

# 510 Series

Direct-reading Precision Attenuators



## New Models Available

From WR-137 to WR-62 Waveguide Bands

## Description

Mi-Wave's 510 Series Direct-reading Precision Attenuators provide 0 to 60 dB of calibrated attenuation by rotation of a resistive vane mounted in a circular waveguide section. These units are often referred to as precision rotary vane attenuators.

- Low VSWR
- Direct Reading
- Low Insertion Loss
- Anti-backlash Drive
- Negligible Phase Shift
- Precision Construction
- Frequency Independent

## Applications

The 510 Series Direct-reading Precision attenuators are used in all RF measurement systems. They are most frequently used in RF substitution-type set-ups for precise measurement of characteristics such as isolation, coupling, insertion loss, and gain.

Description	Specifications
Attenuation Range	0 dB to 60 dB (typical)
Accuracy	0.1 dB or 2% of reading*
Scale Increments	0.0 dB to 0.1 dB – 0.01 dB 0.1 dB to 1.0 dB – 0.05 dB 1.0 dB to 10.0 dB – 0.20 dB 10.0 dB to 20.0 dB – 0.20 dB 20.0 dB to 30.0 dB – 0.5 dB 30.0 dB to 50.0 dB – 1.0 dB Max Setting 60 dB

### \*NOTE:

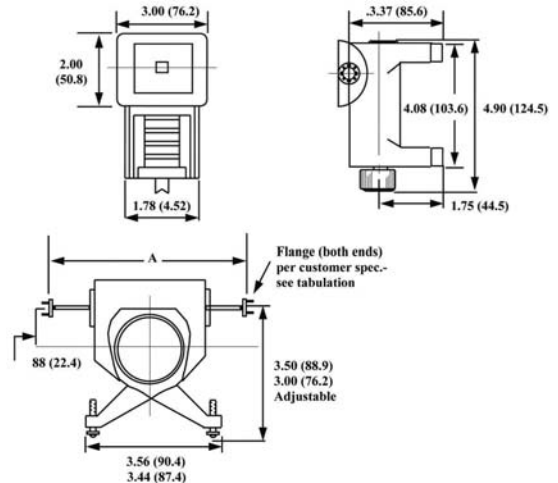
Lower frequency versions are available from 8.4 GHz and up.

Accuracy is based on attenuation settings. Consult Miwave for specifications

Dimensional Specifications		
Model No.	A	
	in.	mm
510K	8.48	215.0
510A	6.87	174.0
510B	6.25	159.0
510U	5.76	146.0
510V	4.50	114.3
510E	4.50	114.3
510W	4.50	114.3
510F	3.53	89.7
510D	3.44	87.4
510G	3.20	81.3

### OTHER BANDS AVAILABLE:

- WR-137
- WR-62
- WR-112
- WR-51
- WR-90
- WR-34
- WR-75



## Ordering Information

510

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Specify Flange (See Appendix A)

Specify RF Band Designer

Technical Specifications (typical)										
Model No.	510K	510A	510B	510U	510V	510E	510W	510F	510D	510G
Frequency Band (GHz)	18–26.5	26.5–40	33–50	40–50	50–75	60–90	75–110	90–140	110–170	140–220
Insertion (Loss) (dB)	0.5	0.5	0.6	0.7	0.9	1.0	1.2	1.5	3.0	4.0
VSWR <sup>1</sup> (typical)	1.30	1.15	1.15	1.15	1.20	1.20	1.20	1.25		
Average Power (watts)	1.0	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1
Weight (oz)	52	38	38	36	29	28	28	26	24	24