

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

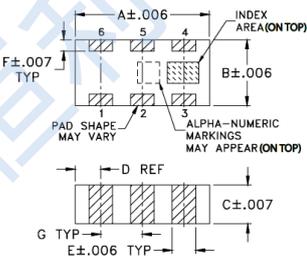
Applications

- GPS
- PCS/DCS
- balanced amplifiers
- modulators

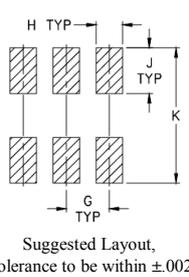
Pad Connections

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

Outline Drawing



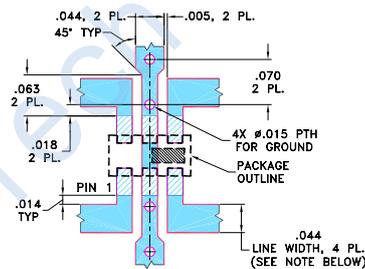
PCB Land Pattern



Outline Dimensions : inch mm

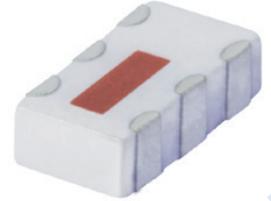
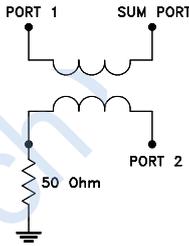
A	B	C	D	E	F	
.126	.063	.035	.024	.022	.011	
3.20	1.60	0.89	0.61	0.56	0.28	
G	H	J	K			wt
.039	.024	.042	.123			grams
0.99	0.61	1.07	3.12			.020

Suggested PCB Layout



- 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.
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Functional Schematic



2Way-90° 50 Ω
1100MHz to 1925MHz

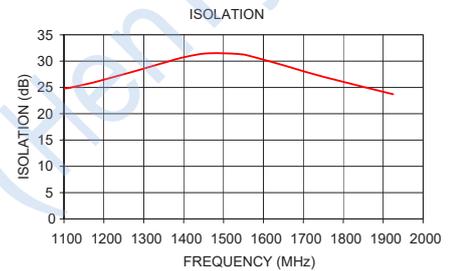
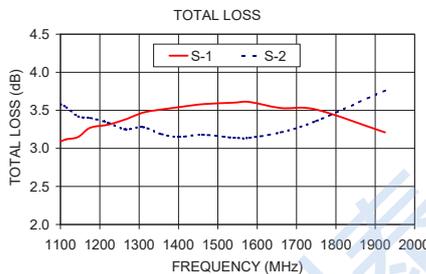
Electrical Specifications at 25°C

Frequency (MHz)	Insertion Loss (dB) above 3.0 dB		Isolation (dB)		Phase Unbalance (Degree)		Amplitude Unbalance (Degree)		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

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.

