

Surface Mount

Power Splitter/Combiner

SCPQ-400+

2 Way-90° 50Ω 250 to 400 MHz



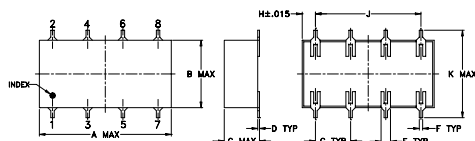
Maximum Ratings

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.	

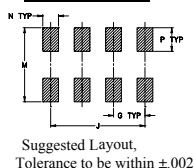
Pin Connections

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

Outline Drawing



PCB Land Pattern



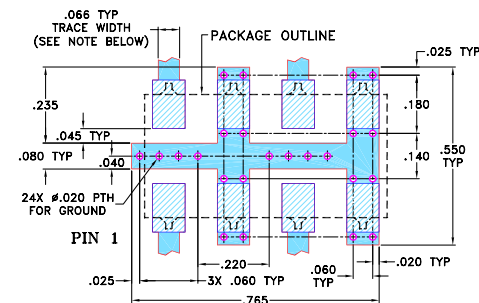
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08

H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

Demo Board MCL P/N: TB-51 Suggested PCB Layout (PL-062)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- wideband, 250 to 400 MHz
- low insertion loss, 0.3 dB typ.

Applications

- UHF
- modulators
- balanced amplifiers

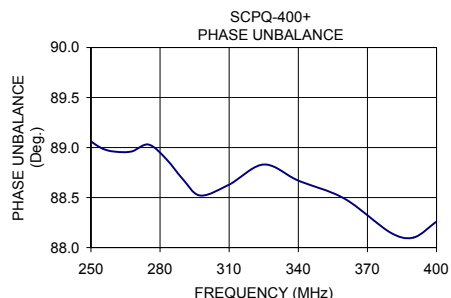
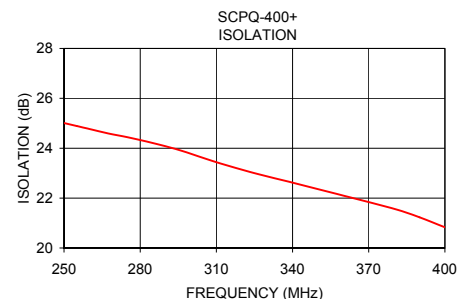
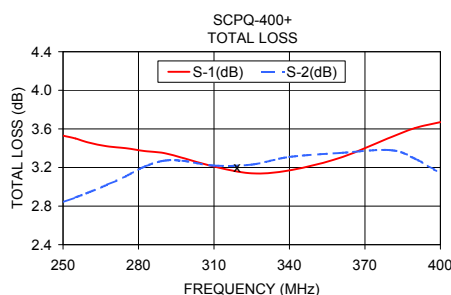
Electrical Specifications

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.
250-400	20 16	0.3 0.7	3	1.2

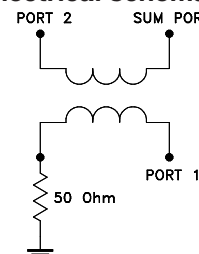
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
250.00	3.53	2.84	0.69	25.01	89.06	1.15	1.11	1.18
255.00	3.50	2.89	0.61	24.89	88.99	1.15	1.11	1.18
260.00	3.46	2.94	0.52	24.77	88.96	1.15	1.12	1.19
267.50	3.42	3.02	0.41	24.59	88.96	1.15	1.12	1.19
275.00	3.40	3.11	0.28	24.44	89.03	1.16	1.12	1.20
282.50	3.37	3.21	0.17	24.27	88.89	1.16	1.12	1.20
290.00	3.35	3.27	0.08	24.08	88.68	1.16	1.13	1.20
297.50	3.30	3.27	0.03	23.86	88.52	1.17	1.13	1.21
310.00	3.21	3.22	0.02	23.44	88.63	1.17	1.14	1.21
325.00	3.14	3.23	0.09	23.00	88.83	1.19	1.15	1.22
340.00	3.17	3.31	0.14	22.62	88.67	1.20	1.16	1.24
360.00	3.30	3.35	0.05	22.10	88.49	1.22	1.18	1.25
380.00	3.51	3.38	0.13	21.57	88.15	1.25	1.21	1.28
390.00	3.61	3.29	0.32	21.23	88.10	1.27	1.23	1.29
400.00	3.67	3.14	0.53	20.83	88.26	1.29	1.25	1.31

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



electrical schematic



For detailed performance specs
& shopping online see web site

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