

**SMA 8 Bit Programmable Phase Shifter 360 Deg  
Phase Shift 256 Steps From 500 MHz to 2 GHz**

SDPS-0502-360-SMA is a Digitally Controlled Analog Phase Shifter that operates from 0.5 GHz to 2 GHz. The unit has the capability for Phase Shifting from 0° to 360°. The unit consist of an Analog Phase Shifter and a Digital-To-Analog converter with 8 bits of logic input lines that allow 256 discrete values of Phase.



**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	0.5		2	GHz
Insertion Loss			13	dB
Phase Error			±10	dB
Amplitude Error			±1	dB
Switching Speed			500	ns
Voltage Supply 1			15	Vdc
Voltage Supply 2	-15			Vdc

**Mechanical Specifications**

**Size**

Length	4.95 in [125.73 mm]
Width/Diameter	3.38 in [85.85 mm]
Height	1 in [25.4 mm]
Weight	0.898 lbs [407.33 g]

**Configuration**

Input Connector	SMA Female
Output Connector	SMA Female
Control Connector	15-Pin D-Subminiatur Male

**Environmental Specifications**

**Temperature**

Operating Range	0 to 50 deg C
Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycle	MIL-STD-202F, METHOD 107

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Features:**

- Analog Phase Shifter
- 0.5 GHz to 2 GHz Frequency Range
- 360 Deg Typ Phase Shift
- 0 - 10 VDC Control Voltage Range
- 1 Watt CW Max InputPower
- Insertion Loss 13 dB Max

