

Power Splitter/Combiner-QCN Series

WGQCN-19

2 Way-90° 50Ω 1100 to 1925 MHz

Ver. A

2025.04.29

Maximum Rating

Operating Temperature -55°C~+100°C

Storage Temperature -55°C~+100°C

RF Input Power 15W max

Pin Connections

SUM PORT 1

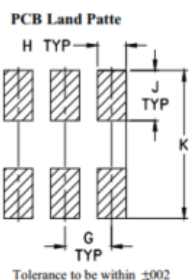
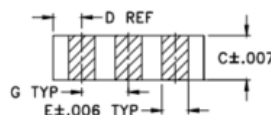
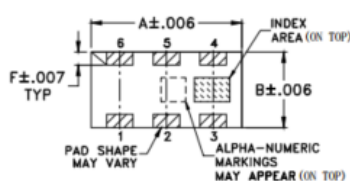
Port 1(0°) 4

Port 2 (+90°) 6

Ground 2,5

50 OHM TERM EXTERNAL 3

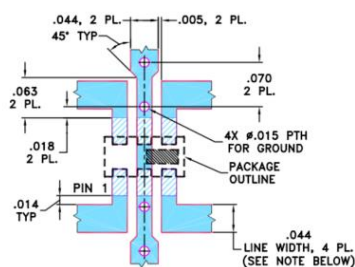
Outline Dimensions



OUTLINE DIMENSIONS (Inches)

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	

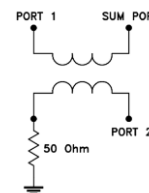
Suggested PCB layout



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- ✧ Wrap-around terminal for excellent solderability
- ✧ Low insertion loss;
- ✧ Excellent amplitude / phase unbalance;
- ✧ High isolation;
- ✧ Temperature stable LTCC;



Application

- ✧ Balanced amplifiers/Modulators/GPS
- ✧ PCS/DCS

RoHS Compliant

Electrical Schematic

Electrical Specifications⁽¹⁾ at 25°C

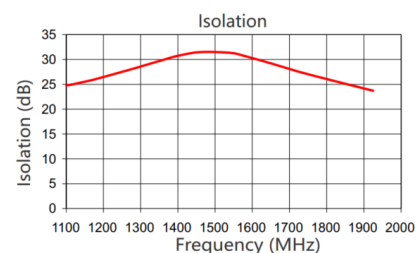
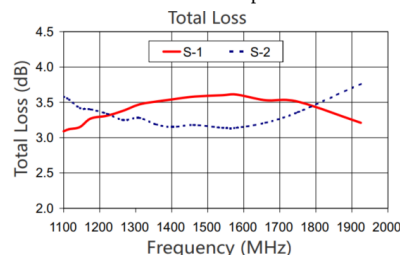
Frequency (MHz)	Insertion Loss (dB)		Isolation (dB)		Phase Unbalance (Degrees)		AMPLITUDE UNBALANCE (dB)		VSWR (:1) Typ.
	Typ.	MAX.	Typ.	Min	Typ.	MAX	Typ.	MAX.	
1100-1400	0.4	0.7	25	19	1	3	0.4	1.1	1.15
1400-1600	0.4	0.8	26	20	2	4	0.5	1.0	1.2
1600-1925	0.5	0.9	26	20	2	4	0.4	1.1	1.2

Measured on Test Board T-11.

Typical Performance at 25°C

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (dB)	VSWR (:1)		
	S-1	S-2				S	1	2
1100	3.09	3.58	0.49	24.79	89.52	1.10	1.11	1.15
1115	3.12	3.54	0.42	24.96	89.64	1.09	1.10	1.14
1145	3.15	3.42	0.27	25.45	89.75	1.08	1.10	1.14
1175	3.27	3.40	0.13	25.96	89.40	1.07	1.09	1.13
1220	3.31	3.34	0.03	26.88	89.94	1.06	1.08	1.12
1265	3.38	3.25	0.13	27.82	90.05	1.05	1.07	1.11
1310	3.47	3.28	0.19	28.81	89.98	1.04	1.06	1.10
1355	3.51	3.19	0.31	29.78	90.12	1.04	1.05	1.09
1400	3.54	3.15	0.39	30.74	90.07	1.04	1.04	1.07
1460	3.58	3.18	0.39	31.49	90.50	1.04	1.03	1.06
1540	3.60	3.14	0.45	31.34	90.65	1.06	1.02	1.04
1580	3.61	3.14	0.46	30.69	90.57	1.07	1.02	1.04
1660	3.53	3.21	0.32	28.99	90.86	1.10	1.02	1.02
1750	3.51	3.36	0.16	27.04	90.76	1.14	1.03	1.01
1925	3.21	3.76	0.55	23.71	91.31	1.21	1.06	1.05

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



Notes

- a. The specifications are tested at 25°C±5°C, relative humidity 55~75%.
- b. Other quality and characteristic not specify in this datasheet.
- Please contact us for detail requirements.



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