



Mini-Circuits

SURFACE MOUNT

Power Splitter/Combiner

CDP2-751-2W+

50Ω (2 Way-0°) 5 to 750 MHz

KEY FEATURES

- Low Insertion Loss, 0.7 dB Typ.
- Good Return Loss, 22 dB Typ.
- Good Power Handling, 2W
- Good Isolation, 25 dB Typ.

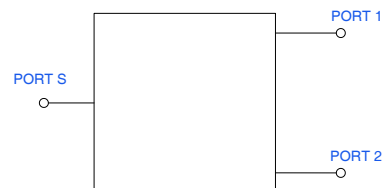


Generic photo used for illustration purposes only

APPLICATIONS

- Cellular
- CATV
- Communication Systems

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' CDP2-751-2W+ is a 50Ω 2 Way 0° Surface Mount Power Splitter/Combiner covering 5 - 750 MHz frequency range. This model can handle 2W RF input power as a splitter and provides low Insertion Loss and good Return Loss and Amplitude Unbalance. The unit measures .0310" x 0.250" x 0.13" and easy to pick and place assembly.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		5	—	750	MHz
Insertion Loss (above 3 dB)	5 - 225	—	0.75	1.0	dB
	225 - 750	—	0.7	0.95	
Isolation	5 - 225	12	15	—	dB
	225 - 750	20	25	—	
Phase Unbalance (±)	5 - 225	—	4.0	6.0	Degree
	225 - 750	—	1.1	3.0	
Amplitude Unbalance (±)	5 - 225	—	0.6	0.9	dB
	225 - 750	—	0.2	0.5	
Return Loss (Port S)	5 - 225	17	22	—	dB
	225 - 750	16	22	—	
Return Loss (Port 1 to Port 2)	5 - 225	8	11	—	dB
	225 - 750	17	24	—	

ABSOLUTE MAXIMUM RATINGS¹

Operating Case Temperature		-40°C to +85°C
Storage Temperature		-55°C to +100°C
Input Power	as splitter	2 W
	as combiner per port	100 mW

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





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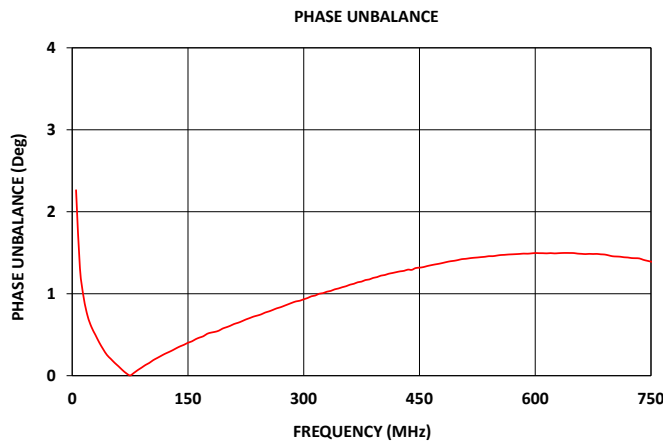
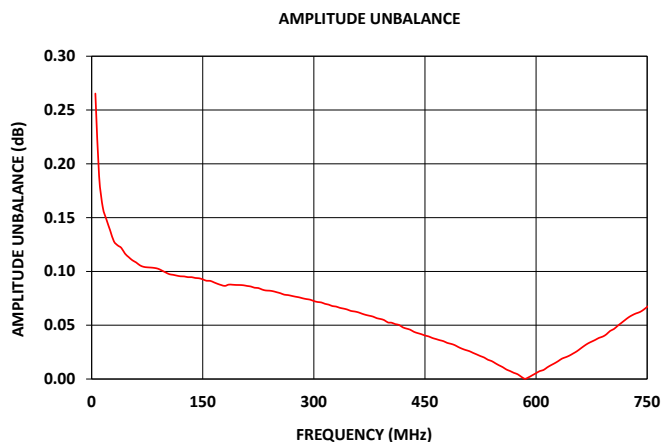
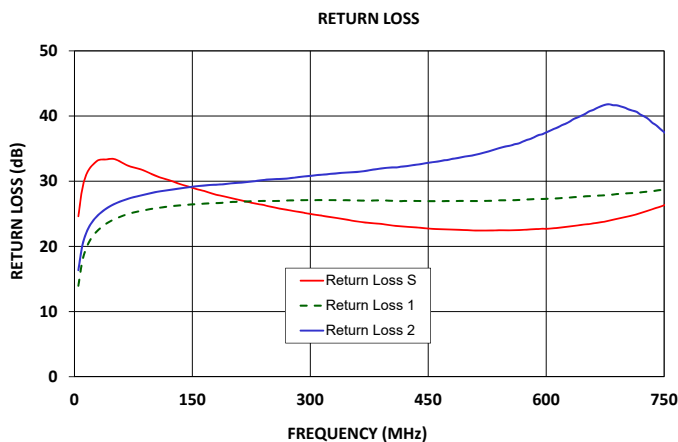
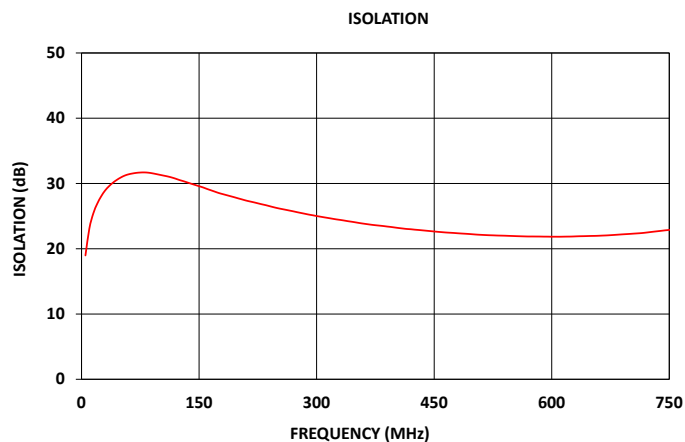
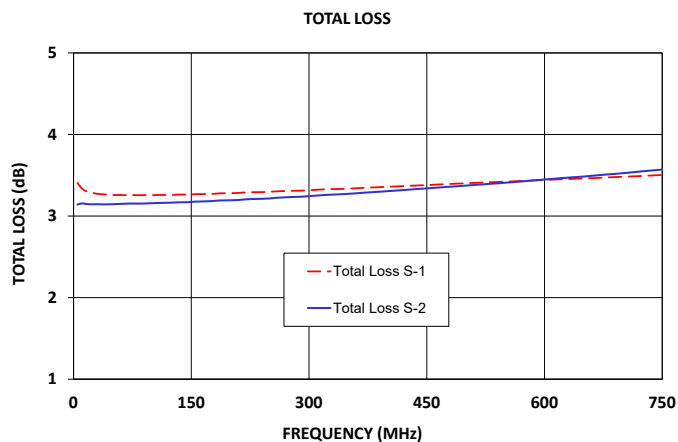
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TYPICAL PERFORMANCE GRAPHS