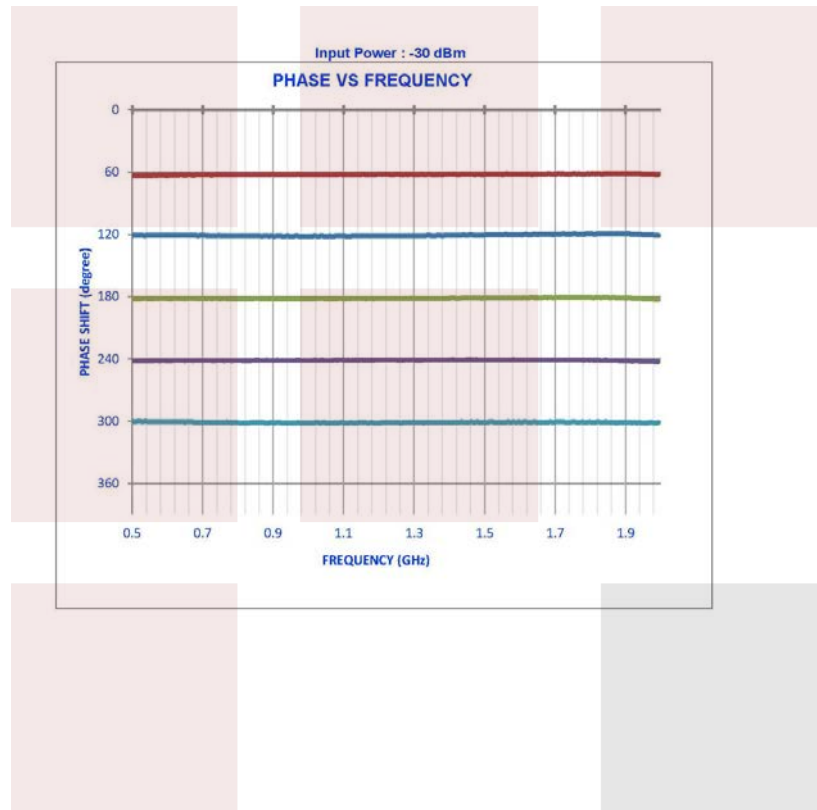
**Applications:**

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

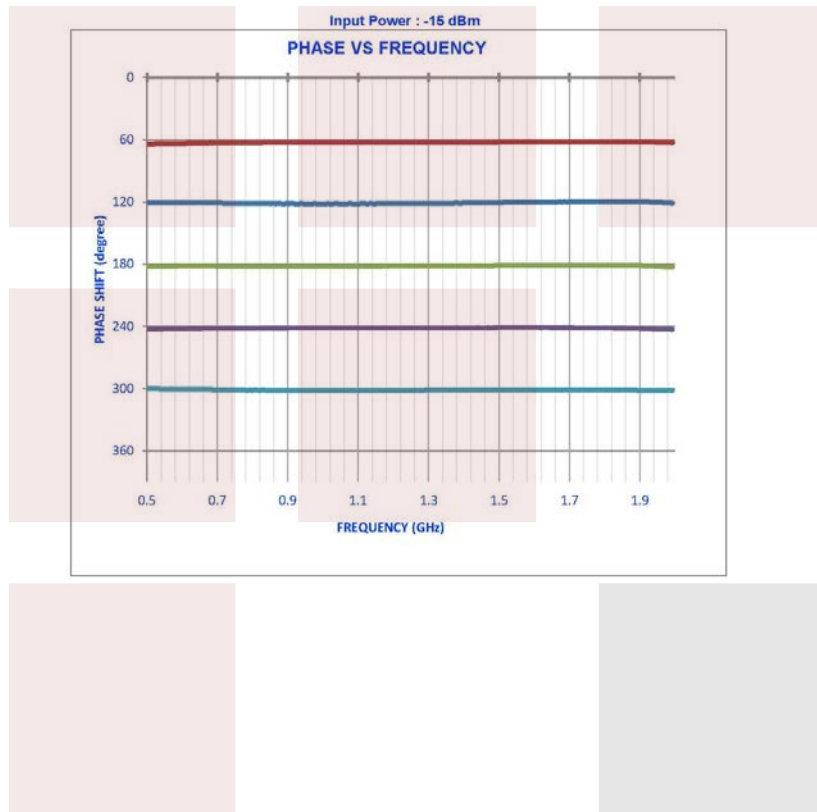
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Typical Performance Data

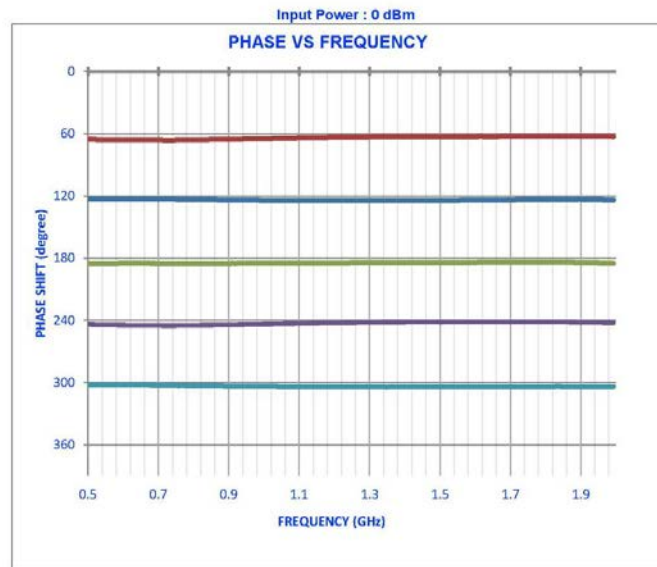
[Phase Plot at 25° C](#)



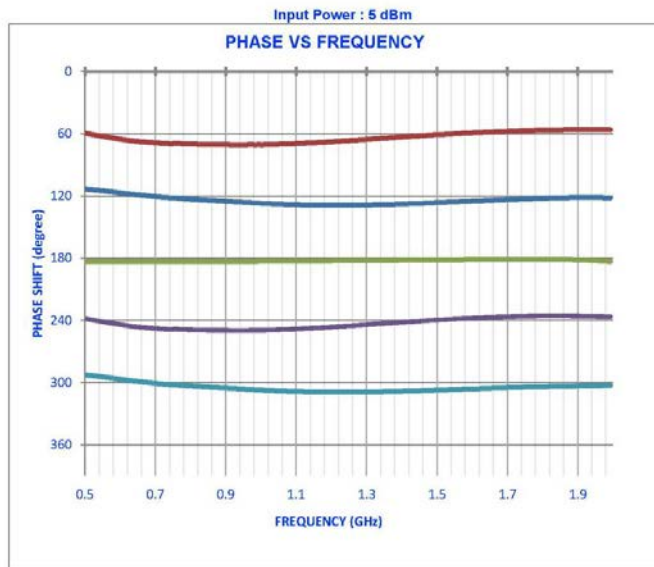
[Phase Plot at 25° C](#)



