Surface Mount

Power Splitter/Combiner

SCPJ-2-750

2 Way-180° 50Ω 30 to 750 MHz

CASE STYLE: YY161
PRICE: $27.95 ea. QTY (1-9)

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.125W max.

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

Pin Connections

SUM PORT	1
PORT 1	5
PORT 2	6
GROUND	2,3,4,7,8

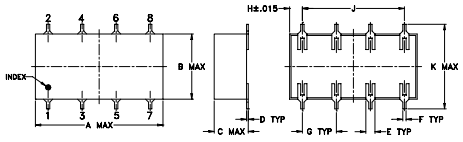
Features

- wideband, 30 to 750 MHz
- excellent amplitude unbalance, 0.3 dB typ.

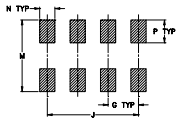
Applications

- VHF/UHF
- receivers/transmitters
- communication systems

Outline Drawing



PCB Land Pattern



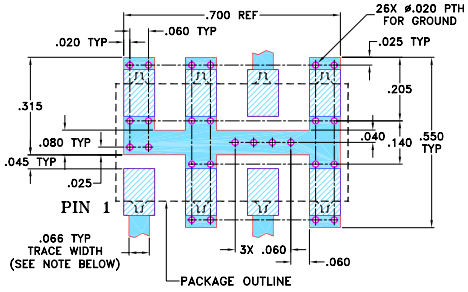
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08

H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

Demo Board MCL P/N: TB-50+
Suggested PCB Layout (PL-060)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". 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 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
f_L-f_U	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
30-750	24	18	21	16	20	16	0.7	1.5	1.5	2.2	1.5	2.2	3	4	6	0.8	0.8	0.8

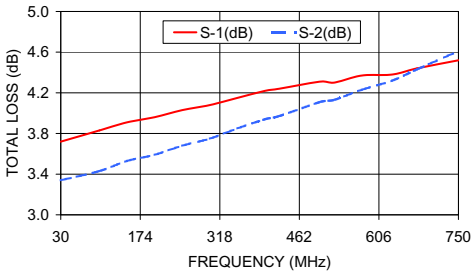
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

Typical Performance Data

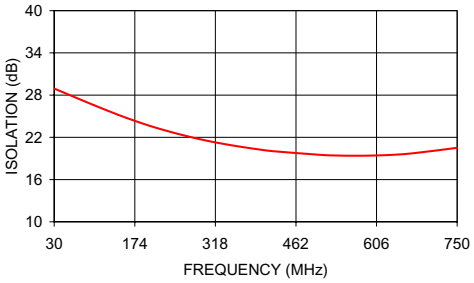
Frequency (MHz)	Total Loss[1] (dB) S-1	Total Loss[1] (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
30.00	3.72	3.34	0.38	28.93	180.00	1.08	1.24	1.14
100.00	3.83	3.43	0.40	26.61	179.58	1.11	1.25	1.14
150.00	3.91	3.53	0.37	25.03	179.40	1.15	1.26	1.14
200.00	3.96	3.59	0.37	23.65	179.27	1.18	1.27	1.15
250.00	4.03	3.68	0.36	22.51	179.26	1.22	1.29	1.16
300.00	4.08	3.75	0.33	21.57	179.12	1.25	1.31	1.17
350.00	4.15	3.85	0.30	20.83	179.27	1.29	1.33	1.18
400.00	4.22	3.94	0.28	20.24	179.31	1.32	1.35	1.18
425.00	4.24	3.97	0.27	20.01	179.44	1.33	1.36	1.19
500.00	4.31	4.11	0.21	19.54	179.84	1.36	1.38	1.20
525.00	4.30	4.13	0.16	19.43	170.03	1.37	1.39	1.20
575.00	4.37	4.23	0.14	19.39	180.44	1.37	1.40	1.21
630.00	4.38	4.32	0.06	19.49	179.09	1.37	1.41	1.23
675.00	4.44	4.43	0.01	19.77	178.47	1.36	1.42	1.26
750.00	4.52	4.61	0.10	20.51	177.51	1.33	1.44	1.32

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

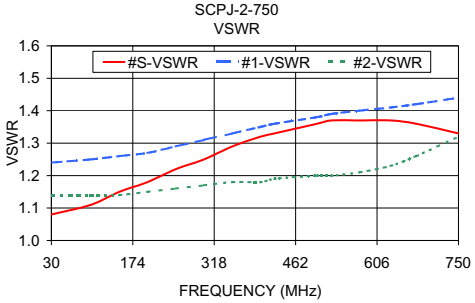
SCPJ-2-750
TOTAL LOSS



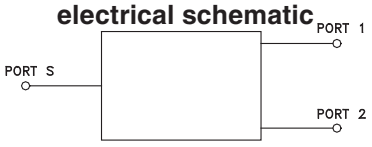
SCPJ-2-750
ISOLATION



SCPJ-2-750
VSWR



electrical schematic



Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. **2.** Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. **3.** The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

REV. B
M127604
SCPJ-2-750
HY/TD/CP/AM
100621