

Power Splitters/Combiners

2 Way-90° 50Ω

330 to 3400 MHz

QCN-SERIES

patent pending



CASE STYLE: FV1206-1

Maximum Ratings

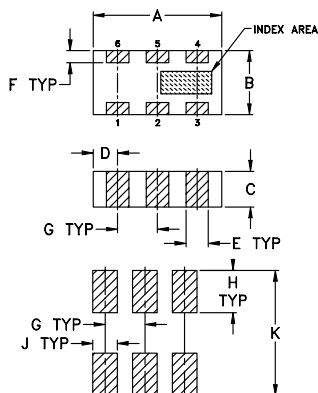
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.

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

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

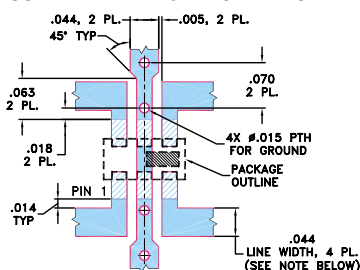
2 PLACE DECIMALS: ±.01
3 PLACE DECIMALS: ±.005

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: 1. 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.

2. 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

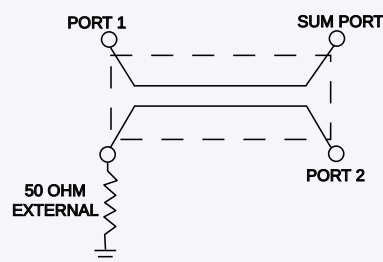
- balanced amplifiers
- modulators
- cellular
- UMTS
- PCN
- WCDMA
- ISM

Splitter Electrical Specifications¹

MODEL NO.	FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB)	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)
	f_L - f_U	Typ. Min.	Avg. of coupled outputs less 3 dB Typ. Max.	Typ. Max.	Typ. Max.	Typ.
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.

schematic



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REV. C
M996263
QCN-7 ED-10849/1
QCN-12 ED-10849/2
QCN-19 ED-10849/3
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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