

Surface Mount

Power Splitter/Combiner

TCP-2-10+ TCP-2-10

2 Way-0° 50Ω 5 to 1000 MHz



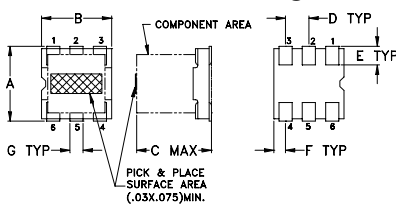
Maximum Ratings

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

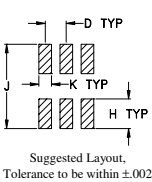
Pin Connections

SUMPORT	6
PORT 1	3
PORT 2	4
GROUND	1
SHORT	2,5
EXT. RESISTOR 100Ω	3,4
EXT. CAPACITOR 1.5pF	2 TO GND 5 TO GND

Outline Drawing



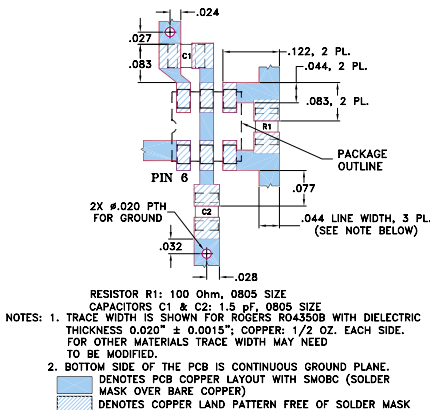
PCB Land Pattern



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-232 Suggested PCB Layout (PL-001)



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

Applications

- cellular
- VHF/UHF
- communications systems

Splitter Electrical Specifications

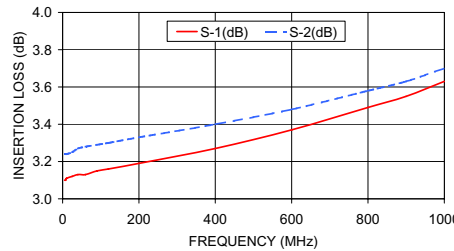
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
5-1000	25	17	25	16	21	16	0.3	0.9	0.5	0.9	0.5	1.4	4.0	4.0	6.0	0.6	0.6	0.3

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

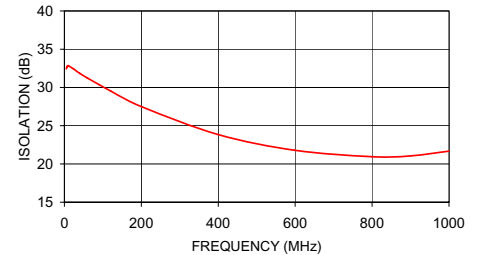
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5.00	3.10	3.24	0.14	32.43	0.15	1.02	1.11	1.14
6.00	3.10	3.24	0.14	32.64	0.15	1.02	1.11	1.14
8.00	3.10	3.24	0.14	32.81	0.09	1.02	1.10	1.14
10.00	3.11	3.24	0.13	32.85	0.09	1.02	1.10	1.14
25.00	3.12	3.25	0.14	32.38	0.01	1.02	1.10	1.14
40.00	3.13	3.27	0.14	31.84	0.06	1.02	1.10	1.14
60.00	3.13	3.28	0.14	31.23	0.09	1.03	1.10	1.13
90.00	3.15	3.29	0.14	30.38	0.10	1.03	1.10	1.13
120.00	3.16	3.30	0.14	29.54	0.11	1.04	1.09	1.13
200.00	3.19	3.33	0.14	27.50	0.24	1.05	1.09	1.11
400.00	3.27	3.40	0.13	23.84	0.45	1.07	1.06	1.06
600.00	3.37	3.48	0.11	21.78	0.71	1.09	1.05	1.02
800.00	3.49	3.58	0.09	20.95	0.98	1.09	1.08	1.09
900.00	3.55	3.63	0.08	21.06	1.15	1.09	1.12	1.14
1000.00	3.63	3.70	0.07	21.68	1.29	1.08	1.16	1.20

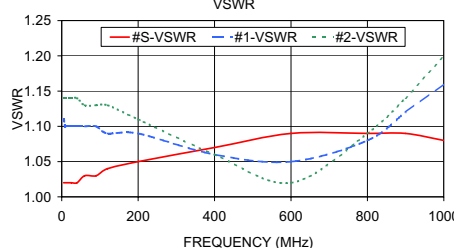
TCP-2-10
INSERTION LOSS



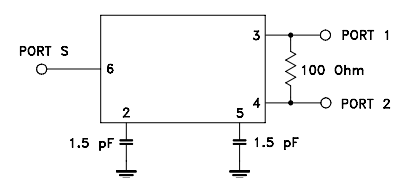
TCP-2-10
ISOLATION



TCP-2-10
VSWR



electrical schematic



Mini-Circuits

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified



REV. D
M102713
TCP-2-10
ED-8261/1
DY/TD/CP
060828