

529 Series Motorized Rotary Vane Phase Shifters



Description 529 Series Phase Shifters

Mi-Wave has developed a new motorized rotary vane phase shifter which is available in W/G bands from 18.0 to 110 GHz. The 529 series is a computer controlled version of Mi-Waves' standard direct reading phase shifter and features a 0 to 360° range with 0.5 degree resolution.

The phase shifter is controlled by a precision stepping motor and all electronics required to drive the motor are contained within the phase shifter housing. Custom microprocessor based electronics translate the desired phase shifter setting into the required motor position and provide the proper drive signals for the motor. Motor speed is ramped up and down ensuring accurated positioning and smooth operation. The unit can be controlled remotely through an IEEE-488 interface or manually with a front panel switch. A three digit readout on the front panel displays the setting. All that is required is a 24 volt, 500 mA supply, which is included.

Applications

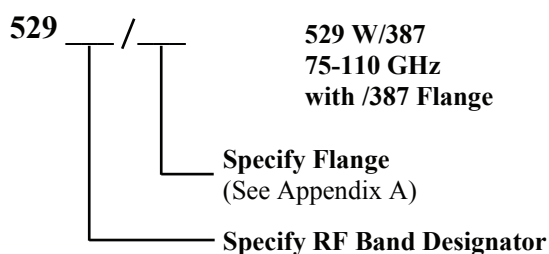
The 529 series motorized direct reading phase shifters are used in all RF automated measurement systems. They are most frequently used in RF substitution type set-ups for precise measurement of characteristics including bridge circuits and phased arrays.

Features

- High Accuracy
- Digital Readout
- Low Insertion Loss
- Computer Controlled
- Precision Construction
- Full Waveguide Bands

Ordering Information

Example :



Principles of Operation

Remote
Local

When the unit is connected to 24 VDC with no connection to the IEEE interface, phase shifter is controlled by a front panel toggle switch. If the toggle is held up or down from 5 counts or more, the phase shifter changes at a rapid rate to facilitate larger changes.

Mi-Wave

Millimeter Wave Products Inc.

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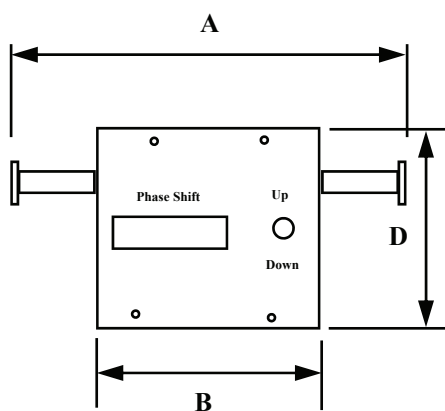
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529 Series Motorized Rotary Vane Phase Shifters

Technical Specifications

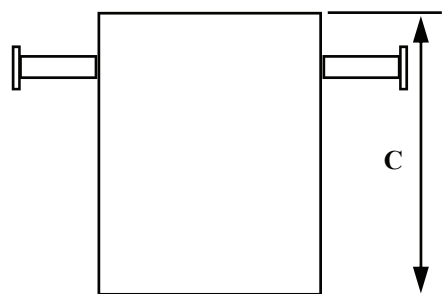
Model No.	Frequency Band (GHz)	Insertion Loss	VSWR	Average Power	Weight
529K	18.0 - 26.5	1.0 dB	1.30	1.0 Watts	63 oz
529A	26.5 - 40.0	1.0 dB	1.15	0.5 Watts	60 oz
529B	33.0 - 50.0	1.0 dB	1.15	0.5 watts	60 oz
529U	40.0 - 60.0	1.1 dB	1.15	0.4 watts	59 oz
529V	50.0 - 75.0	1.2 dB	1.20	0.3 watts	50 oz
529E	50.0 - 90.0	1.4 dB	1.20	0.2 watts	30 oz
529W	75.0 - 110.0	1.5 dB	1.20	0.2 watt	30 oz



Electrical Specifications

Model No.	Resolution (degree)	Repeatability	Accuracy	Speed (Sec) 0-360
529K	0.5	0.5	4 deg.	5 sec
529A	0.5	0.5	4 deg.	5 sec
529B	0.5	0.5	4 deg.	5 sec
529U	0.5	0.5	4 deg.	5 sec
529V	0.5	0.5	4 deg.	5 sec
529E	0.5	0.5	4 deg.	5 sec
529W	0.5	0.5	4 deg.	5 sec

Dimensional Specifications



Model No.	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
529K	8.48	215.4	4.00	101.6	5.50	139.7	3.50	88.9
529A	6.87	174.5	4.00	101.6	5.50	139.7	3.50	88.9
529B	6.24	158.4	4.00	101.6	5.50	139.7	3.50	88.9
529U	5.74	145.7	4.00	101.6	5.50	139.7	3.50	88.9
529V	4.50	114.3	4.00	101.6	5.50	139.7	3.50	88.9
529E	4.50	114.3	4.00	101.6	5.50	139.7	3.50	88.9
529W	4.50	114.3	4.00	101.6	5.50	139.7	3.50	88.9

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