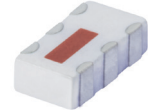


Ultra-Small Ceramic Power Splitter/Combiner

2 Way-90° 50Ω 1350 to 2450 MHz

QCN-25D+



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.
* Derate linearly to 7W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

Features

- low insertion loss, 0.4 dB typ.
- high isolation, 25 dB typ.
- wrap-around terminal for excellent solderability
- ultra small, 0.12"X0.06"X0.035"
- patent pending

Applications

- GPS
- PCS/DCS
- UMTS
- balanced amplifiers
- modulators

Electrical Specifications

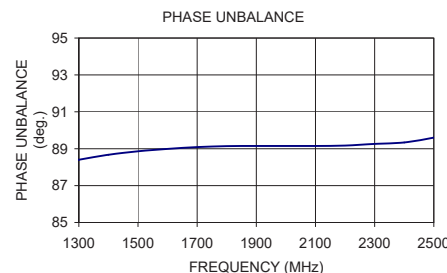
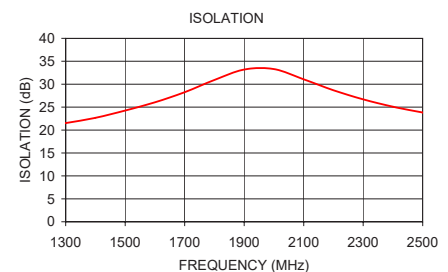
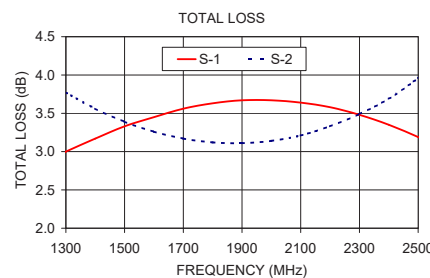
FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)
f_L - f_U	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Typ.
1350-2450					
1350-1950	25 18	0.4 0.7	1 5	0.5 1.1	1.2
1950-2200	25 20	0.4 0.7	1 4	0.5 1.0	1.15
2200-2450	25 18	0.6 0.9	1 4	0.5 1.1	1.2

1. For applications requiring DC voltage to be applied to the RF ports. DC resistance to ground is 100 Mohms min.

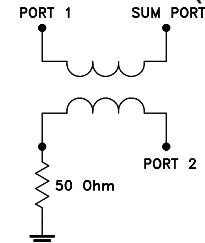
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1 S-2						
1275.00	2.95 3.83	0.88	21.24	88.32	1.19	1.20	1.18
1300.00	3.00 3.77	0.77	21.52	88.40	1.18	1.19	1.17
1400.00	3.17 3.56	0.38	22.67	88.67	1.15	1.16	1.14
1500.00	3.33 3.39	0.06	24.25	88.86	1.13	1.13	1.11
1600.00	3.45 3.26	0.20	26.05	88.99	1.11	1.10	1.09
1700.00	3.56 3.17	0.38	28.25	89.09	1.09	1.07	1.07
1800.00	3.63 3.12	0.50	30.93	89.14	1.08	1.05	1.05
1900.00	3.67 3.11	0.56	33.19	89.15	1.08	1.04	1.06
2000.00	3.67 3.14	0.53	33.29	89.15	1.08	1.04	1.07
2100.00	3.64 3.21	0.43	31.07	89.15	1.09	1.05	1.08
2200.00	3.58 3.33	0.25	28.67	89.17	1.11	1.08	1.10
2300.00	3.48 3.49	0.00	26.70	89.26	1.13	1.11	1.12
2400.00	3.35 3.69	0.35	25.09	89.34	1.16	1.14	1.16
2500.00	3.19 3.96	0.78	23.82	89.60	1.19	1.17	1.19
2550.00	3.10 4.13	1.03	23.23	89.77	1.21	1.19	1.21

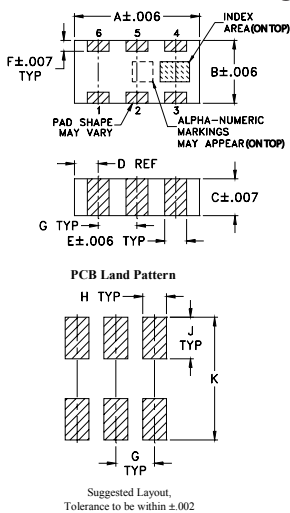
1. Total Loss = Insertion Loss + 3dB splitter loss.



electrical schematic (Note 1)



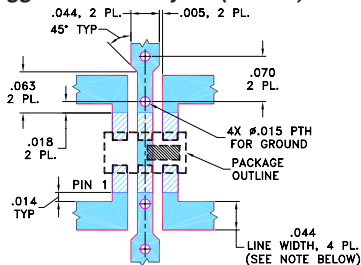
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28
G	H	J	K	wt	
.039	.024	.042	.123	grams	
0.99	0.61	1.07	3.12		.020

Demo Board MCL P/N: TB-255+ Suggested PCB Layout (PL-131)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". 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

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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