



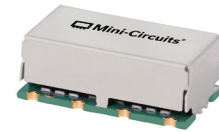
Mini-Circuits

SURFACE MOUNT

Power Splitter/Combiner **SC4PS-751-3W+**50 Ω (4 Way-0°) 100 to 750 MHz

KEY FEATURES

- Low Insertion Loss, 0.65 dB Typ.
- Low Amplitude Unbalance, 0.1 dB Typ
- Good Power Handling
- Good Return Loss, 20 dB Min.

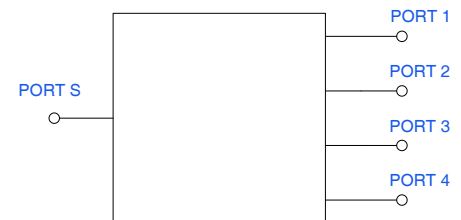


Generic photo used for illustration purposes only

APPLICATIONS

- Communication Systems
- VHF/UHF
- Cellular
- GPS
- PCs

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' SC4PS-751-3W+ is a 50 Ω 4 Way 0° Surface Mount Power Splitter/Combiner covering 100 - 750 MHz frequency range. This model can handle 3W RF input power as a splitter and provides low Insertion Loss and good Return Loss and Amplitude Unbalance. The unit measures 0.740" x 0.440" x 0.27" and easy to pick and place assembly. This is a shielded case used to reduced interference from the surrounding components.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range		100	—	750	MHz
Insertion Loss (above 6 dB)	100 - 225	—	0.65	1.0	dB
	225 - 750	—	1.2	1.6	
Isolation	100 - 225	17	20	—	dB
	225 - 750	16	22	—	
Phase Unbalance ($\pm$)	100 - 225	—	0.7	2	Degree
	225 - 750	—	3	6	
Amplitude Unbalance ($\pm$)	100 - 225	—	0.1	0.2	dB
	225 - 750	—	0.25	0.5	
Return Loss (Port S)	100 - 225	11	14	—	dB
	225 - 750	10	13	—	
Return Loss (Port 1 to Port 2)	100 - 225	20	25	—	dB
	225 - 750	17	22	—	

ABSOLUTE MAXIMUM RATINGS¹

Operating Case Temperature		-40°C to +85°C
Storage Temperature		-55°C to +100°C
Input Power	as splitter	3 W
	as combiner per port	100 mW

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





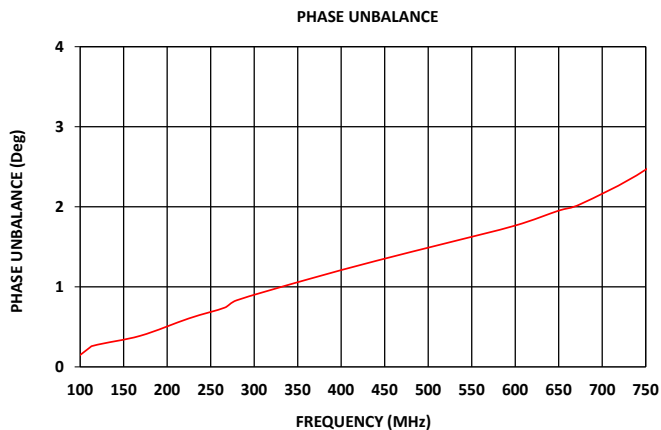
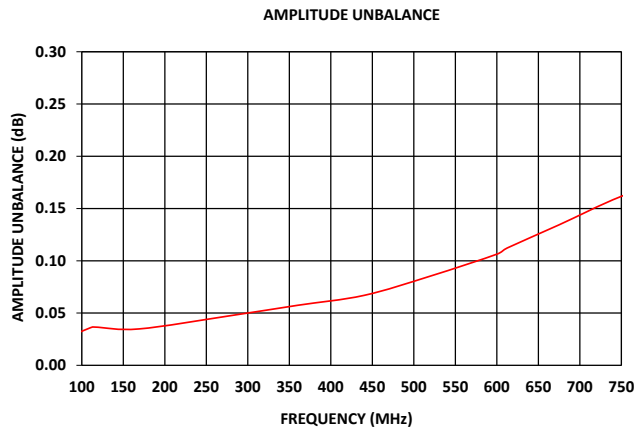
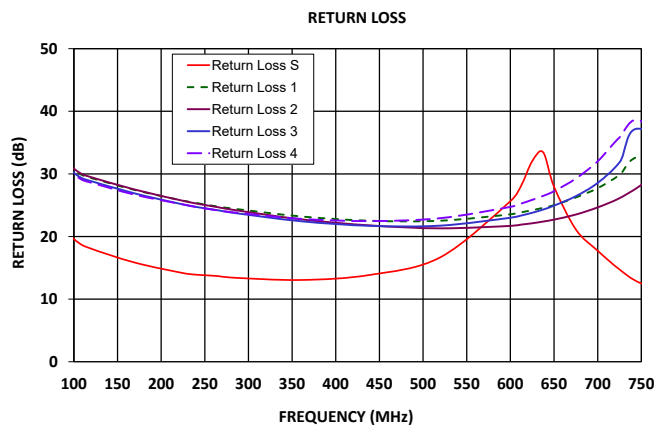
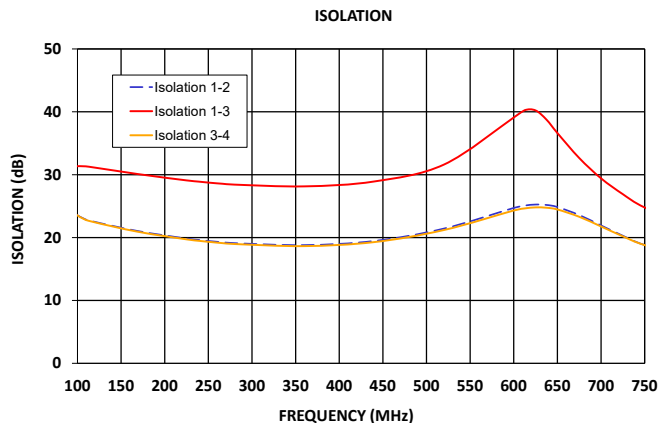
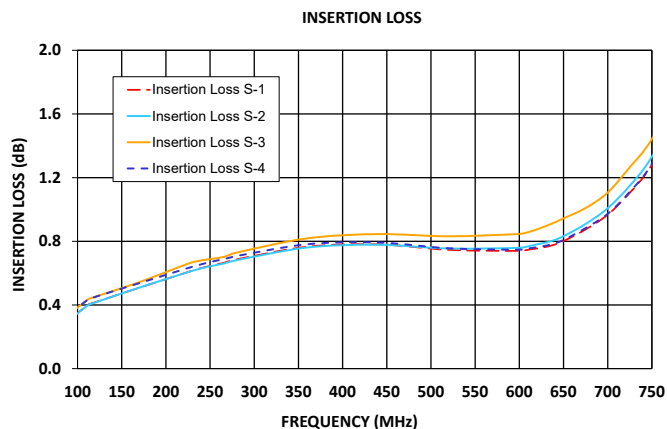
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TYPICAL PERFORMANCE GRAPHS





