

Ultra-Small Ceramic Power Splitters/Combiners

2 Way-90° 50Ω

330 to 3400 MHz

QCN-SERIES
patent pending



BLUE CELL™

CASE STYLE: FV1206-1

Model	Price	Qty.
QCN	\$3.95	(10-49)
QCN-D	\$4.45	(10-49)

Maximum Ratings

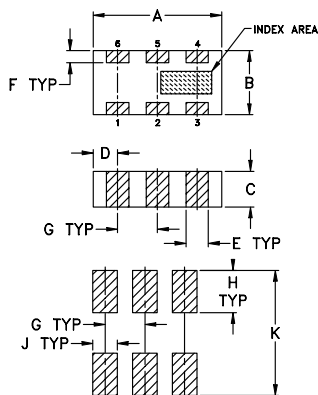
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.

*derate linearly to 7W at 100°C ambient.

Pin Connections

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

Outline Drawing



SUGGESTED LAYOUT FOR PCB PATTERN
PATTERN TO BE WITHIN ±.002

TOLERANCE UNLESS OTHERWISE STATED

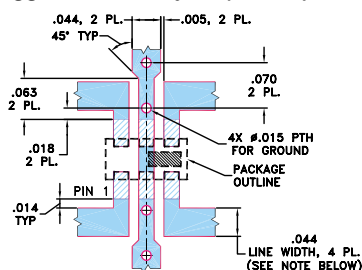
- 2 PLACE DECIMALS: ±.01
- 3 PLACE DECIMALS: ±.005

Outline Dimensions (inch/mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.012
3.20	1.60	0.89	0.61	0.56	0.30

G	H	J	K	wt
.039	.042	.024	.123	grams
0.99	1.07	0.61	3.12	.020

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



- NOTE:
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Features

- low insertion loss, 0.4 dB typ.
- high isolation, 26 dB typ.
- wrap-around terminal for excellent solderability
- ultra small, .12"x.06"x.035"
- patent pending

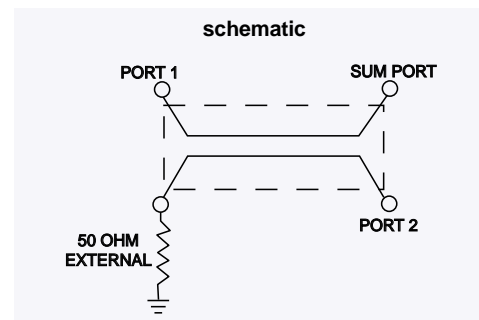
Applications

- balanced amplifiers
- modulators
- cellular
- UMTS
- PCN
- WCDMA
- ISM

Splitter Electrical Specifications¹

MODEL NO.	FREQ. RANGE (MHz) f _L -f _U	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of coupled outputs less 3 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		VSWR (:1) Typ.
		Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
New! QCN-5	330-580									
	330-400	23	20	0.3	0.6	2.5	5	0.6	1.1	1.2
	400-525	22	17	0.4	0.7	2.5	4	0.2	0.5	1.2
	525-580	18	14	0.6	0.9	1	4	0.3	1.1	1.2
QCN-7	425-675									
	425-550	17	13	0.4	0.7	2	8	0.5	1.0	1.3
	550-675	17	11	0.6	1.0	4	8	0.5	1.0	1.4
QCN-12	800-1375									
	800-1000	19	14	0.4	0.8	9	12	0.4	0.9	1.3
1000-1375	19	14	0.6	1.0	9	13	0.7	1.0	1.5	
New! QCN-12A	800-1250									
	800-1000	17	15	0.3	0.6	2.5	5	0.2	0.8	1.2
	1000-1250	16	13	0.4	0.7	1	3	0.5	0.8	1.2
QCN-19	1100-1925									
	1100-1400	25	19	0.4	0.7	1	3	0.4	1.1	1.15
	1400-1600	26	20	0.4	0.8	2	4	0.5	1.0	1.2
	1600-1925	26	20	0.5	0.9	2	4	0.4	1.1	1.2
QCN-25	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
QCN-27	1700-2700									
	1700-1800	21	18	0.4	0.7	3	6	0.5	1.0	1.2
	1800-2000	22	18	0.4	0.7	2	6	0.2	0.6	1.2
	2000-2400	30	20	0.4	0.7	3	6	0.2	0.8	1.2
	2400-2700	30	20	0.5	0.9	3	6	0.6	1.0	1.2
New! QCN-34	2500-3400									
	2500-2800	32	23	0.4	0.6	1	3	0.4	0.9	1.15
	2800-3400	26	20	0.5	0.7	1	4	0.5	1.2	1.15

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.



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M996263
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QCN-25 ED-10849/4
QCN-27 ED-10849/5
QCN-5 ED-N/A
QCN-34 ED-10885
QCN-12A ED-11641/2
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Page 1 of 3

