

Surface Mount  **Power Splitter/Combiner**

CDP-2-122-75+

2 Way-0° 75Ω 5 to 1200 MHz

Features

- wideband, 5 to 1200 MHz
- low insertion loss, 0.8 dB typ.
- excellent matching return loss, 20 dB typ.
- aqueous washable

Applications

- DOCSIS® 3.1 Systems
- cellular
- VHF/UHF
- communication systems
- CATV



Generic photo used for illustration purposes only
CASE STYLE: TT1491-2

+RoHS Compliant

The +Suffix identifies 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"	10, 20, 50, 100, 200
13"	500

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1200	MHz
Insertion Loss Above 3.0 dB	5-50	—	0.4	0.8	dB
	50-600	—	0.6	1.0	
	600-1200	—	1.0	1.8	
Isolation	5-50	20	24	—	dB
	50-600	20	25	—	
	600-1000	17	20	—	
	1000-1200	15	18	—	
Phase Unbalance	5-50	—	1.0	3.0	Degree
	50-600	—	1.0	3.0	
	600-1200	—	2.0	5.0	
Amplitude Unbalance	5-50	—	0.2	0.5	dB
	50-600	—	0.2	0.4	
	600-1200	—	0.2	0.6	
VSWR (Port S)	5-50	—	1.05	1.2	:1
	50-600	—	1.10	1.2	
	600-1200	—	1.25	1.3	
VSWR (Port 1-2)	5-50	—	1.20	1.5	:1
	50-600	—	1.15	1.3	
	600-1200	—	1.10	1.45	

Maximum Ratings

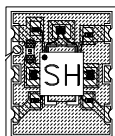
Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max

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

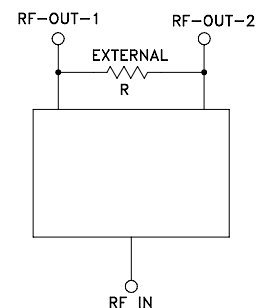
Pad Connections

Function	Pin Number
SUM PORT	6
PORT 1	3
PORT 2	4
GROUND	1
NOT USED	2,5
EXT. RESISTOR 165 Ω	3,4

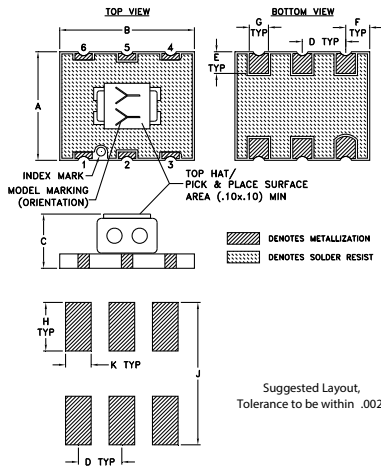
Product Marking



Electrical Schematic



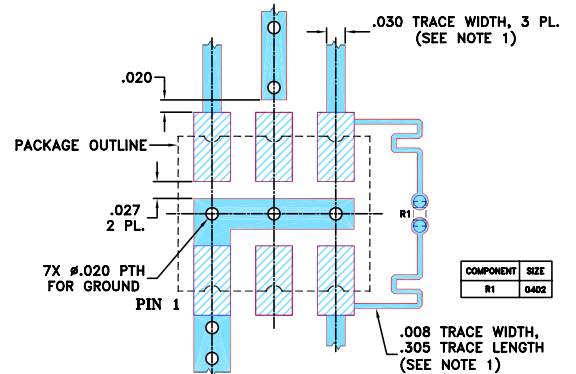
Outline Drawing



Outline Dimensions (Inch/mm)

A	B	C	D	E	F	G	H	J	K	wt. grams
.250	.310	.133	.100	.050	.055	.044	.112	.328	.059	0.35
6.35	7.87	3.38	2.54	1.27	1.40	1.12	2.84	8.33	1.50	

Demo Board MCL P/N: TB-698+ Suggested PCB Layout (PL-385)

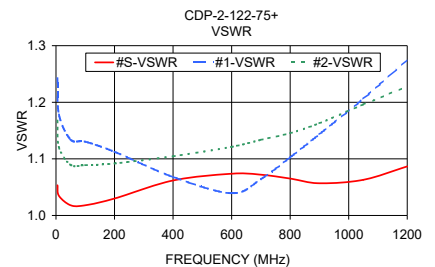
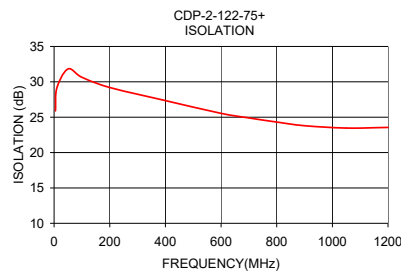
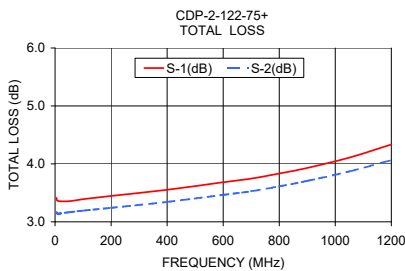


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030 ± 0.002 ; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. CHIP COMPONENT FOOT PRINT SHOWN FOR REFERENCE.
3. FOR COMPONENT VALUES REFER TO TB-698+
BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
DEMOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).
DEMOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

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						
5.00	3.41	3.16	0.25	25.89	0.86	1.05	1.24	1.17
10.00	3.36	3.14	0.22	29.14	0.49	1.03	1.18	1.12
50.00	3.36	3.17	0.19	31.82	0.01	1.02	1.13	1.09
100.00	3.39	3.19	0.20	30.64	0.14	1.02	1.13	1.09
200.00	3.45	3.24	0.21	29.20	0.27	1.03	1.11	1.09
400.00	3.55	3.34	0.21	27.35	0.40	1.06	1.07	1.10
600.00	3.68	3.47	0.22	25.55	0.41	1.07	1.04	1.12
700.00	3.75	3.53	0.22	24.90	0.35	1.07	1.06	1.13
800.00	3.83	3.61	0.22	24.31	0.26	1.07	1.10	1.15
900.00	3.93	3.71	0.22	23.80	0.08	1.06	1.14	1.16
1050.00	4.11	3.87	0.24	23.46	0.30	1.06	1.21	1.20
1200.00	4.34	4.06	0.27	23.56	0.84	1.09	1.28	1.23

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



Additional Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document 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