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FUNCTIONAL DIAGRAM

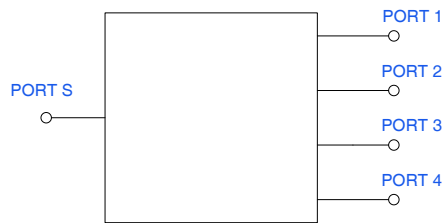
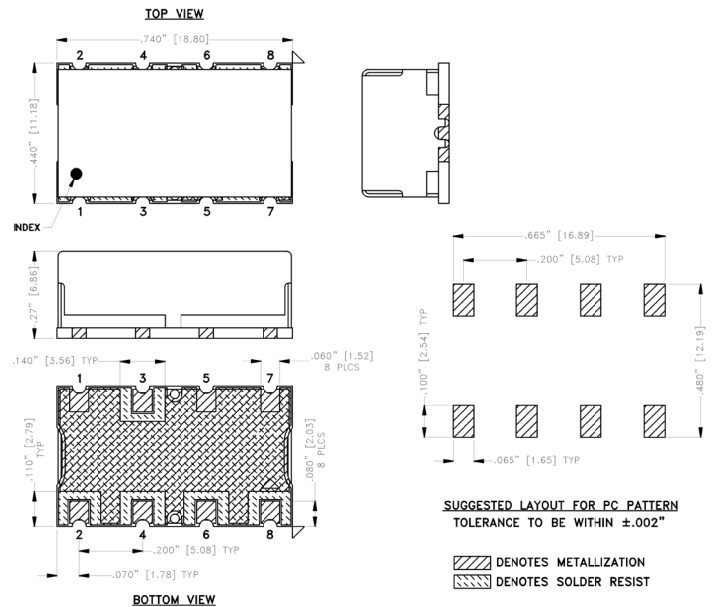


Figure 1. SC4PS-751-3W+ Functional Diagram

PAD DESCRIPTION

Function	Pad Number	Description
Sum Port	3	Connects to Sum Port
Port 1	2	Connects to 1 Port
Port 2	4	Connects to 2 Port
Port 3	6	Connects to 3 Port
Port 4	8	Connects to 4 Port
Ground	1,5,7	Connects to Ground

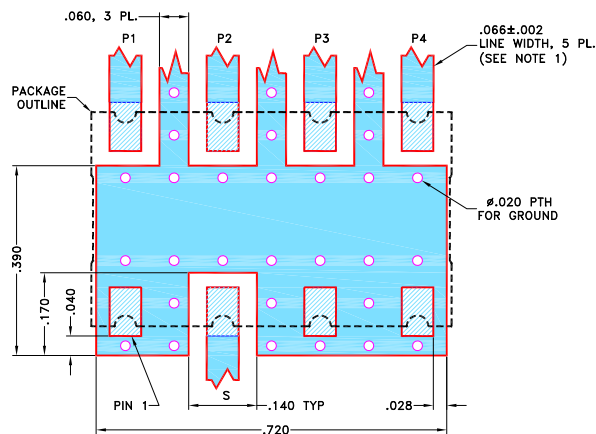
CASE STYLE DRAWING



Weight: 1.7 grams

Dimensions are in inches (mm). Tolerances: 2Pl. ± .015 [.381]; 3Pl. ± .01 [.254]

SUGGESTED PCB LAYOUT (PL-492)



NOTES:

1. LINE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS LINE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

Figure 2. Suggested PCB Layout PL-492

PRODUCT MARKING*: SC4PS-751-3W

*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 (S5P Files) Data Set (.zip file) De-embedded to device pads
Case Style	HF1485-2 Lead Finish: Gold over Nickel Plate
RoHS Status	Compliant
Tape and Reel	F5
Suggested Layout for PCB Design	PL-492
Evaluation Board	TB-SC4PS-7513W+ 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

