

Digitally Controlled Phase Shifter, 8.5 to 10.5 GHz

Description:

Model SKP-8521030736-SFSF-D1 is a 6-bit digitally controlled phase shifter that covers the frequency range of 8.5 to 10.5 GHz. The phase shifter can be used in many applications such as transmit/receive modules and phased arrays. The phase shifter exhibits 9.0 dB typical insertion loss and offers a 360 degree phase shifting range and phase accuracy of ± 5 degrees.



Features:

- 6 Bit Control
- Digitally Controlled
- 360° Phase Shifting
- Low DC Power Consumption

Applications:

- Test Lab
- Phased Array Radar
- Transmit/Receive Modules
- Communications Antennas

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency Range	8.5 GHz		10.5 GHz
Insertion Loss		9.0 dB	
Return Loss		10 dB	
Phase Shifting Range	0°		360°
Phase Accuracy (RMS)		$\pm 5^\circ$	
Bias		± 5 V/10 mA	± 6 V
Switching Speed			50 ns
Power Handling			+25 dBm
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

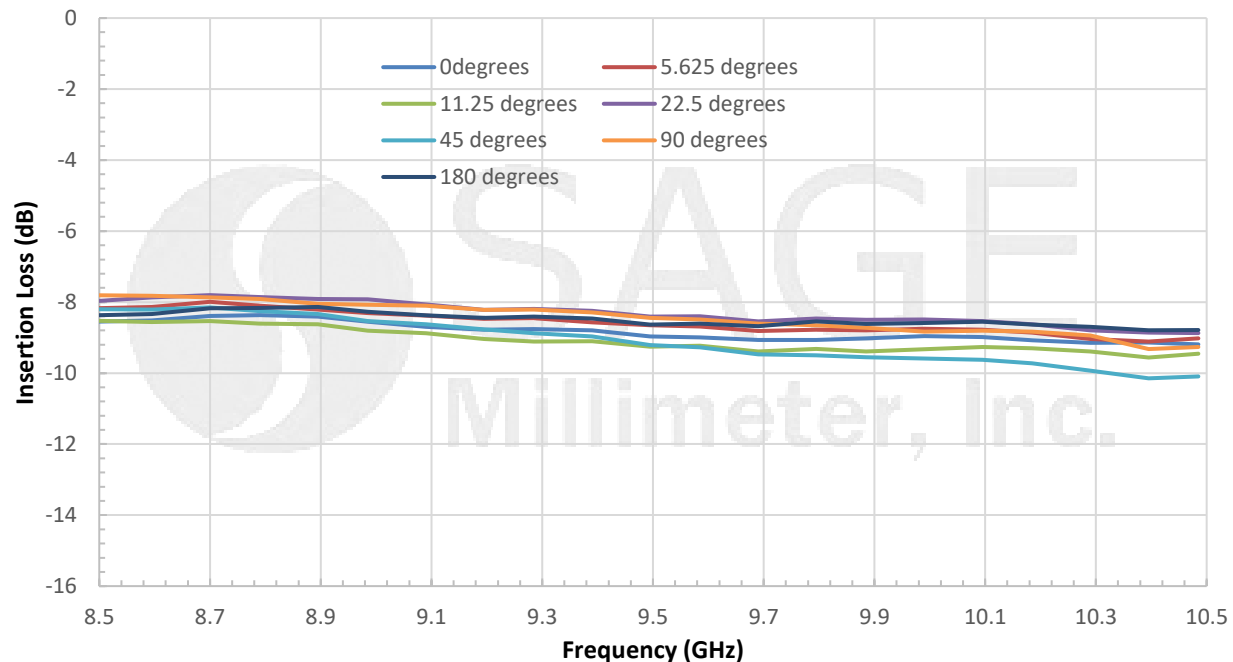
Item	Specification
Control and Bias Connector	D-Sub, Female, 9 Sockets
Control Voltage	TTL
RF Connectors	SMA(F)
Finish	Gold Plated
Weight	1.3 Oz
Size	1.57" (L) x 1.30" (W) x 0.59" (H)
Outline	KP-DC-S3



