Surface Mount

Power Splitter/Combiner

SYPQ-70+
SYPQ-70

2 Way-90° 50Ω 65 to 75 MHz

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

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

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

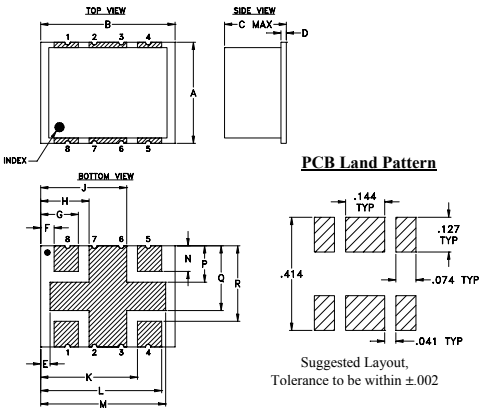
Features

- 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

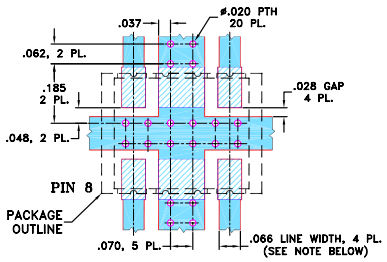
Outline Drawing



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

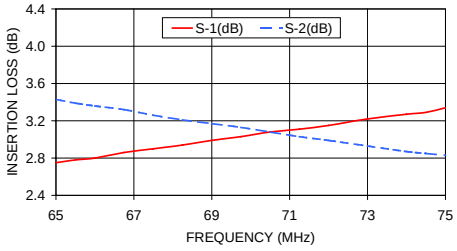
Splitter Electrical Specifications

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

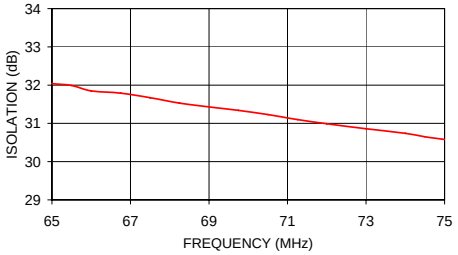
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) S-1	Insertion Loss (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 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

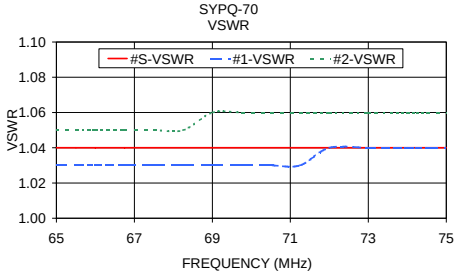
SYPQ-70
INSERTION LOSS



SYPQ-70
ISOLATION



SYPQ-70
VSWR



electrical schematic