

VA65

WR-6.5 voltage variable attenuator

Specifications

Flange	WR-6.5 UG387/UM
Frequency (GHz)	110-170
Insertion Loss (dB, avg)	1.5
VSWR (typ max)	1.5:1
Dynamic Range (dB, min)	0-35
Flatness (dB, avg/max)	
@ 0 dB Attenuation	±0.4/0.5
@ 10 dB Attenuation	±0.7/0.8
@ 20 dB Attenuation	±1.2/1.4
@ 30 dB Attenuation	±2.9/4.4
@ 35 dB Attenuation	±5.1/8.0
Max Forward Power (W)	1.5
Switching Speed (Hz)	200
Voltage Control Range (V)	0-10
Max Control Current (mA)	90
Control Circuit Connector	SMP-m

CAUTION: Avoid magnetic fields

WR-6.5 Voltage Variable Attenuator

The two primary technologies used for electronically tunable attenuation in the mm-wave are PIN diode and rotary vane. Micro Harmonics has developed a third approach that uses the principle of Faraday rotation to rotate the RF signal polarity into a fixed resistive vane. There are no moving parts and no sensitivity to electrostatic discharge.

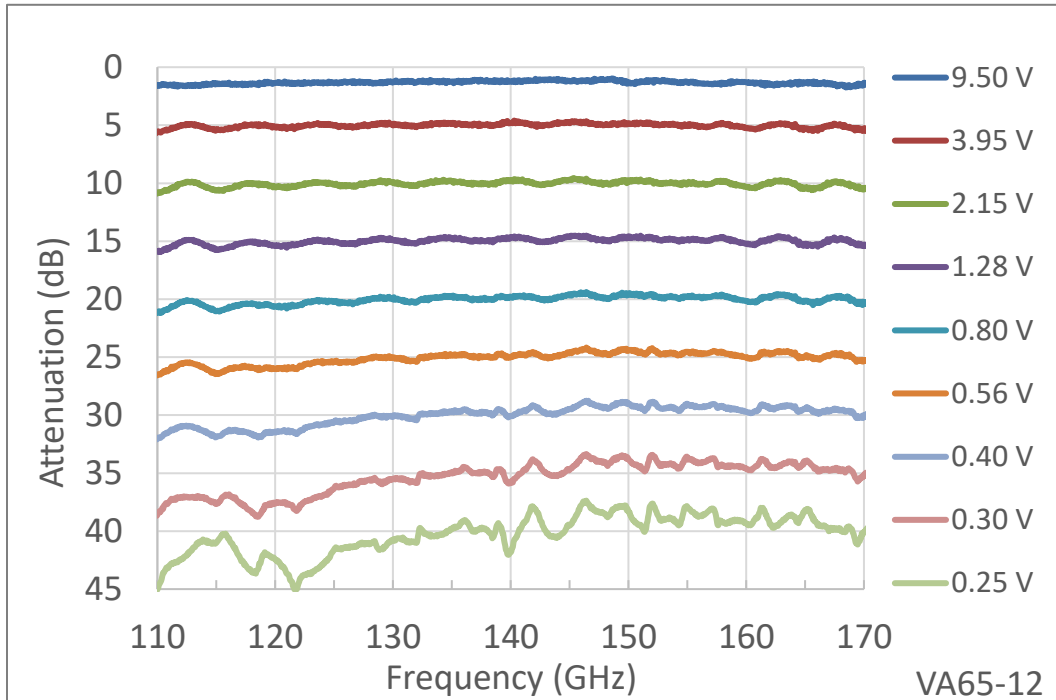
The Micro Harmonics attenuator has lower insertion loss, lower reflections, higher dynamic range, and higher power handling than the PIN diode. It has a much smaller form factor and higher switching speed than the rotary vane. These properties make the Micro Harmonics attenuator an attractive option since it combines some of the best attributes of the PIN diode and the rotary vane attenuators.

- ◆ **Anti-cocking waveguide flanges**
- ◆ **Comprehensive test data**
- ◆ **High power handling**
- ◆ **High dynamic range**
- ◆ **Low insertion loss**
- ◆ **Insensitive to ESD**
- ◆ **Compact size**
- ◆ **Low VSWR**