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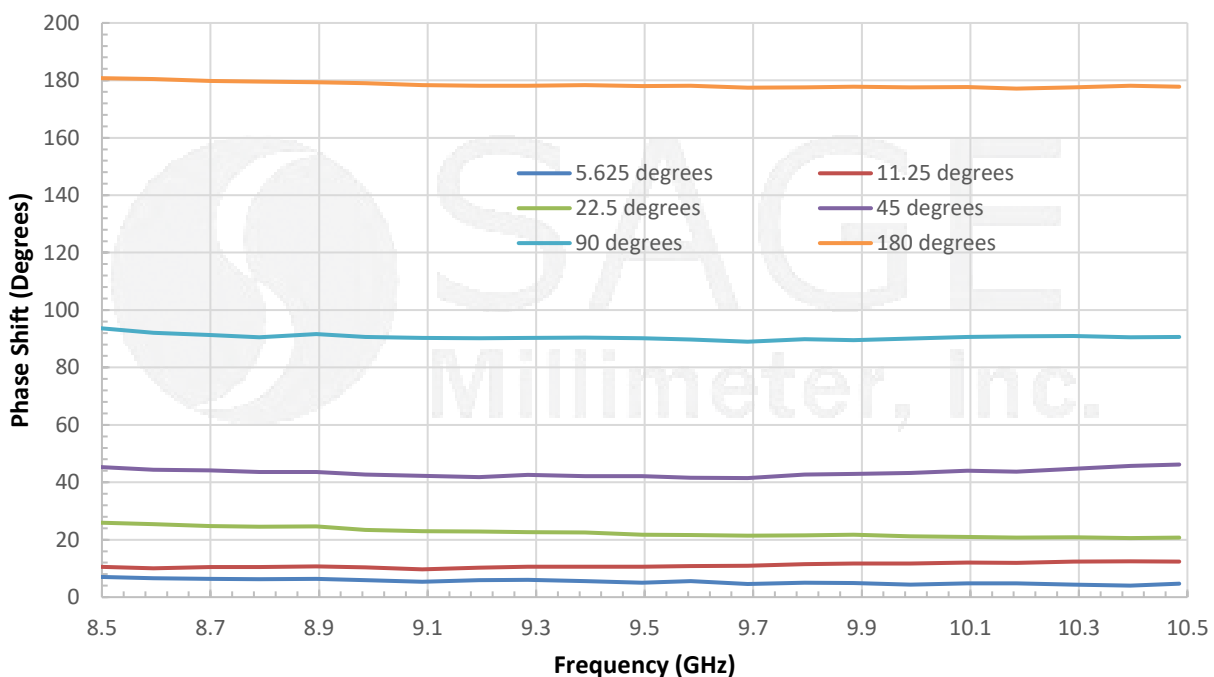
Typical Insertion Loss, All States, vs. Frequency

Bias: +5V/<1mA; -5V/<1mA



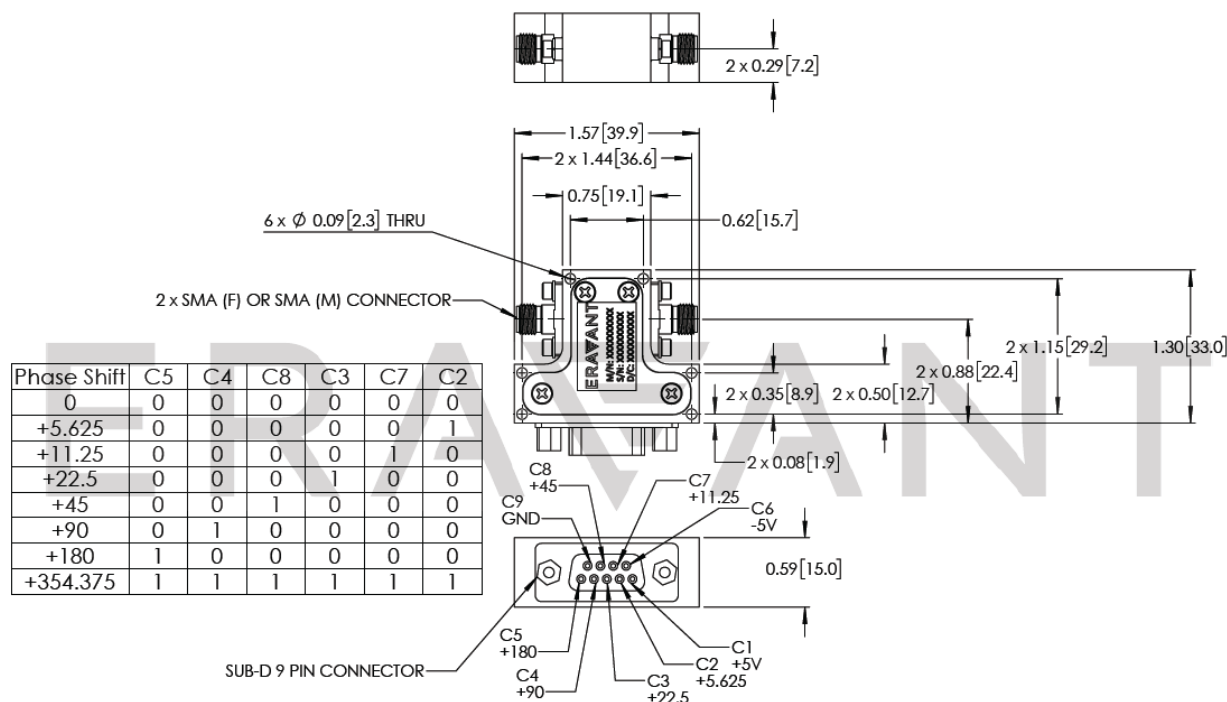
Typical Phase Shift vs. Frequency

Bias: +5V/<1mA; -5V/<1mA



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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches[millimeters])



Note:

- All data are presented using a limited sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**