

LTCC 功分器/合路器 (Power Splitter/Combiner)

HT-QCN-19+

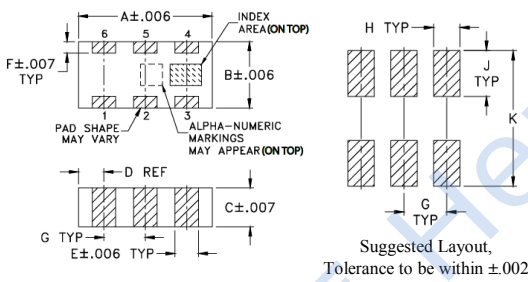
Features

- low insertion loss, 0.4 dB typ.
- high isolation, 26 dB typ.
- wrap-around terminal for excellent solderability
- ultra small, 0.12"X0.06"X0.035"
- patent pending

Applications

- GPS
- PCS/DCS
- balanced amplifiers
- modulators

Outline Drawing



PCB Land Pattern

Pad Connections

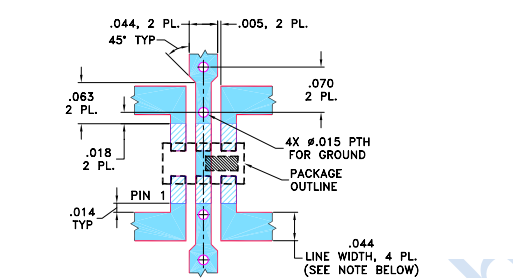
SUM PORT	1
PORT 1 (0°)	4
PORT 2 (+90°)	6
GROUND	2,5
50 OHM TERM EXTERNAL	3

Outline Dimensions : inch mm

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28

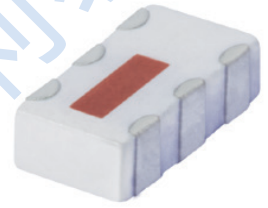
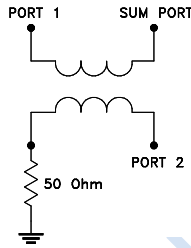
G	H	J	K	wt
.039	.024	.042	.123	grams
0.99	0.61	1.07	3.12	.020

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



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B 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

Functional Schematic



2Way-90° 50 Ω
1100MHz to 1925MHz

Electrical Specifications(1) at 25°C

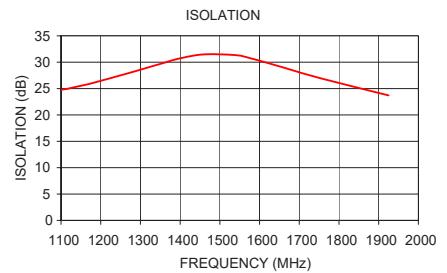
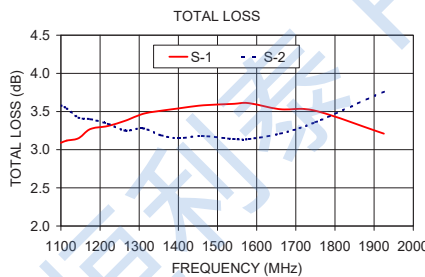
Frequency (MHz)	Insertion Loss (dB) above 3.0 dB		Isolation (dB) Typ. Min.	Phase Unbalance (Degree) Typ. Max.		Amplitude Unbalance (Degree) Typ. Max.		VSWR (:1) Typ.
	Typ.	Max.						
1100-1400	0.4	0.7	25 19	1 3	0.4 1.1		1.15	
1400-1600	0.4	0.8	26 20	2 4	0.5 1.0		1.2	
1600-1925	0.5	0.9	26 20	2 4	0.4 1.1		1.2	

(1) Measured on Fenghua Characterization Test Board T-11.

Typical Performance Data(1,2,3) at 25°C

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR (:1)		
	S-1	S-2				S	1	2
1100.00	3.09	3.58	0.49	24.79	89.52	1.10	1.11	1.15
1115.00	3.12	3.54	0.42	24.96	89.64	1.09	1.10	1.14
1145.00	3.15	3.42	0.27	25.45	89.75	1.08	1.10	1.14
1175.00	3.27	3.40	0.13	25.96	89.40	1.07	1.09	1.13
1220.00	3.31	3.34	0.03	26.88	89.94	1.06	1.08	1.12
1265.00	3.38	3.25	0.13	27.82	90.05	1.05	1.07	1.11
1310.00	3.47	3.28	0.19	28.81	89.98	1.04	1.06	1.10
1355.00	3.51	3.19	0.31	29.78	90.12	1.04	1.05	1.09
1400.00	3.54	3.15	0.39	30.74	90.07	1.04	1.04	1.07
1460.00	3.58	3.18	0.39	31.49	90.50	1.04	1.03	1.06
1540.00	3.60	3.14	0.45	31.34	90.65	1.06	1.02	1.04
1580.00	3.61	3.14	0.46	30.69	90.57	1.07	1.02	1.04
1660.00	3.53	3.21	0.32	28.99	90.86	1.10	1.02	1.02
1750.00	3.51	3.36	0.16	27.04	90.76	1.14	1.03	1.01
1925.00	3.21	3.76	0.55	23.71	91.31	1.21	1.06	1.05

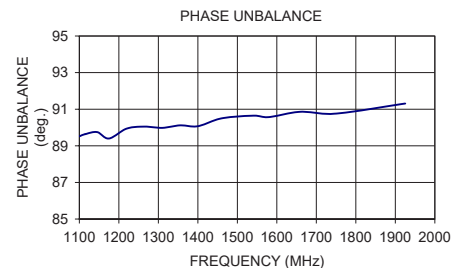
1. Total Loss = Insertion Loss + 3 dB splitter loss.
2. The specifications are tested at 25°C±5°C, relative humidity 55~75%.
3. Other quality and characteristic not specify in this datasheet.



Maximum Ratings

Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input*	15W at 25°C

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



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