Loop Couplers

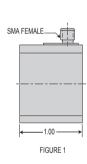
MDL waveguide loop coupler cover the frequency spectrum from WR90 to WR2100, and are widely used in RF circuits requiring directional power injection or extraction.

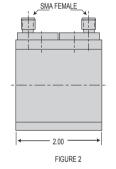
These units are available as uni- or bi-directional couplers. Modifications to the standard designs are available on request.

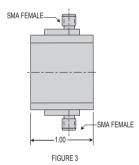
EDEO	MIN					ONAL CONNECTO	110
FREQ. RANGE (GHz)	COUPLING VALUE (dB)	WITH UNI-DIRECTIONA CONNECTORS	iL (FIG)	SAME SIDE	(FIG)	ONE TOP/ ONE Bottom	(FIG)
3.20-12.40	20 to 70	90LT16	1*	90LT26	2*	90LT36	3*
7.05-10.00	25 to 70	112LT16	1*	112LT26	2*	112LT36	3*
5.85-8.20	30 to 70	137LT16	4	137LT26	5	137LT36	6
4.90-7.05	30 to 70	159LT16	4	159LT26	5	159LT36	6
3.95-5.85	30 to 70	187LT16	4	187LT26	5	187LT36	6
3.30-4.90	35 to 70	229LT16	4	229LT26	5	229LT36	6
2.60-3.95	35 to 70	284LT16	4	284LT26	5	284LT36	6
1.70-2.60	40 to 70	430LT16	7	430LT26	8		
			4	430LT46	5	430LT56	6
1.12-1.70	40 to 70	650LT16	7	650LT26	8		
			4	650LT46	5	650LT56	6
	(GHz) 3.20-12.40 7.05-10.00 5.85-8.20 4.90-7.05 3.95-5.85 3.30-4.90 2.60-3.95 1.70-2.60	RANGE (GHz) VALUE (dB) 3.20-12.40 20 to 70 7.05-10.00 25 to 70 5.85-8.20 30 to 70 4.90-7.05 30 to 70 3.95-5.85 30 to 70 3.30-4.90 35 to 70 2.60-3.95 35 to 70 1.70-2.60 40 to 70	RANGE (GHz)VALUE (dB)UNI-DIRECTIONA CONNECTORS3.20-12.4020 to 7090LT167.05-10.0025 to 70112LT165.85-8.2030 to 70137LT164.90-7.0530 to 70159LT163.95-5.8530 to 70187LT163.30-4.9035 to 70229LT162.60-3.9535 to 70284LT161.70-2.6040 to 70430LT16	RANGE (GHz) VALUE (dB) UNI-DIRECTIONAL CONNECTORS (FIG) 8.20-12.40 20 to 70 90LT16 1* 7.05-10.00 25 to 70 112LT16 1* 5.85-8.20 30 to 70 137LT16 4 4.90-7.05 30 to 70 159LT16 4 8.30-4.90 35 to 70 229LT16 4 2.60-3.95 35 to 70 284LT16 4 1.70-2.60 40 to 70 430LT16 7 4 1.12-1.70 40 to 70 650LT16 7	RANGE (GHz) VALUE (dB) UNI-DIRECTIONAL CONNECTORS (FIG) SAME SIDE 8.20-12.40 20 to 70 90LT16 1* 90LT26 7.05-10.00 25 to 70 112LT16 1* 112LT26 5.85-8.20 30 to 70 137LT16 4 137LT26 4.90-7.05 30 to 70 159LT16 4 159LT26 3.95-5.85 30 to 70 187LT16 4 187LT26 3.30-4.90 35 to 70 229LT16 4 229LT26 2.60-3.95 35 to 70 284LT16 4 284LT26 1.70-2.60 40 to 70 430LT16 7 430LT26 4 430LT46 7 650LT26	RANGE (GH2) VALUE (dB) UNI-DIRECTIONAL CONNECTORS (FIG) SAME SIDE (FIG) 8.20-12.40 20 to 70 90LT16 1* 90LT26 2* 7.05-10.00 25 to 70 112LT16 1* 112LT26 2* 5.85-8.20 30 to 70 137LT16 4 137LT26 5 8.90-7.05 30 to 70 159LT16 4 159LT26 5 8.90-7.05 30 to 70 187LT16 4 187LT26 5 3.95-5.85 30 to 70 229LT16 4 229LT26 5 2.60-3.95 35 to 70 2284LT16 4 284LT26 5 1.70-2.60 40 to 70 430LT16 7 430LT26 8 1.12-1.70 40 to 70 650LT16 7 650LT26 8	RANGE (GHz) VALUE (dB) UNI-DIRECTIONAL CONNECTORS SAME SIDE (FIG) ONE TOP/ ONE BOTTOM 8.20-12.40 20 to 70 90LT16 1* 90LT26 2* 90LT36 7.05-10.00 25 to 70 112LT16 1* 112LT26 2* 112LT36 5.85-8.20 30 to 70 137LT16 4 137LT26 5 137LT36 4.90-7.05 30 to 70 159LT16 4 159LT26 5 159LT36 3.95-5.85 30 to 70 187LT16 4 187LT26 5 187LT36 3.30-4.90 35 to 70 229LT16 4 229LT26 5 229LT36 2.60-3.95 35 to 70 284LT16 4 284LT26 5 284LT36 1.70-2.60 40 to 70 430LT16 7 430LT26 8 430LT56 1.12-1.70 40 to 70 650LT16 7 650LT26 8

ELECTRICAL DATA

Frequency:	Bandwidth to be specified.		
Coupling Value:	To be specified.		
Coupling			
Sensitivity:	Approximately +/- 1dB for 20% bandwidth.		
Directivity:	25dB for 2% of the waveguide band		
	20dB for 20% of the waveguide band		
	15dB for coupling values < 30dB for 20% of the waveguide band.		
VSWR:	Main arm: 1.05 max. typcial for coupling values greater than 30dB.		
Power:	The main arm will handle approximately 90% of waveguide rating. The internal load in the loop will handle 5 watts average power at 25°C.		
Output			
Connectors:	WR90 to 112 SMA female WR137 to 2100 type "N" female.		

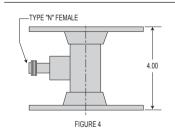


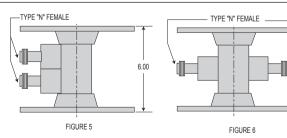


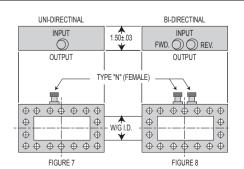


4.00









*All lengths as shown are for cover flanges only. When couplers are made with choke, cover or choke, choke lengths are greater.