

Surface Mount

Power Splitter/Combiner

SCQ-4-1650+

4 Way Quadrifilar 50Ω 1150 to 1650 MHz



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

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

Features

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

Applications

- GPS phase array antenna

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

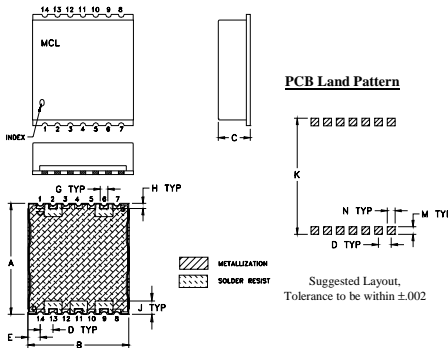
The + suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6dB		PHASE* UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	VSWR (:1)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Max.	S Typ.	OUT Typ.
f _L -f _U									
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.

Outline Drawing



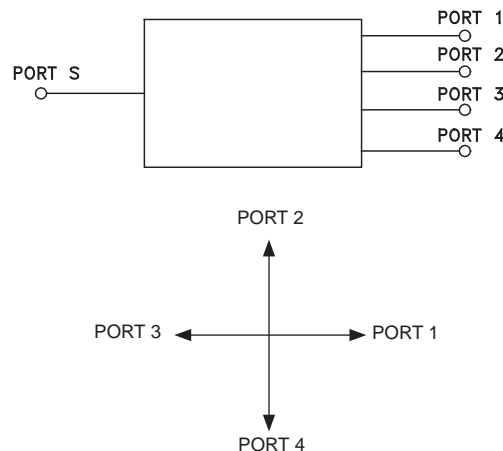
Outline Dimensions (inch/mm)

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

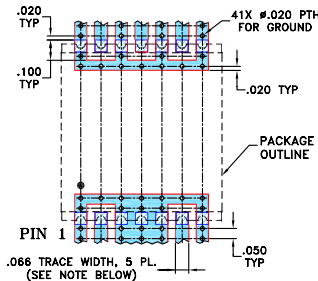
Typical Performance Data

Freq. (MHz)	Insertion Loss (dB)	Amp. Unbal. (dB)	Insertion Phase (deg)	Phase Unbalance (deg.)				Isolation (dB)			VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
				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

Electrical Configuration



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.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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