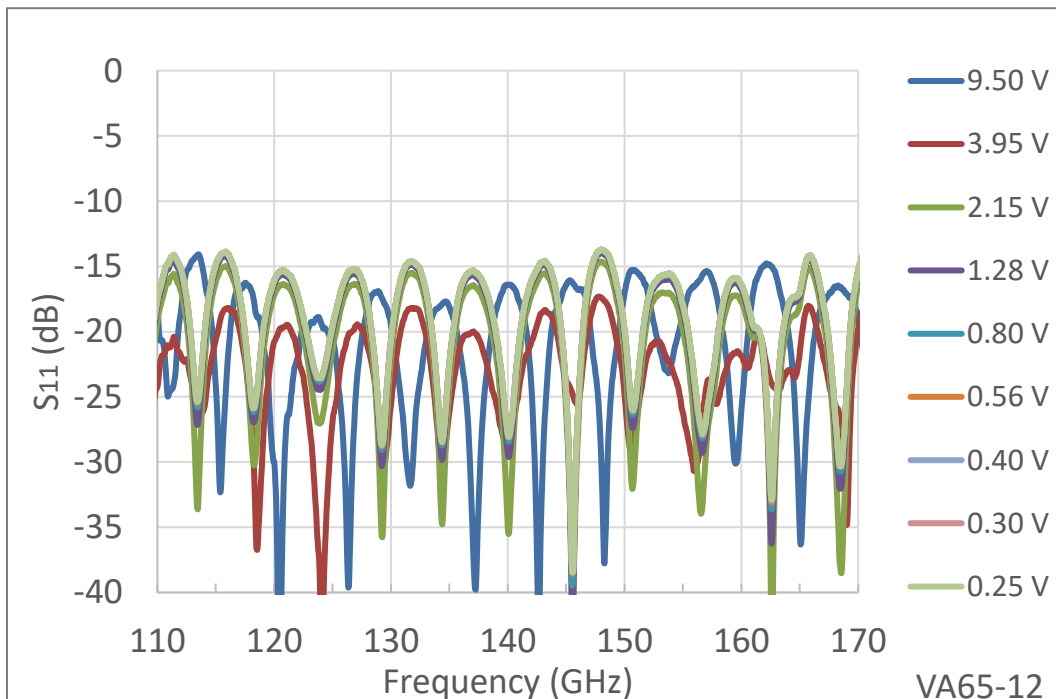




Attenuation



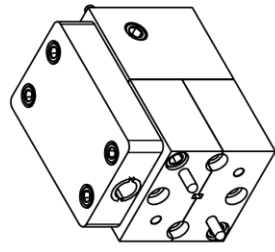
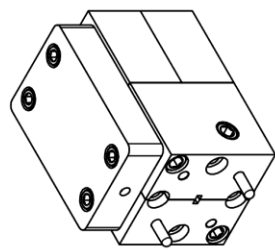
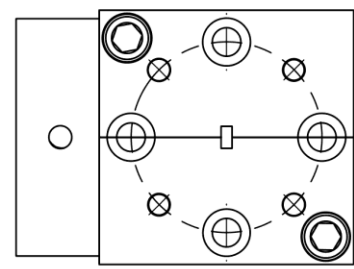
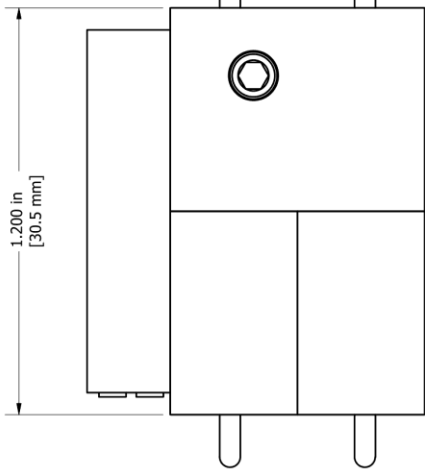
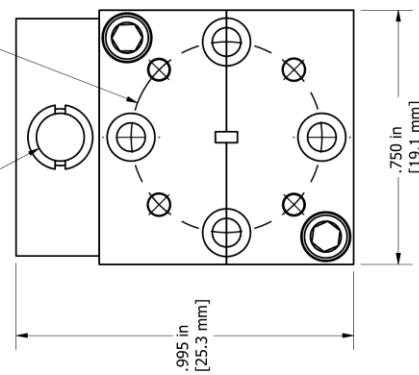
Port Reflections



8	Micro Harmonics		Proprietary - Micro Harmonics Corporation		7		
	Date 8/18/2023		Date 8/18/2023		6		
5	ZONE		REVISION HISTORY		4		
	-		DESCRIPTION		3		
1		RELEASE FOR MANUFACTURE		DATE		2	
SCS		8/21/2023		APPROVED		1	
F		SCS		F		1	

SMP MALE CONNECTOR

MATES WITH UG-387/UIM FLANGE
WR-6.5 WAVEGUIDE



NOTES: INPUT AND OUTPUT PORTS ARE ROTATED 90°

PART NUMBER - DESCRIPTION		Micro Harmonics Corporation	
VA65 Dimension Drawing		20 S Roanoke St. Ste 202	
DWG. UNITS: DRAWN BY: SIZE		Fincastle, VA 24090	
INCHES SCS B		ph. 540-473-9983	
PAGE NUMBER: 1 of 1		REV: -	
APPROVAL: JTK - 8/21/2023		fax 844.449.1561	