



ULTRA-SMALL CERAMIC

Power Splitter/Combiner

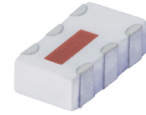
QCN-45+

Mini-Circuits

2 Way-90° 50Ω 2500 to 4500 MHz

FEATURES

- Low insertion loss, 0.4 dB typ.
- Wide band, 2500-4500 MHz
- Wrap-around terminal for excellent solderability
- Ultra small, 0.12"X0.06"X0.035"
- Patent pending



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

APPLICATIONS

- Balanced amplifiers
- Modulators
- MMDS
- Defense communications

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		2500		4500	MHz
Insertion Loss, above 3.0 dB	2500-3500		0.4	0.7	dB
	3500-4500		0.5	0.8	
Isolation	2500-3500	16	22		dB
	3500-4500	15	19		
Phase Unbalance	2500-3500		1	4	Degree
	3500-4500		3	6	
Amplitude Unbalance	2500-3500		0.5	1.7	dB
	3500-4500		1.0	2.1	
VSWR	2500-3500		1.2		(:1)
	3500-4500		1.2		

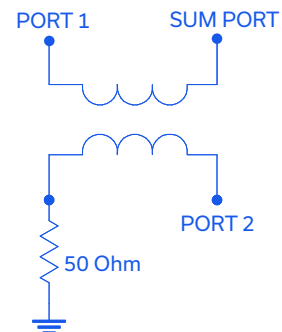
1. For applications requiring DC voltage to be applied to the RF ports, add suffix letter "D" to part no. DC resistance to ground is 100 Mohms min.

MAXIMUM RATINGS

Parameter	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.

ELECTRICAL SCHEMATIC (NOTE 1)



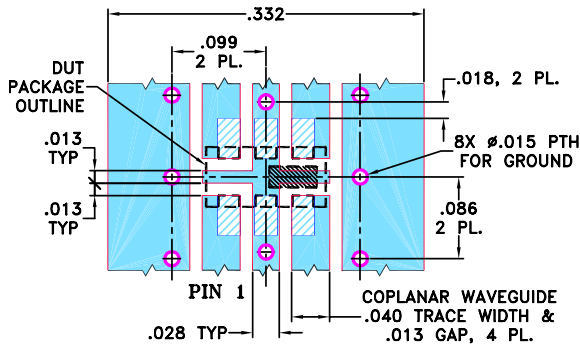


PIN CONNECTIONS

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

PRODUCT MARKING: SA

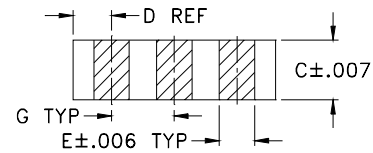
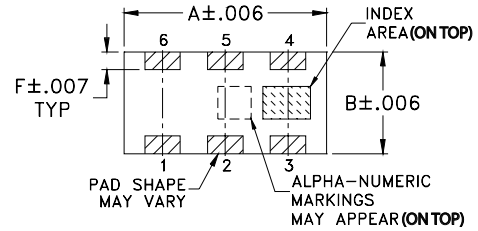
DEMO BOARD MCL P/N: TB-405
SUGGESTED PCB LAYOUT (PL-250)



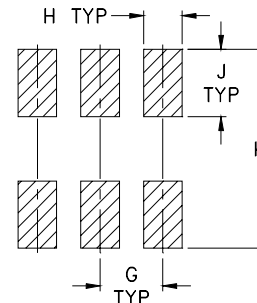
NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS $0.020" \pm 0.0015"$; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ± 0.02

OUTLINE DIMENSIONS (Inches/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

TAPE & REEL INFORMATION: F75