

Power Splitters/Combiners

2 Way-90° 50Ω

330 to 3400 MHz

QCN-SERIES

patent pending



CASE STYLE: FV1206-1

Maximum Ratings

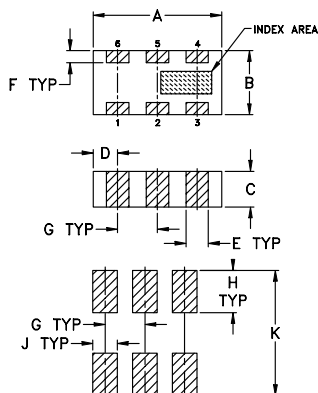
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.

*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

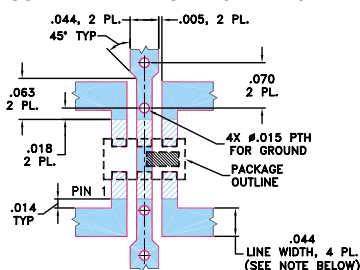
3 PLACE DECIMALS: ±.005

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

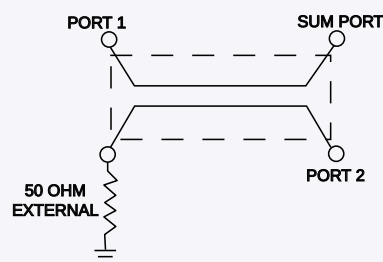
- balanced amplifiers
- modulators
- cellular
- UMTS
- PCN
- WCDMA
- ISM

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
AD/RS/CP
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