

QCN-12D+



CASE STYLE: FV1206-1
PRICE: \$4.45 ea. QTY (20)

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

* Derate linearly to 7W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 3000

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

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

- cellular
- satellite distribution
- GSM
- balanced amplifiers
- modulators

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.
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

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

Frequency (MHz)	Total Loss¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
800.00	3.30	3.72	0.42	17.70	82.30	1.26	1.31	1.31
810.00	3.33	3.68	0.35	17.77	82.27	1.26	1.31	1.31
830.00	3.35	3.60	0.24	17.90	82.14	1.25	1.31	1.31
870.00	3.46	3.53	0.07	18.29	82.10	1.24	1.30	1.31
900.00	3.52	3.43	0.08	18.58	82.03	1.22	1.29	1.31
930.00	3.54	3.38	0.16	18.85	81.82	1.21	1.29	1.30
960.00	3.63	3.36	0.27	19.22	81.93	1.20	1.28	1.30
990.00	3.63	3.28	0.35	19.52	81.65	1.19	1.28	1.31
1040.00	3.72	3.28	0.44	20.15	81.66	1.17	1.27	1.31
1100.00	3.73	3.26	0.46	20.91	81.43	1.15	1.27	1.32
1160.00	3.69	3.26	0.44	21.62	81.05	1.13	1.27	1.33
1220.00	3.68	3.35	0.33	22.25	81.02	1.12	1.28	1.36
1280.00	3.61	3.53	0.08	22.51	80.98	1.12	1.29	1.39
1340.00	3.45	3.72	0.27	22.12	80.57	1.14	1.31	1.44
1375.00	3.39	3.8	0.42	21.66	80.68	1.17	1.33	1.47

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

Figure 1 illustrates the dimensional callouts for a 3D printed part. The top view shows a rectangular part with dimensions A ± .006 (width) and B ± .006 (height). It features six numbered regions (1-6) for pad shape and alpha-numeric markings. Region 1 is the bottom-left corner, 2 is the bottom-center, 3 is the bottom-right corner, 4 is the top-right corner, 5 is the top-center, and 6 is the top-left corner. The side view shows a rectangular part with dimensions D REF (width) and C ± .007 (height). It features two numbered regions (1-2) for pad shape and alpha-numeric markings. Region 1 is the front-left corner and 2 is the front-right corner. The part is shown with a G TYP (typical) dimension of E ± .006.

PCB Land Pattern

Suggested Layout,
Tolerance to be within ± 0.02

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 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)

 MASK OVER BARE COPPER
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

A. 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.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

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