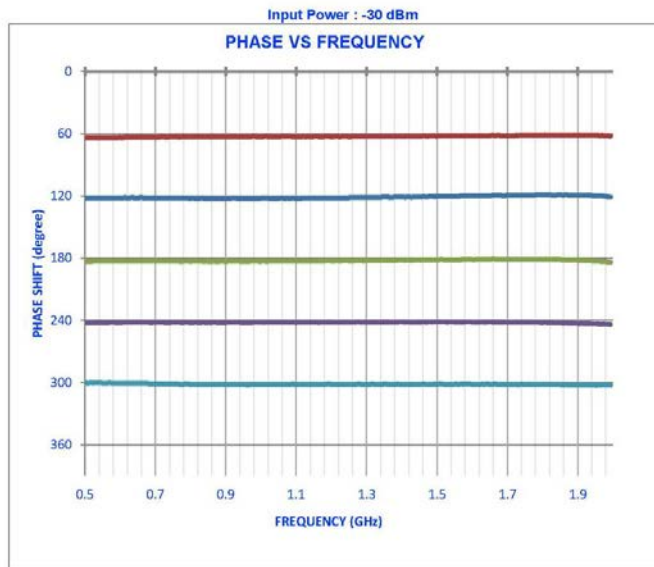
[Phase Plot at 25° C](#)



