

Surface Mount

Phase Shifter

SPHSA-152+

50Ω 360° Voltage Variable 800 to 1500 MHz

The Big Deal

- Wideband
- Excellent VSWR, 1.2:1 typ.
- Wide phase shift, 360°



CASE STYLE: JW1441

Product Overview

Mini-Circuits' SPHSA-152+ is a surface mount voltage variable phase shifter providing precise 360° phase control from 800 to 1500 MHz, supporting many popular cellular and communications application bands. This model achieves low insertion loss of 2.8 dB and good VSWR of 1.2:1. It has a control bandwidth of DC to 50 kHz and a control voltage range of 0 to +15V. Housed in a shielded, 12-lead package with wrap-around terminations, the unit measures only 0.44 x 0.74 x 0.19", offering a space-efficient, low-cost alternative to larger connectorized phase shifters.

Feature	Advantages
Low insertion loss, 2.8 dB typ.	Enables good transmission of signal power from input to output and minimizes effect on system noise figure.
Good VSWR, 1.2:1 typ.	SPHSA-152+ provides good input/output matching for 50Ω systems.
Wide Phase Shift, 360°	In test environments, full 360° phase control allows the user to experiment with various incident phases. This can be used to test residual phase noise of amplifiers and to determine the influence of phase between two mismatched components in a system.
Miniature Size: 0.44 x 0.74 x 0.19"	Saves PCB space and system cost.

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-Circuit's 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





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Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	20 dBm max.
Control Voltage	20V

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

Pin Connections

IN	2
OUT	5
BIAS	8, 12 [^]
GROUND	1, 3, 4, 6, 7, 9, 10, 11

[^] proper operation is achieved with pins 8 or 12 or both connected to BIAS.

Outline Drawing

