



Mini-Circuits

SURFACE MOUNT 

Power Splitter/Combiner TCP-2-10X+

50Ω 2 Way-0° 5 to 1000 MHz

FEATURES

- Low insertion, 0.5 dB typ.
- Excellent amplitude unbalance, 0.1 dB typ.
- Very good phase unbalance, 1.0 deg. typ.
- External resistor & capacitor required
- Aqueous washable
- Leads for excellent solderability
- Low cost



Generic photo used for illustration purposes only

CASE STYLE: DB1627

APPLICATIONS

- Cellular
- VHF/UHF
- Communications systems

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

ELECTRICAL SPECIFICATIONS AT 25°C

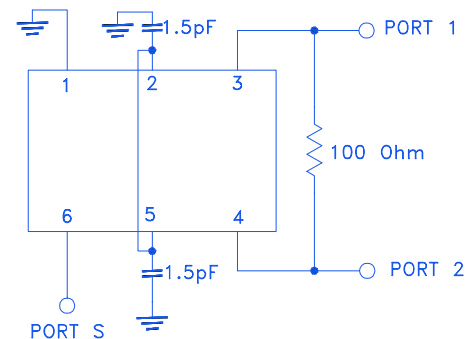
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1000	MHz
Insertion Loss, above 3.0 dB	5 - 50	—	0.3	0.9	dB
	50 - 500	—	0.5	0.9	
	500 - 1000	—	0.5	1.4	
Isolation	5 - 50	17	25	—	dB
	50 - 500	16	25	—	
	500 - 1000	16	21	—	
Phase Unbalance	5 - 50	—	—	4.0	Degree
	50 - 500	—	—	4.0	
	500 - 1000	—	—	6.0	
Amplitude Unbalance	5 - 50	—	—	0.6	dB
	50 - 500	—	—	0.6	
	500 - 1000	—	—	0.3	

MAXIMUM RATINGS

Parameter	Ratings
Operating temperature	-40°C to 85°C
Storage temperature	-55°C to 100°C
RF Power Input (as splitter)	0.5 W max.

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

FUNCTIONAL SCHEMATIC



REV. B
 ECO-012587
 TCP-2-10X+
 ED-8261/1
 DY/CP/AM
 230919





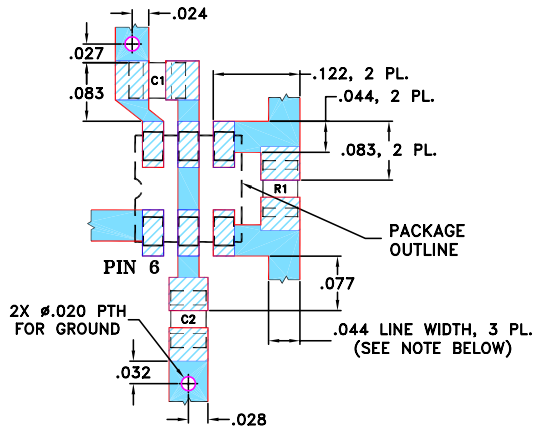
Power Splitter/Combiner **TCP-2-10X+**

PIN CONNECTIONS

SUM PORT	6
PORT 1	3
PORT 2	4
GROUND	1
CONNECT	2,5
EXT. RESISTOR 100Ω	3,4
EXT. CAPACITOR 1.5pF	both 2 and 5 to GND

PRODUCT MARKING: PC

DEMO BOARD MCL P/N: TB-232
SUGGESTED PCB LAYOUT (PL-001)



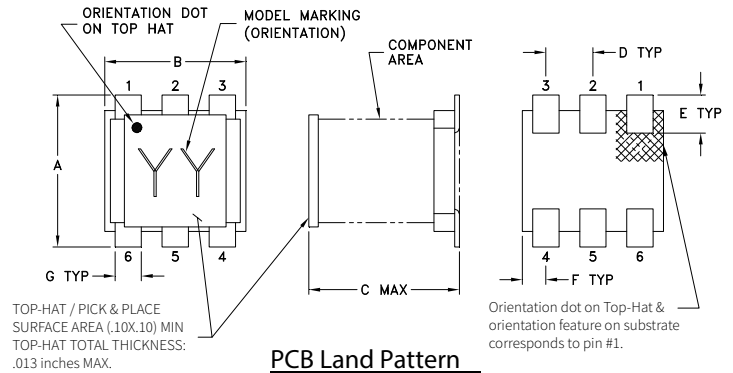
RESISTOR R1: 100 Ohm, 0805 SIZE
CAPACITORS C1 & C2: 1.5 pF, 0805 SIZE

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.

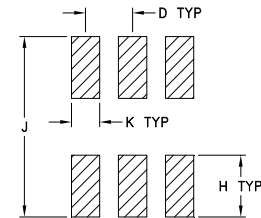
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

OUTLINE DRAWING



PCB Land Pattern



SUGGESTED LAYOUT
TOLERANCE TO BE WITHIN ±.002

OUTLINE DIMENSIONS (Inches/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

TAPE & REEL INFORMATION: F47