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FUNCTIONAL DIAGRAM

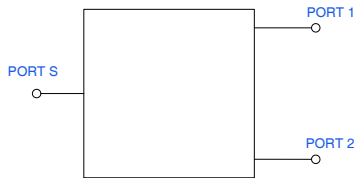
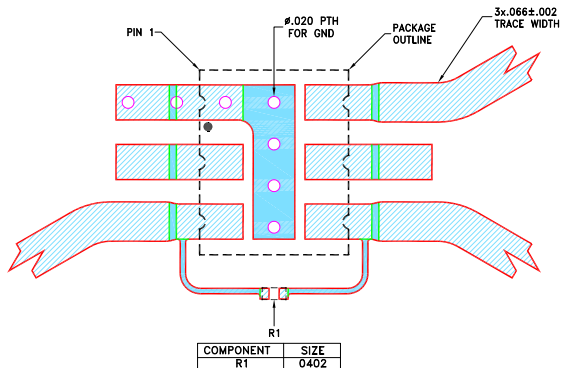


Figure 1. CDP2-751-2W+ Functional Diagram

PAD DESCRIPTION

Function	Pad Number	Description
Sum Port	6	Connects to Sum Port
Port 1	3	Connects to 1 Port
Port 2	4	Connects to 2 Port
Ground	1	Connects to Ground
Not Used	2,5	—

SUGGESTED PCB LAYOUT (PL-845)

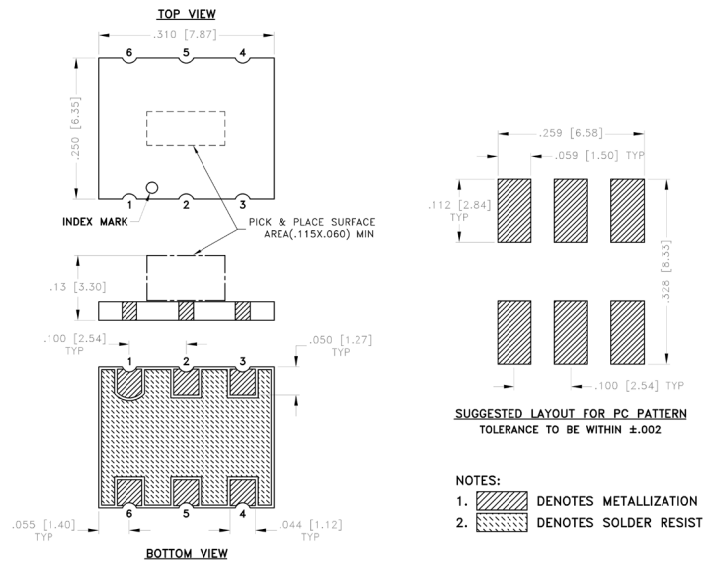


NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS (R04350B) WITH DIELECTRIC THICKNESS .030±.002 COPPER: 1/2 Oz ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
 - CHIP COMPONENT FOOT PRINTS SHOWN FOR REFERENCE. FOR COMPONENT VALUES REFER TO TB-1319.
 - 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 SOLDERMASK.

Figure 2. Suggested PCB Layout PL-845

CASE STYLE DRAWING



Weight: .12 grams

Dimensions are in inches (mm). Tolerances: 2Pl. ± .02 [508]; 3Pl. ± .01 [254]

PRODUCT MARKING*: N/A

*Marking may contain other features or characters for internal lot control.



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ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data Graphs S-Parameter (S3P Files) Data Set (.zip file) De-embedded to device pads
Case Style	TT1491-11 Lead Finish: Gold over Nickel Plate
RoHS Status	Compliant
Tape and Reel	F2
Suggested Layout for PCB Design	PL-845
Evaluation Board	TB-CDP2-751-2W+ Gerber File
Environmental Rating	ENV02T1

NOTES

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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/terms/viewterm.html

