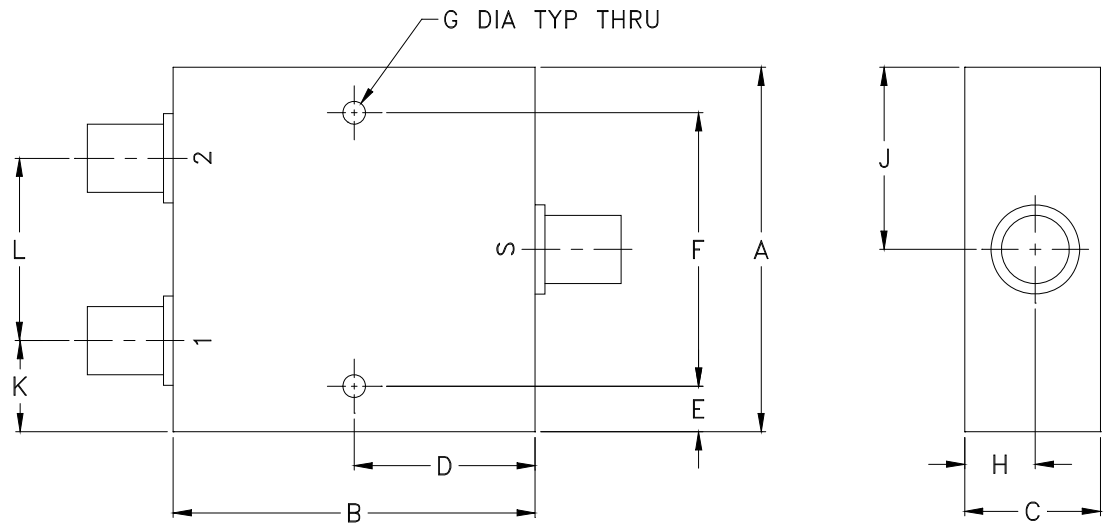
VSWR



Case Style F

F14

Outline Dimensions



CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
F14	2.00 (50.80)	2.00 (50.80)	.75 (19.05)	1.00 (25.40)	.25 (6.35)	1.500 (38.10)	.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. ± .03; 3Pl. ± .015

Notes:

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

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