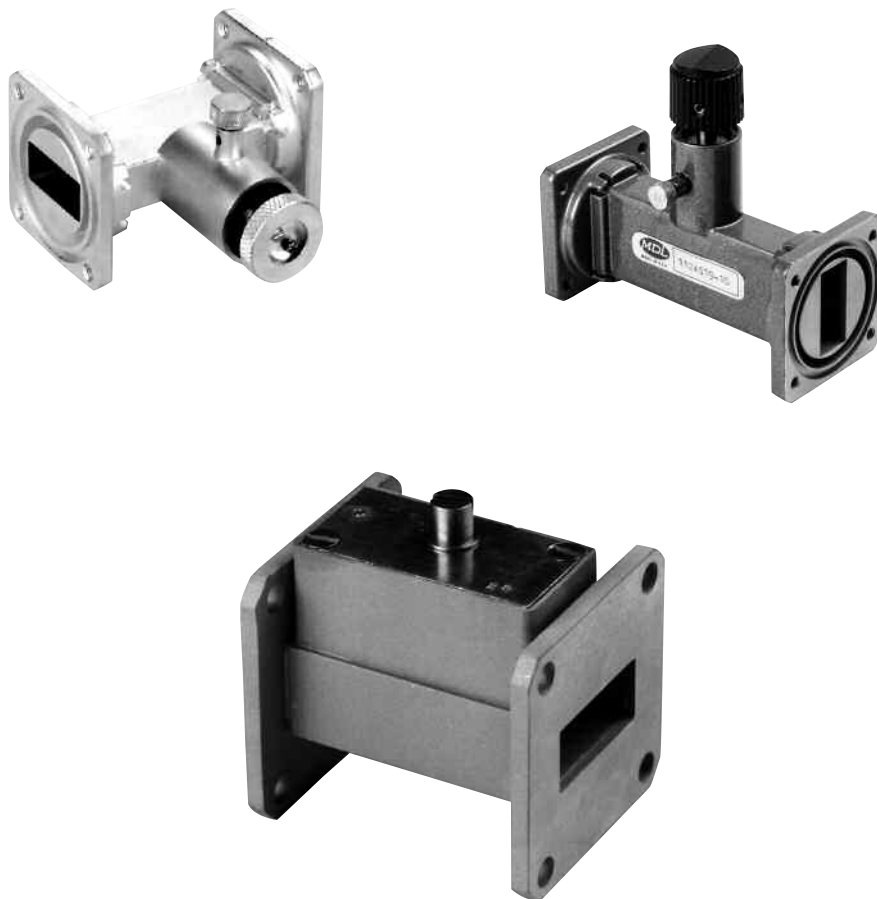


Section 7

Variable Attenuators



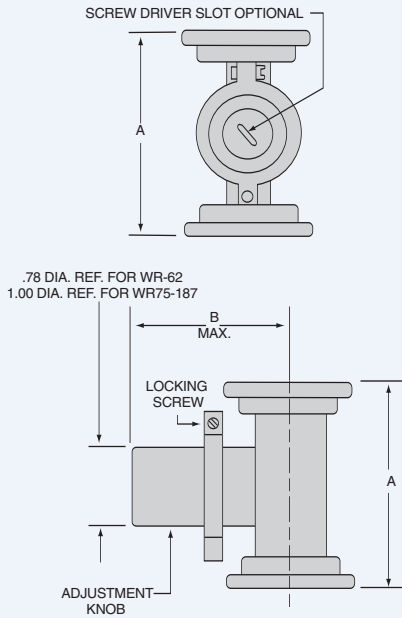
Introduction

MDL's series of Topwall and Sidewall variable attenuators feature low VSWR and insertion loss over the entire waveguide band. Attenuation is accomplished by moving an adjustable resistance cord through the waveguide. The units are of compact design and utilize a unique drive mechanism which gives an exceptionally smooth travel.

