



Digitally Controlled Phase Shifter, 6 to 18 GHz

Description:

Model SKP-0631830936-SFSF-D1 is a 6-bit digitally controlled phase shifter that covers the frequency range of 6 to 18 GHz. The phase shifter can be used in many applications such as transmit/receive modules and phased arrays. The phase shifter exhibits 9 dB typical insertion loss and offers a 360 degree phase shifting range and phase accuracy of ± 9 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 |
|---------------------------|---------|---------------|---------|
| Frequency | 6 GHz | | 18 GHz |
| Insertion Loss | | 9 dB | |
| Phase Shifting | 0° | | 360° |
| Phase Accuracy (RMS) | | $\pm 9^\circ$ | |
| Bias | | +5 V/10 mA | |
| Switching Speed | | | 50 ns |
| Power Handling | | | +25 dBm |
| Return Loss | | 9 dB | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | -40 °C | | +85 °C |

Mechanical Specifications:

| Item | Specification |
|----------------------------|-----------------------------------|
| RF Ports | SMA(F) |
| Control Type | Digital |
| Control and Bias Connector | D-Sub 9 Pin Connector (F) |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 1.3 Oz |
| Size | 1.57" (L) x 1.30" (W) x 0.59" (H) |
| Outline | KP-DC-S1 |