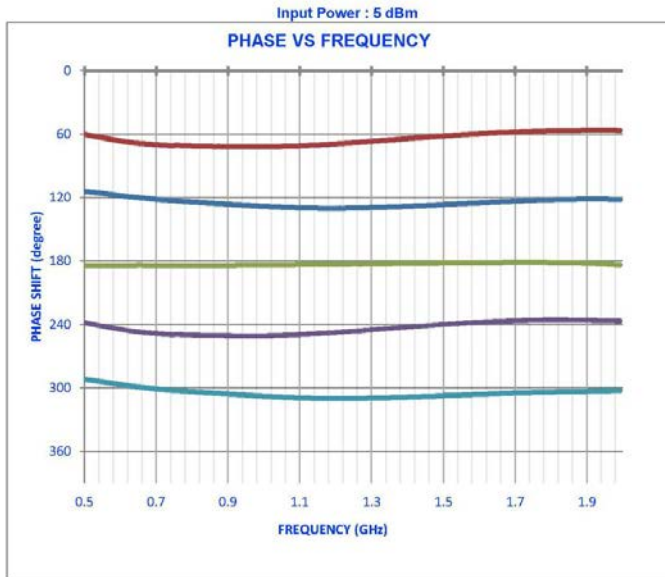
Phase Plot at 25° C



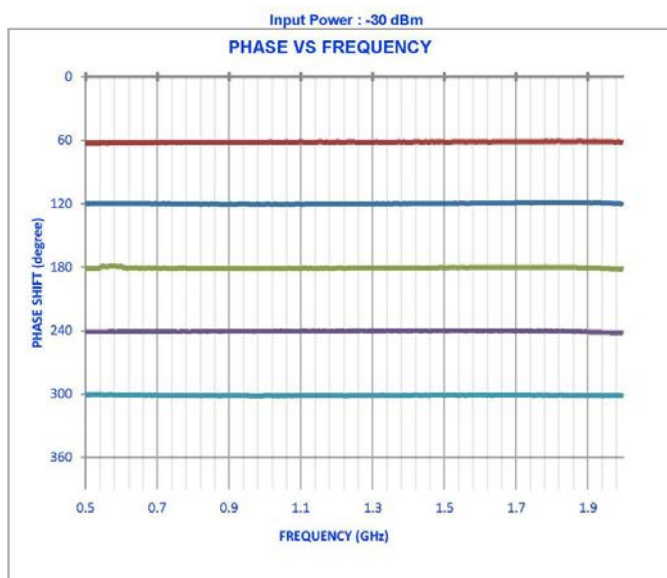
Phase Plot at 0° C



Phase Plot Taken at 0° C

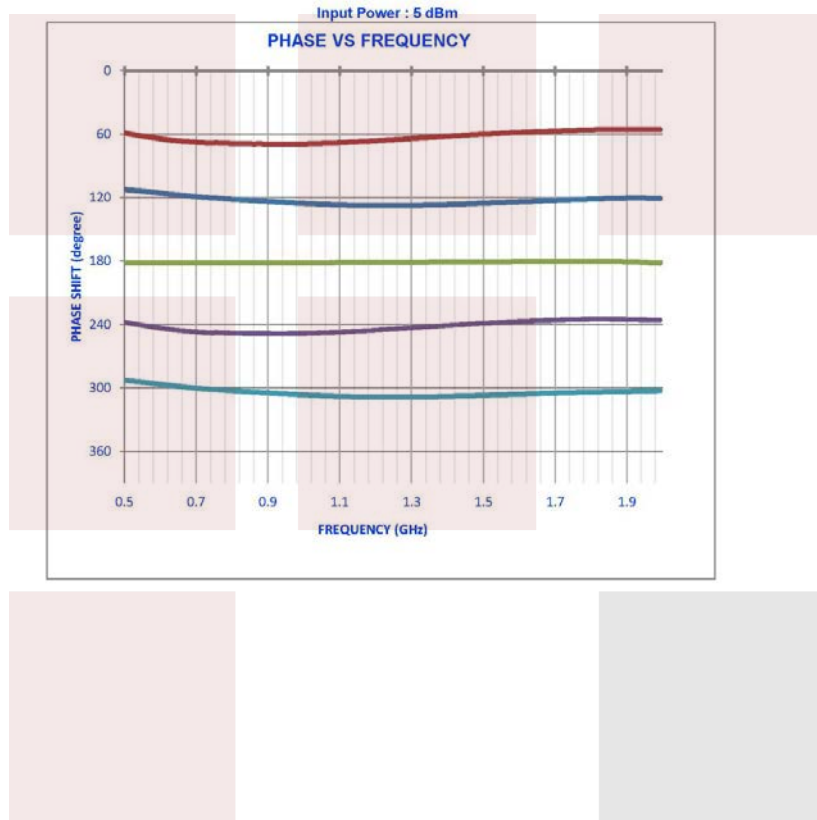


Phase Plot Taken at 50° C

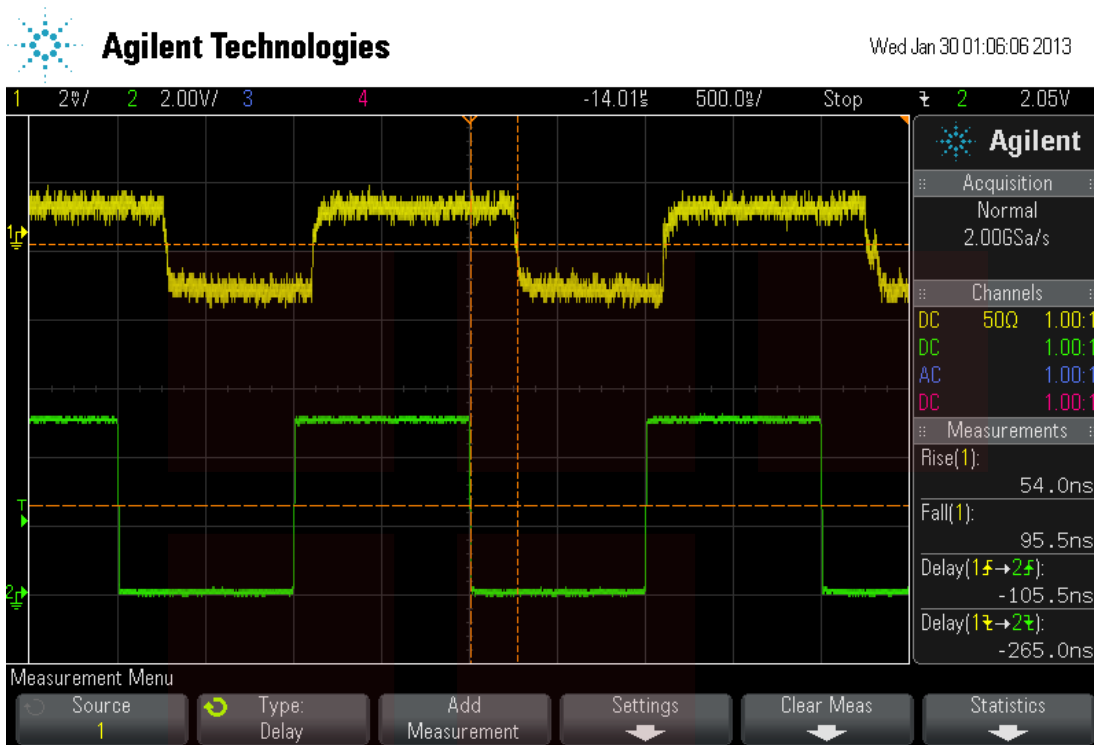




Phase Plot Taken at 50° C



Switching Speed



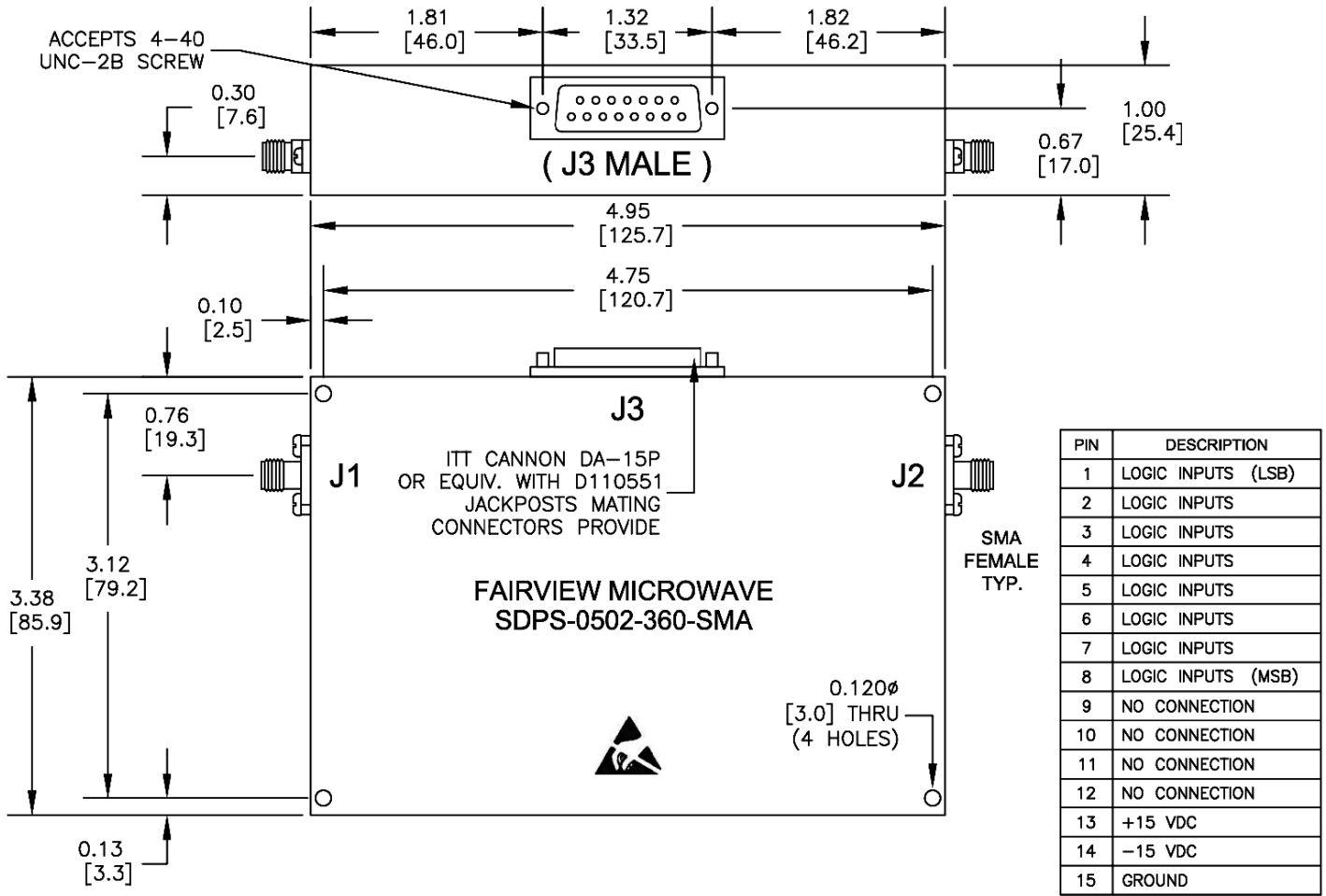
**Channel 1 (Yellow Trace): RF output signal**  
**Channel 2 (Green Trace): TTL trigger signal**

SMA 8 Bit Programmable Phase Shifter 360 Deg Phase Shift 256 Steps From 500 MHz to 2 GHz from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA 8 Bit Programmable Phase Shifter 360 Deg Phase Shift 256 Steps From 500 MHz to 2 GHz SDPS-0502-360-SMA](https://www.fairviewmicrowave.com/8-bit-programmable-phase-shifter-500-mhz-2-ghz-sdps-0502-360-sma)

URL: <https://www.fairviewmicrowave.com/8-bit-programmable-phase-shifter-500-mhz-2-ghz-sdps-0502-360-sma-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



**STANDARD TOLERANCES**  
 .X  $\pm 0.2$   
 .XX  $\pm 0.01$   
 .XXX  $\pm 0.005$

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

<b>FAIRVIEW MICROWAVE INC.</b> ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
TITLE SMA 8 Bit Programmable Phase Shifter 360 Deg Phase Shift 256 Steps From 500 MHz to 2 GHz		DWG NO SDPS-0502-360-SMA		CAGE CODE 3FKR5	
CAD FILE	022318	SHEET	1 OF 1	SCALE	N/A
SIZE	A	7361			