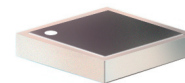


Surface Mount Power Splitter/Combiner

QCC-20+

2 Way-90° 50Ω 1200 to 2200 MHz



Maximum Ratings

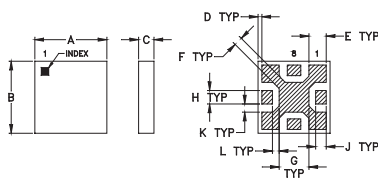
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	17.5W* max.

* Derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

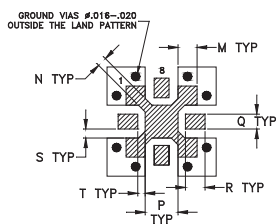
Pin Connections

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

Outline Drawing



PCB Land Pattern

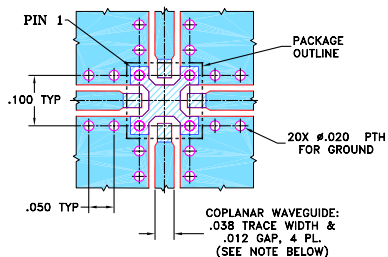


Suggested Layout,
Tolerance to be within ±0.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt
.150	.150	.032	.008	.036	.018	.062	.028	.022	.017	.014	.036	.018	.062	.028	.037	.017	.014	grams
3.81	3.81	0.81	0.20	0.91	0.46	1.57	0.71	0.56	0.43	0.36	0.91	0.46	1.57	0.71	0.94	0.43	0.36	0.05

Demo Board MCL P/N: TB-302+ Suggested PCB Layout (PL-128)



- NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP 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

Features

- low insertion loss, 0.4 dB typ.
- high isolation, 25 dB typ.
- LTCC construction
- excellent temperature stability
- small size, 0.15" X 0.15"
- aqueous washable
- protected by U.S. Patent 7,030,713

Applications

- WCDMA • defense
- PCS
- DECT
- PHS
- radar

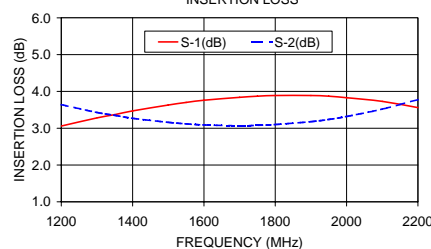
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs less 3 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.
1200-2200								
1200-1400	32	24	0.4	0.6	1	3	0.4	1.0
1400-1800	35	20	0.4	0.7	1	3	0.5	0.85
1800-2200	23	16	0.6	0.9	1	5	0.5	0.9

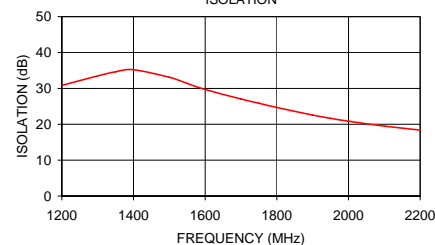
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
1200.00	3.06	3.64	0.58	30.83	90.74	1.03	1.16	1.19
1300.00	3.28	3.43	0.16	33.49	91.05	1.01	1.18	1.20
1350.00	3.37	3.35	0.03	34.64	91.20	1.02	1.19	1.20
1400.00	3.47	3.27	0.20	35.21	91.33	1.04	1.19	1.20
1500.00	3.63	3.16	0.47	33.11	91.51	1.08	1.21	1.21
1550.00	3.70	3.12	0.58	31.38	91.57	1.10	1.22	1.21
1600.00	3.76	3.09	0.67	29.70	91.60	1.12	1.24	1.22
1700.00	3.84	3.07	0.77	27.04	91.58	1.15	1.27	1.23
1750.00	3.87	3.08	0.79	25.86	91.55	1.17	1.28	1.24
1800.00	3.89	3.10	0.79	24.69	91.48	1.18	1.29	1.25
1900.00	3.89	3.18	0.71	22.58	91.25	1.23	1.31	1.28
1950.00	3.87	3.24	0.63	21.66	91.11	1.25	1.32	1.30
2000.00	3.83	3.32	0.52	20.85	90.94	1.27	1.33	1.32
2100.00	3.73	3.52	0.21	19.49	90.53	1.31	1.35	1.35
2200.00	3.56	3.78	0.22	18.38	90.13	1.33	1.37	1.40

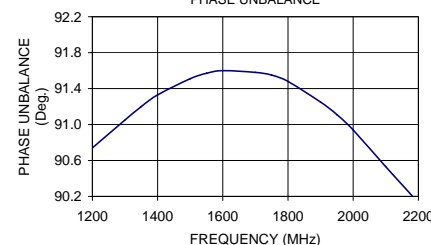
QCC-20+
INSERTION LOSS



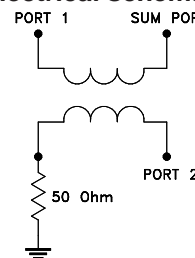
QCC-20+
ISOLATION



QCC-20+
PHASE UNBALANCE



electrical schematic



For detailed performance specs & shopping online see web site

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IFIRF MICROWAVE COMPONENTS

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