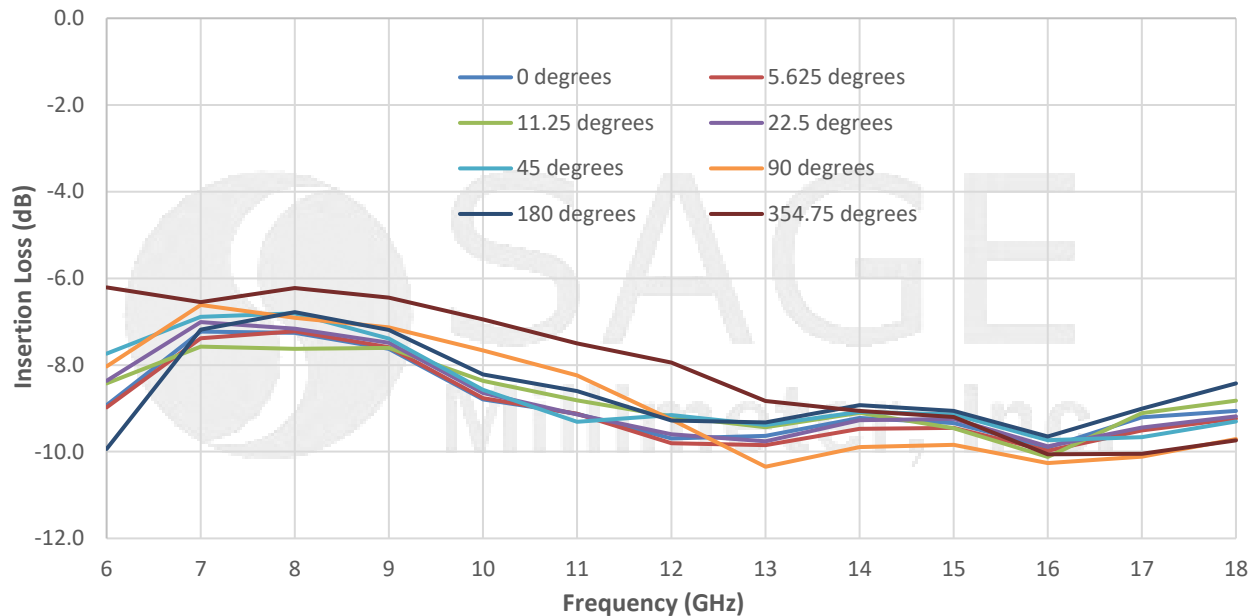




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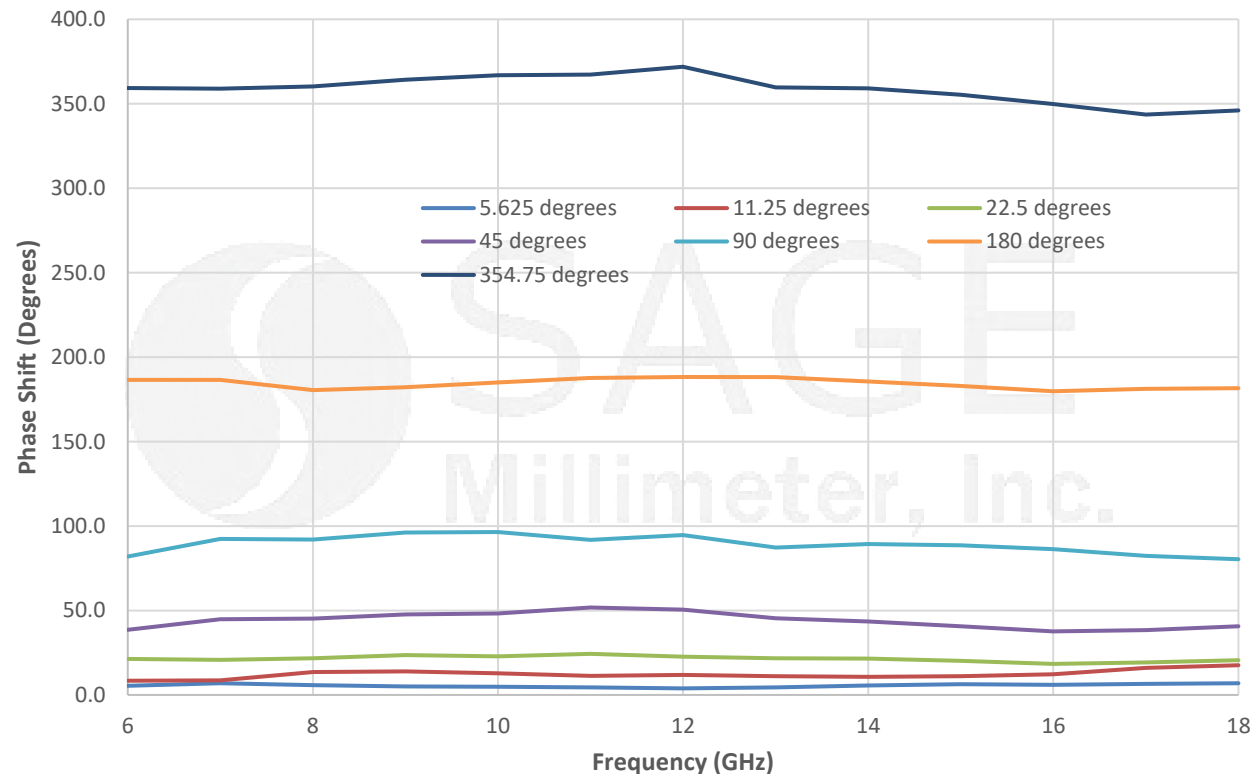
Typical Insertion Loss, All States, vs. Frequency

Bias: +5V/<1mA



Typical Phase Shift vs. Frequency

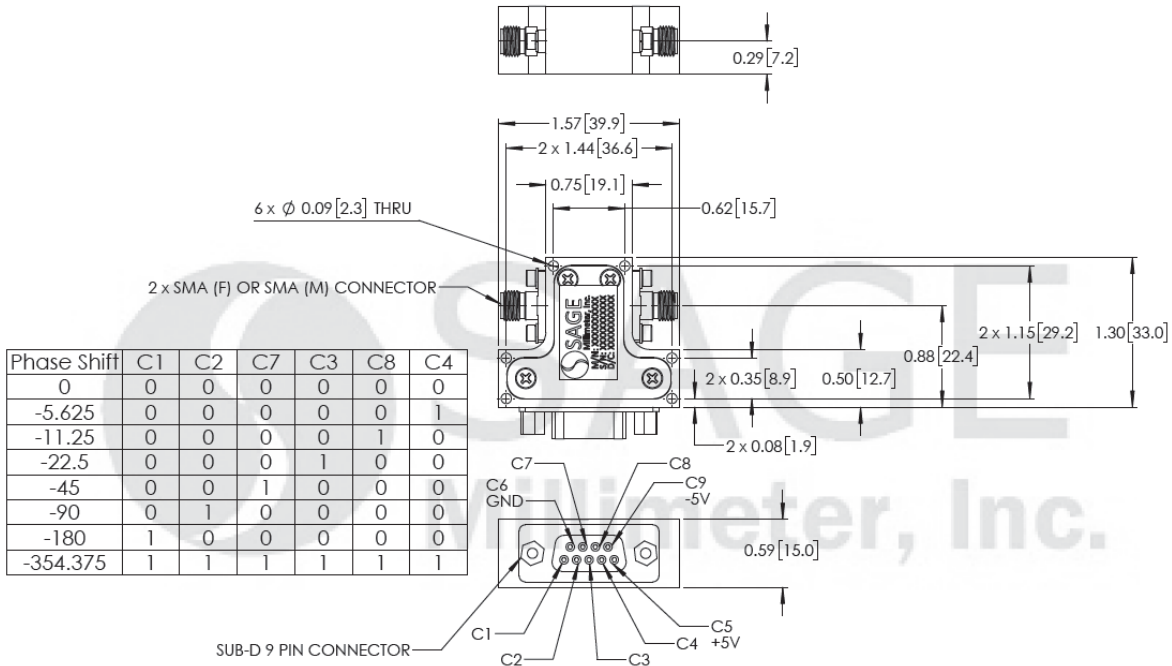
Bias: +5V/<1mA





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



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit slightly.
- All testing was performed under +25°C case temperature.
- Other mechanical configurations are available under different model numbers.
- 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 a static sensitive. Always follow ESD rules when working with the attenuator.
- 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.**