Variable Attenuators

VARIABLE ATTENUATORS

Sidewall Variable Attenuators



W/G SIZE	FREQ. RANGE (GHz)	MDL MODEL NUMBER	DIMENSIONS (INCHES)		VSWR	INSERTION LOSS (dB)	ATTENUATION 20 dB (MIN.)
			A	B (MAX.)			
WR62	12.40-18.00	62AS56	2.00	1.62	1.15	.5	20
WR75	10.00-15.00	75AS26	2.25	2.12	1.15	.5	20
WR90	8.20-12.40	90AS66	2.50	2.25	1.15	.5	20
WR102	7.00-11.00	102AS26	3.00	2.31	1.15	.5	20
WR112	7.05-10.00	112AS36	3.50	2.37	1.15	.5	20
WR137	5.85-8.20	137AS26	4.00	2.62	1.15	.5	20
WR187	3.95-5.85	187AS26	5.00	3.18	1.15	.5	20

Notes:

1. Material: Aluminum alloy standard, copper alloy available on special request.
2. Finish: Aluminum models are chromated.
3. Flanges: Cover flanges are supplied as standard. Chokes available on special request.

Variable Attenuators

Topwall Drive Variable Attenuators

- Resistance-card drive assembly can be removed quickly by loosening two screws.
- Complete drive mechanism accessible through top of attenuator housing.
- Attenuator housing available separately for brazing to any waveguide.
- Curves demonstrating typical attenuation may be supplied on request.

W/G SIZE	FREQ. RANGE (GHz)	PEAK POWER (WATTS)	AVERAGE POWER (WATTS)	VSWR MAX. (0-15 dB)	ATTENUATION RANGE (dB MIN.)
WR28	26.50-40.00	25	0.20	1.4	0.5-25
WR42	18.00-26.50	50	0.30	1.4	0.5-20
WR51	15.00-22.00	60	0.40	1.4	0.5-15
WR62	12.40-18.00	75	0.50	1.4	0.5-15
WR75	10.00-15.00	150	1.00	1.4	0.5-15
WR90	8.20-12.40	150	1.00	1.4	0.5-20
WR102	7.00-11.00	250	1.25	1.4	0.5-15
WR112	7.00-10.00	275	1.75	1.4	0.5-15
WR137	5.40-8.20	350	2.25	1.4	0.5-15
WR159	4.90-7.00	500	3.50	1.4	0.5-15
WR187	4.00-6.00	600	4.00	1.4	0.5-15

- Notes:**
1. Material: Aluminum alloy standard, copper alloy available on special request.
 2. Finish: Aluminum models are chromated and painted MDL blue unless otherwise specified.

