

Resonance Isolators

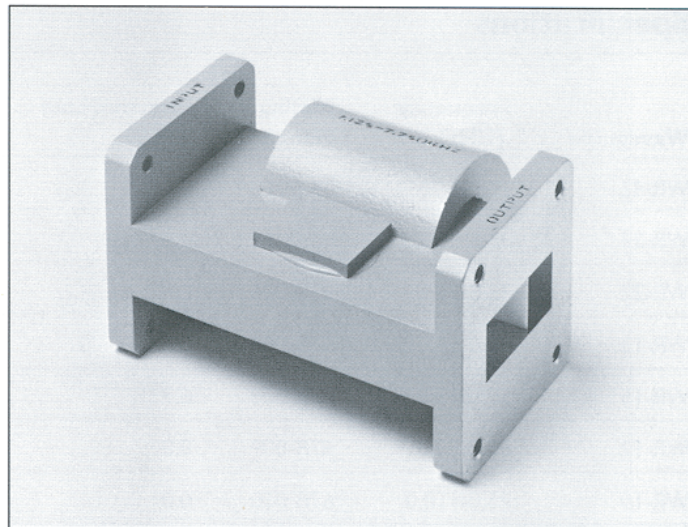
Description

Waveguide resonance isolators are available in waveguide sizes from WR-284 to WR-42. High and low power, broad and narrow bandwidth options are listed. All flanges mate with standard UG flanges associated with the particular waveguide size. Most designs are in aluminum to minimize weight and cost.

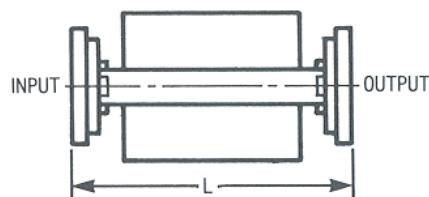
Pressurization and cooling are required on several of the high power designs. Unless noted otherwise, resonance isolators are convection cooled.

The power listed is the forward power handling capability of the unit. The reflected power handling capability of the device is usually 10 dB less than the forward power or equivalent to a 2:1 output mismatch.

The resonance isolators shown represent only a sampling of M/A-COM's product capability. Contact the factory for custom options such as direction of circulation, RFI shielding, magnetic shielding, frequency range, etc.



Mechanical Outline



Specifications

Waveguide	Frequency (GHz)	Isolation (dB Min.)	Insertion Loss (dB Max.)	VSWR Max.	Power		Length Inches (mm)	Isolator Model No.
					Peak ³ kW	Avg. ⁴ W		
WR-284	2.6-3.9	20	1.2	1.20	50	50	14.00 (355.6)	I-151L
WR-284	2.7-2.9	10	0.4	1.15	1000	1000	6.30 (160.0)	8P19-101
WR-284	2.7-3.1	10	0.5	1.20	300	300	6.10 (154.9)	8P253-101
WR-284	2.9-3.1	10	0.4	1.10	3000	15000	12.00 (304.8)	8P14 ¹
WR-284	2.9-3.1	10	0.5	1.10	1500	1700	10.30 (261.6)	8P23-101 ²
WR-229	3.7-4.2	20	0.5	1.05	20	30	5.50 (139.7)	I-1512L-101
WR-229	3.7-4.2	40	0.8	1.08	20	30	6.50 (165.1)	I-1511L-101
WR-187	3.9-5.9	40	1.2	1.15	10	10	8.00 (203.2)	8Q237
WR-187	4.4-5.0	20	0.5	1.08	10	50	4.50 (114.3)	I-1441L-101
WR-187	4.4-5.0	40	0.8	1.08	10	50	5.00 (127.0)	I-1418L-101
WR-187	4.9-5.1	10	0.4	1.10	1000	1000	7.50 (190.5)	8P43A ²
WR-187	5.1-5.9	25	0.8	1.15	20	20	8.40 (213.4)	8Q42 ¹
WR-187	5.4-5.9	10	0.6	1.10	1000	1000	6.75 (171.5)	8P43 ¹

Notes:

