Surface Mount

Power Splitter/Combiner

TCP-2-25+

2 Way-0° 50Ω 200 to 2500 MHz

CASE STYLE: DB714
PRICE: $1.99 ea. QTY. (20)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	2,5,6
PORT 1	3
PORT 2	4
GROUND	1
EXT. RESISTOR 475Ω	3,4

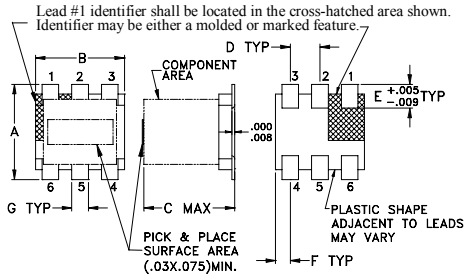
Features

- low insertion, 0.8 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- very good phase unbalance, 1.2 deg. typ.
- external resistor required
- aqueous washable
- leads for excellent solderability
- low cost

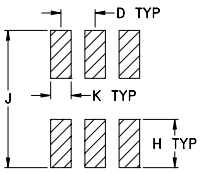
Applications

- cellular
- PCN
- GPS

Outline Drawing



PCB Land Pattern



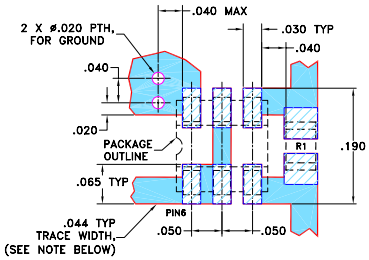
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.160	.150	.160	.050	.040	.025
4.06	3.81	4.06	1.27	1.02	0.64

G	H	J	K	wt
.028	.065	.190	.030	grams
0.71	1.65	4.83	0.76	0.15

Demo Board MCL P/N: TB-86
Suggested PCB Layout (PL-008)



RESISTOR R1: 475 ± 1% Ohm, 0805 SIZE

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.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

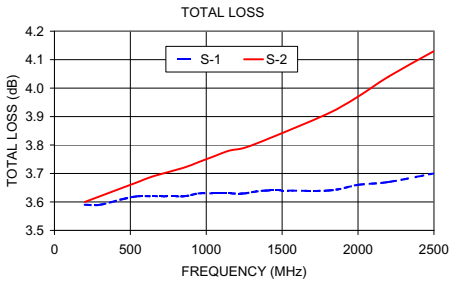
Electrical Specifications

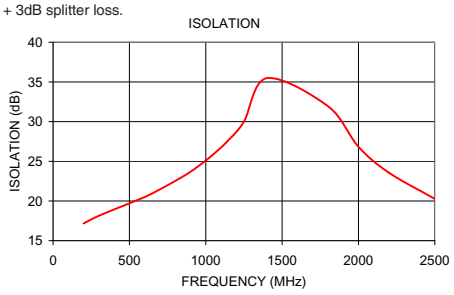
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min	Typ.	Max.	Max.	Max.
200-2500	18	10	0.8	1.3	6.0	0.8

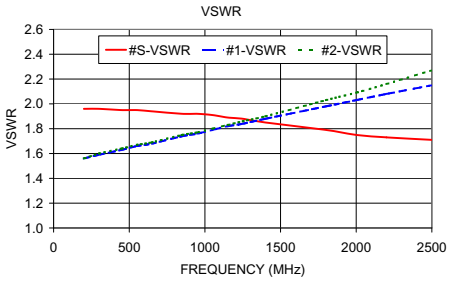
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
200.00	3.59	3.60	0.01	17.18	0.16	1.96	1.56	1.56
300.00	3.59	3.62	0.03	18.14	0.19	1.96	1.59	1.60
450.00	3.61	3.65	0.04	19.32	0.24	1.95	1.63	1.64
550.00	3.62	3.67	0.05	20.10	0.25	1.95	1.66	1.67
650.00	3.62	3.69	0.07	20.96	0.31	1.94	1.68	1.69
850.00	3.62	3.72	0.10	23.08	0.32	1.92	1.74	1.75
950.00	3.63	3.74	0.11	24.37	0.35	1.92	1.76	1.77
1050.00	3.63	3.76	0.13	25.89	0.38	1.91	1.79	1.80
1150.00	3.63	3.78	0.15	27.69	0.44	1.89	1.82	1.83
1250.00	3.63	3.79	0.16	30.01	0.48	1.88	1.84	1.86
1400.00	3.64	3.82	0.18	35.48	0.56	1.85	1.88	1.90
1800.00	3.64	3.91	0.27	31.95	0.78	1.79	1.98	2.03
2000.00	3.66	3.97	0.31	26.83	0.86	1.75	2.03	2.09
2200.00	3.67	4.04	0.37	23.56	1.14	1.73	2.08	2.16
2500.00	3.70	4.13	0.43	20.27	1.32	1.71	2.15	2.27

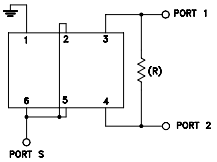
1. Total Loss = Insertion Loss + 3dB splitter loss.







electrical schematic



MODEL	R (Ohm)
TCP-2-25	475
TCP-2-33	200
TCP-2-33W+	475
TCP-2-272+	475

For detailed performance specs & shopping online see web site

REV. G
M135395
TCP-2-25+
ED-8545
DY/TD/CP/AM
120110