Variable Attenuators

W/G SIZE	FREQ. RANGE (GHz)	MDL MODEL NUMBER	PEAK POWER (WATTS)	AVERAGE POWER (WATTS)	VSWR MAX. (0-15 dB)	ATTENUATION RANGE (dB MIN.)	DIMENSIONS (INCHES) TOLERANCE .XX = ±0.2			FIG. NO.
							A	B	C	
WR28	26.50-40.00	28AT16-1	25	0.20	1.4	0.5-25	1.19	0.72	0.14	1
		28AT16-2					1.19	0.72	0.14	1
		28AT16-4					1.19	0.72	0.14	1
WR42	18.00-26.50	42AT16-1	50	0.30	1.4	0.5-20	1.29	0.75	0.14	1
		42AT16-2					1.29	0.75	0.14	1
		42AT16-4					1.29	0.75	0.14	1
WR51	15.00-22.00	51AT13	60	0.40	1.4	0.5-15	1.10	0.96	0.14	2
		51AT16-1					1.25	0.80	0.14	1
		51AT16-2					1.46	0.80	0.14	1
		51AT16-4					1.56	0.80	0.14	1
WR62	15.00-22.00	62AT13	75	0.50	1.4	0.5-15	1.25	0.83	0.14	2
		62AT23					0.82	0.83	0.14	2
		62AT33					1.03	0.83	0.14	2
		62AT16-1					1.16	0.83	0.14	1
		62AT16-2					1.34	0.83	0.14	1
		62AT16-4					1.53	0.83	0.14	1
WR75	15.00-22.00	75AT16-1	150	1.00	1.4	0.5-15	2.43	0.94	0.20	1
		75AT16-2					2.43	0.94	0.20	1
		75AT16-4					2.43	0.94	0.20	1
		75AT13					1.70	0.95	0.20	3
WR90	8.20-12.40	90AT23	150	1.00	1.4	0.5-20	2.69	0.95	0.20	2
		90AT83					2.13	0.95	0.20	2
		90AT53					1.57	0.95	0.20	2
		90AT46-1					1.87	0.95	0.20	1
		90AT36-1					2.69	0.95	0.20	1
		90AT36-2					2.69	0.95	0.20	1
		90AT36-4					2.69	0.95	0.20	1
		90AT73					1.70	1.10	0.20	3
WR102	7.00-11.00	102AT16-1	250	1.25	1.4	0.5-15	2.74	1.18	0.18	1
		102AT16-2					2.96	1.18	0.18	1
		102AT16-4					3.17	1.18	0.18	1
		102AT13					2.27	0.84	0.18	4
WR112	7.00-10.00	112AT16-1	275	1.75	1.4	0.5-15	2.67	1.17	0.18	1
		112AT16-2					3.06	1.17	0.18	1
		112AT16-4					3.25	1.17	0.18	1
		112AT13					2.27	0.84	0.18	4
WR137	5.40-8.20	137AT16-1	350	2.25	1.4	0.5-15	2.83	1.36	0.18	1
		137AT16-2					3.30	1.36	0.18	1
		137AT16-4					3.67	1.36	0.18	1
		137AT13					2.27	0.84	0.18	4
WR159	4.90-7.00	159AT16-1	500	3.50	1.4	0.5-15	3.78	1.69	0.18	1
		159AT16-2					4.15	1.69	0.18	1
		159AT16-4					4.53	1.69	0.18	1
		159AT13					2.99	0.84	0.18	4
WR187	4.00-6.00	187AT13	600	4.00	1.4	0.5-15	2.99	0.84	0.18	4
		187AT16-1					3.56	1.73	0.18	1
		187AT16-2					4.00	1.73	0.18	1
		187AT16-4					4.53	1.73	0.18	1

Variable Attenuators

FIGURE 1

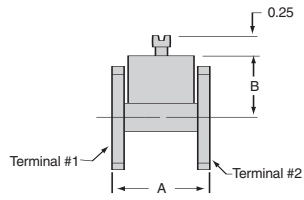


FIGURE 4

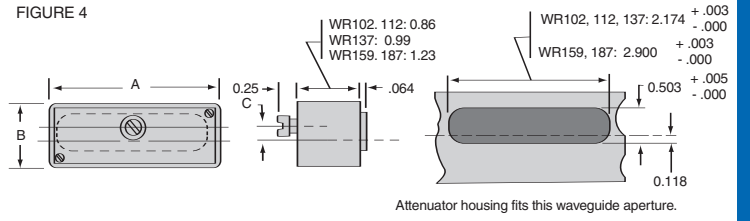


FIGURE 2

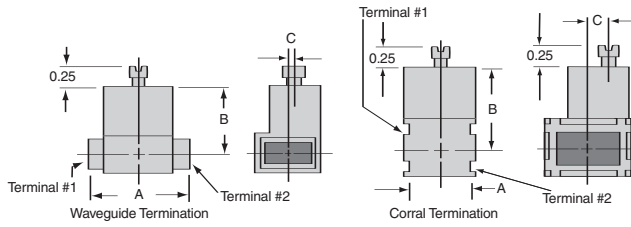
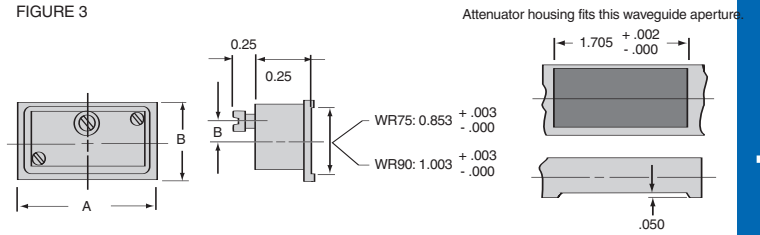


FIGURE 3



Notes:

1. Material: Aluminum alloy, copper available on request.
2. Cover flanges are standard. Chokes available on special request.
3. Finish: Aluminum chromated.