1. Liquid Cooled

2. Air Cooled

3. Peak power handling capability will depend on pressurization, duty cycle, pulsewidth, load mismatch and altitude.

4. Average power handling capability may be increased by adding heat sinking, fins or liquid cooling.



Specifications

Waveguide	Frequency (GHz)	Isolation (dB Min.)	Insertion Loss (dB Max.)	VSWR Max.	Power		Length Inches (mm)	Isolator Model No.
					Peak ³ kW	Avg. ⁴ W		
WR-137	5.9-8.2	40	1.0	1.10	10	10	7.00 (177.8)	8Q238
WR-137	5.925-6.425	20	0.5	1.08	10	30	3.25 (82.6)	I-1421L-101
WR-137	5.925-6.425	40	0.8	1.08	10	30	3.25 (82.6)	I-1426L-101
WR-137	5.85-8.2	20	1.0	1.15	2	10	6.00 (152.4)	8P221
WR-137	6.425-6.875	20	0.5	1.05	10	30	3.25 (82.6)	I-1422L-101
WR-137	6.425-6.875	40	0.8	1.05	10	30	3.25 (82.6)	I-1427L-101
WR-137	6.7-7.4	12	0.7	1.20	100	150	8.50 (215.9)	8P265
WR-137	6.875-7.125	20	0.5	1.05	10	30	3.25 (82.6)	I-1424L-101
WR-137	6.875-7.125	40	0.8	1.05	10	30	3.25 (82.6)	I-1428L-101
WR-112	6.9-7.5	30	0.6	1.06	10	10	6.00 (152.4)	8Q61
WR-112	7.1-8.4	45	1.5	1.15	1	10	6.25 (158.8)	8Q63
WR-112	7.1-10.0	30	1.0	1.15	10	10	7.00 (177.8)	8Q201
WR-112	7.125-7.8	20	0.5	1.05	10	20	3.25 (82.6)	I-1396L-101
WR-112	7.125-7.8	40	0.75	1.05	10	20	3.25 (82.6)	I-1435L-101
WR-112	7.8-8.4	20	0.5	1.05	10	20	3.25 (82.6)	I-1433L-101
WR-112	7.8-8.4	40	0.75	1.05	10	20	3.25 (82.6)	I-1436L-101
WR-112	8.5-9.6	15	0.5	1.15	300	300	4.50 (114.3)	8P62
WR-90	8.2-12.4	30	1.0	1.15	10	10	6.25 (158.8)	I-155L
WR-90	8.5-9.6	55	1.5	1.15	10	10	3.00 (76.2)	I-948L
WR-90	8.5-9.6	30	0.75	1.15	20	20	3.00 (76.2)	I-160L
WR-90	8.5-9.6	10	0.5	1.15	125	125	3.25 (82.6)	8P71
WR-90	8.5-9.6	20	1.0	1.15	125	125	3.25 (82.6)	8P72
WR-90	8.5-9.6	40	1.2	1.15	10	10	3.25 (82.6)	8Q72
WR-90	8.8-9.6	10	0.3	1.10	10	1	1.00 (25.4)	8Q269
WR-90	10.0-10.3	50	1.0	1.20	10	10	3.00 (76.2)	I-217L
WR-75	10.7-11.7	20	0.5	1.05	5	15	2.75 (69.9)	I-1522L-101
WR-75	10.7-11.7	40	0.8	1.05	5	15	4.00 (101.6)	I-1523L-101
WR-75	10.7-11.7	60	1.5	1.05	5	15	4.00 (101.6)	I-1524L-101
WR-75	11.7-12.2	20	0.5	1.05	10	10	2.75 (69.9)	8Q313
WR-75	11.9-13.2	13	0.7	1.20	100	100	4.50 (114.3)	8P268
WR-75	12.2-12.7	20	0.5	1.05	5	15	2.75 (69.9)	I-1525L-101
WR-75	12.2-12.7	40	0.8	1.05	5	15	4.00 (101.6)	I-1526L-101
WR-75	12.7-13.2	20	0.5	1.05	5	15	2.75 (69.9)	I-1630L-101
WR-75	12.7-13.2	40	0.8	1.05	5	15	4.00 (101.6)	I-1634L-101
WR-62	12.4-18.0	30	1.0	1.15	10	10	5.25 (133.4)	8Q229
WR-62	12.4-18.0	13	0.8	1.20	100	100	4.50 (114.3)	8P209
WR-62	15.5-17.5	18	0.5	1.10	150	150	2.50 (63.5)	8P82
WR-62	16.0-17.0	20	0.5	1.10	150	150	2.50 (63.5)	8Q82
WR-42	18.0-26.5	20	1.0	1.15	5	5	5.00 (127.0)	8Q203

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