

Surface Mount Power Splitter/Combiner

2 Way-90° 50Ω 65 to 75 MHz

SYPQ-70+



CASE STYLE: AH202
PRICE: \$13.95 ea. QTY (1-9)

+RoHS Compliant
The +Suffix identifies 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.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

SUMPORT	1
PORT 1 (0°)	5
PORT 2 (+90°)	8
GROUND	2,3,6,7
50 OHM TERM EXTERNAL	4

Features

- low insertion loss, 0.1 dB typ.
- high isolation, 31 dB typ.
- good amplitude balance, 1.1 dB max.
- excellent VSWR, 1.06:1 typ.

Applications

- VHF
- balanced amplifiers
- I&Q modulators

Splitter Electrical Specifications

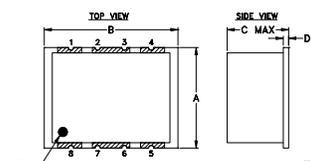
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.		
f_L - f_U					Max.	Max.
65-75	31	24	0.1	0.4	3	1.1

Typical Performance Data

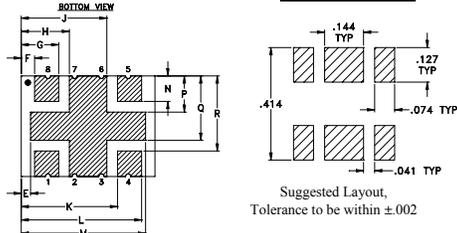
Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
65.00	2.75	3.43	0.68	32.04	89.63	1.04	1.03	1.05
65.50	2.78	3.39	0.61	31.99	89.64	1.04	1.03	1.05
66.00	2.80	3.36	0.56	31.85	89.63	1.04	1.03	1.05
66.75	2.86	3.32	0.46	31.79	89.58	1.04	1.03	1.05
67.50	2.90	3.26	0.36	31.67	89.62	1.04	1.03	1.05
68.25	2.94	3.21	0.27	31.53	89.66	1.04	1.03	1.05
69.00	2.99	3.17	0.19	31.43	89.62	1.04	1.03	1.06
69.75	3.03	3.13	0.10	31.34	89.67	1.04	1.03	1.06
70.50	3.08	3.08	0.00	31.23	89.61	1.04	1.03	1.06
71.25	3.11	3.03	0.08	31.10	89.55	1.04	1.03	1.06
72.00	3.15	2.99	0.16	30.99	89.58	1.04	1.04	1.06
73.00	3.22	2.93	0.29	30.86	89.61	1.04	1.04	1.06
74.00	3.27	2.87	0.40	30.74	89.56	1.04	1.04	1.06
74.50	3.29	2.85	0.45	30.65	89.51	1.04	1.04	1.06
75.00	3.34	2.83	0.51	30.58	89.53	1.04	1.04	1.06

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

Outline Drawing



PCB Land Pattern

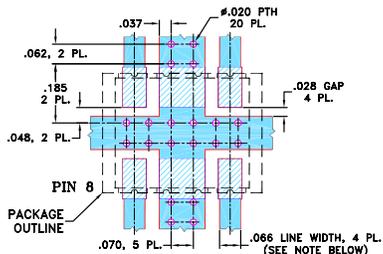


Suggested Layout,
Tolerance to be within ±0.02

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	
.38	.50	.25	.020	.035	.050	.140	.180	
9.65	12.70	6.35	0.51	0.89	1.27	3.56	4.57	
J	K	L	M	N	P	Q	R	wt
.320	.360	.450	.465	.095	.135	.240	.280	grams
8.13	9.14	11.43	11.81	2.41	3.43	6.10	7.11	0.80

Demo Board MCL P/N: TB-265 Suggested PCB Layout (PL-138)

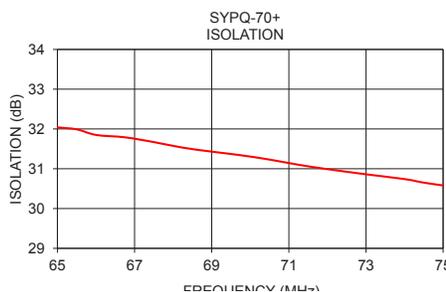
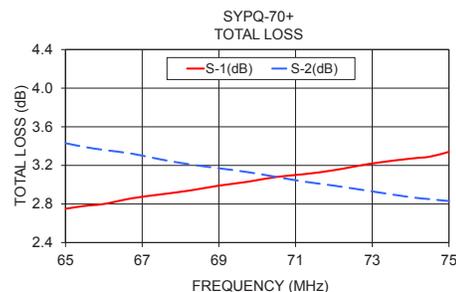
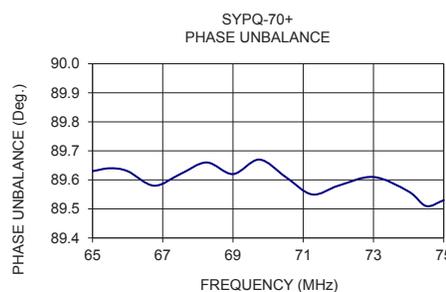


- NOTE:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .030 ± .002. COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

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



electrical schematic

