

Surface Mount

Power Splitter/Combiner

SCQ-4-1650+

4 Way Quadrifilar 50Ω 1150 to 1650 MHz

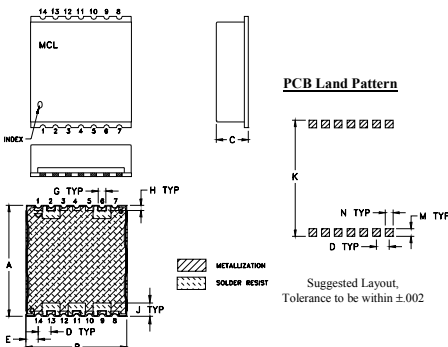
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.20W max.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

SUM PORT	11
PORT 1 (0°)	9
PORT 2 (90°)	6
PORT 3 (180°)	2
PORT 4 (270°)	13
GROUND	1,3,4,5,7,8,10,12,14

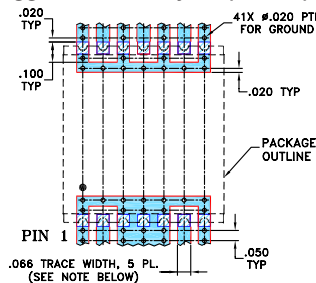
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
.870	.800	.250	.100	.097	--	.060	.040
22.10	20.32	6.35	2.54	2.46	--	1.52	1.02
J	K	L	M	N	P	wt	
.105	.910	--	.060	.060	--	grams	
2.67	23.11	--	1.52	1.52	--	2.85	

Demo Board MCL P/N: TB-490+ Suggested PCB Layout (PL-292)



- 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

- good isolation, 22 dB typ.
- good phase unbalance, 1 deg.
- good matching VSWR, 1.15:1 typ.

Applications

- GPS phase array antenna



CASE STYLE: HU1374
PRICE: \$24.95 ea. QTY (1-9)

+ 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.

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6dB		PHASE* UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	VSWR (:1)	
$f_L - f_U$	Typ.	Min.	Typ.	Max.	Typ.	Max.	Max.	S Typ.	OUT Typ.
1150-1650	22	18	1.5	2.0	3.0	8.0	1.0	1.2	1.1

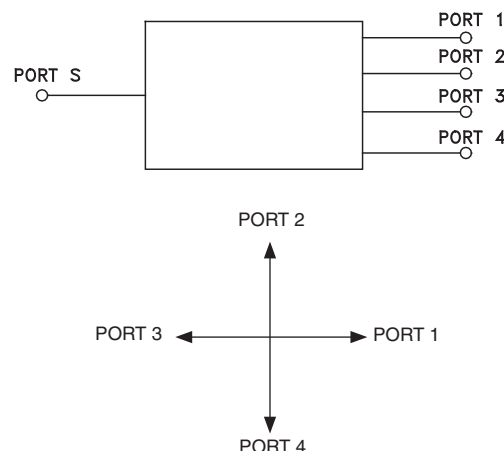
*Phase Unbalance is referenced insertion phase at 0° port.

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)	Amp. Unbal. (dB)	Insertion Phase (deg)	Phase Unbalance (deg.)				Isolation (dB)			VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-1	S-1	0°	90°	180°	270°	1-2	2-3	3-4					
1150.00	6.98	0.32	160.79	0.00	88.03	179.66	267.65	22.35	31.34	25.42	1.09	1.03	1.04	1.07	1.02
1200.00	7.10	0.18	144.77	0.00	88.25	179.80	267.68	22.07	30.71	25.20	1.10	1.03	1.06	1.07	1.02
1225.00	7.16	0.26	136.76	0.00	88.37	179.89	267.72	21.94	30.39	25.11	1.11	1.03	1.06	1.07	1.03
1250.00	7.21	0.33	128.75	0.00	88.49	179.96	267.76	21.82	30.06	25.02	1.11	1.03	1.07	1.07	1.03
1275.00	7.26	0.38	120.75	0.00	88.62	180.02	267.82	21.72	29.69	24.95	1.11	1.03	1.07	1.08	1.04
1300.00	7.31	0.43	112.75	0.00	88.76	180.07	267.88	21.65	29.32	24.90	1.11	1.04	1.08	1.08	1.04
1350.00	7.38	0.51	96.73	0.00	89.04	180.18	268.04	21.54	28.55	24.88	1.11	1.04	1.09	1.09	1.05
1400.00	7.44	0.54	80.72	0.00	89.32	180.28	268.21	21.52	27.81	24.98	1.12	1.05	1.10	1.10	1.06
1450.00	7.48	0.54	64.73	0.00	89.60	180.32	268.38	21.59	27.08	25.19	1.12	1.06	1.10	1.11	1.07
1500.00	7.50	0.53	48.73	0.00	89.83	180.35	268.57	21.73	26.33	25.50	1.14	1.06	1.11	1.12	1.07
1525.00	7.50	0.51	40.73	0.00	89.96	180.35	268.67	21.83	26.00	25.70	1.15	1.07	1.11	1.13	1.08
1550.00	7.50	0.48	32.73	0.00	90.07	180.33	268.76	21.94	25.67	25.91	1.16	1.07	1.11	1.13	1.08
1575.00	7.49	0.44	24.73	0.00	90.18	180.30	268.87	22.07	25.33	26.16	1.18	1.07	1.11	1.14	1.08
1600.00	7.48	0.39	16.75	0.00	90.28	180.25	268.98	22.23	25.02	26.43	1.20	1.08	1.11	1.14	1.09
1650.00	7.46	0.30	0.72	0.00	90.48	180.20	269.22	22.57	24.40	26.99	1.23	1.08	1.11	1.14	1.10

1. Total Loss = Insertion Loss + 6dB splitter loss.

Electrical Configuration



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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