

Faraday Rotation Isolators

Micro Harmonics offers a complete line of Faraday rotation isolators covering 25-400 GHz in every standard waveguide band from WR-28 through WR-2.8. These isolators exhibit state-of-the-art performance in terms of low-insertion loss, broad-bandwidth, low port reflections, and the highest frequency coverage in the industry. They are the most advanced isolators on the market today.

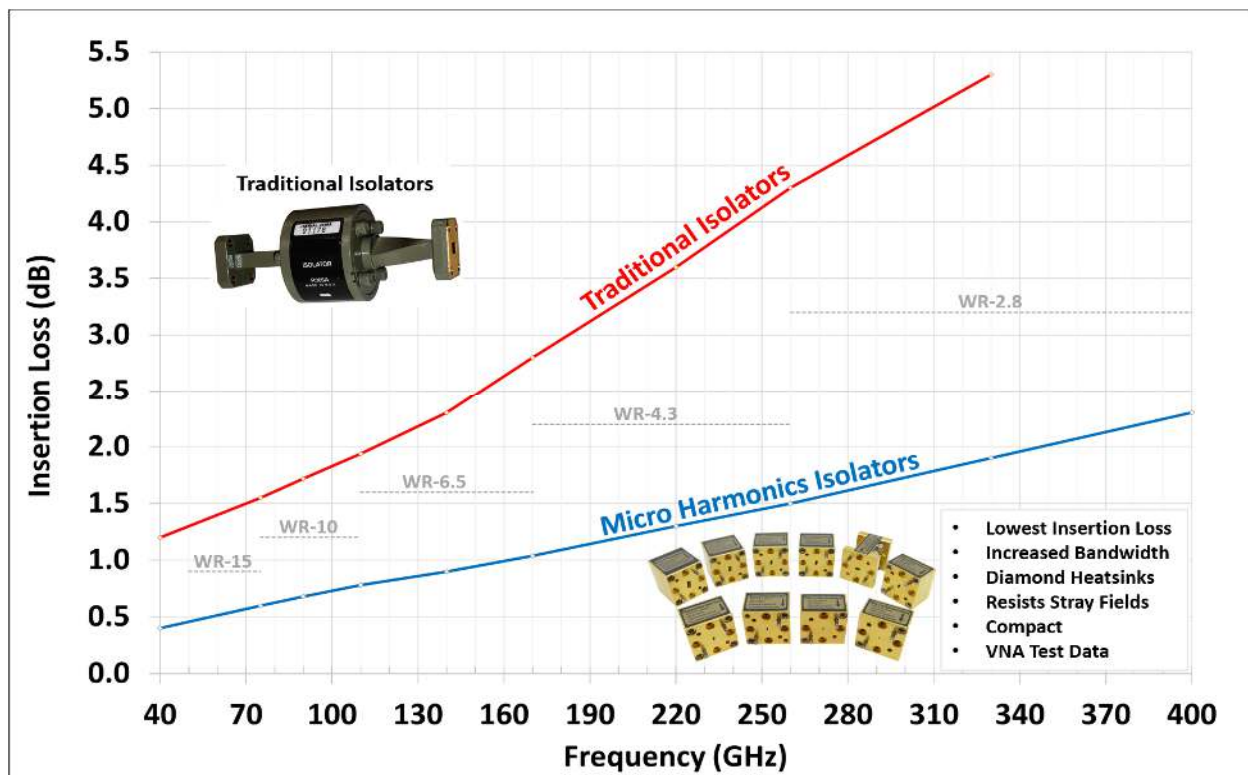
“The compact size, extremely low insertion loss, and the wide bandwidth have allowed us to use isolators in a wider variety of our systems than was previously possible and have led to significant improvements in key system performance metrics such as source power and sensitivity.”

*Jeffrey Hesler, Ph.D.
CTO, Virginia Diodes*

“They had an isolator with the single most important parameter I needed, low insertion loss. They were ultimately able to select one with just 1.2 dB loss at 240 GHz, which is pretty phenomenal.”

*Curt Dunnam, Director of Operations
ACERT National Biomedical Center at Cornell*

The graph below gives a good illustration of how our insertion loss compares to the traditional isolators offered by other vendors. Our insertion loss in the WR-3.4 band is less than 2 dB! Join the many companies who are using our isolators in their systems and seeing tangible improvements in system performance.



Micro Harmonics Corporation
20 S Roanoke St, Ste 202
Fincastle, VA 24090

Ph: 540.473.9983
Fax: 844.449.1561
MicroHarmonics.com

Micro Harmonics Faraday Rotation Isolators

Model	Flange (EIA)	Band (GHz)	Insertion Loss (dB, typ)	Isolation (dB, typ)	*Max Power (W)
FR280	WR-28	26 - 40	0.5	25	5
FR188	WR-19	40 - 60	Coming		4
FR148	WR-15	50 - 75	0.6	25	1.7
FR122	WR-12	60 - 90	0.8	25	1.5
FR100	WR-10	75 - 110	0.8	30	1.3
FR100M2	WR-10	75 - 110	0.8	30	1.3
FR90	WR-9	82 - 122	1.0	24	1.1
FR80	WR-8	90 - 140	0.9	30	0.9
FR65	WR-6.5	110 - 170	1.0	24	0.8
FR51	WR-5.1	140 - 220	1.4	25	0.6
FR43	WR-4.3	170 - 260	1.5	20	0.4
FR34	WR-3.4	220 - 330	2.0	25	0.3
FR28	WR-2.8	260 - 400	2.3 (preliminary)	25	0.3

* The maximum power ratings are conservative and will be revised upward in the coming year.



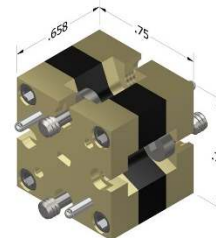
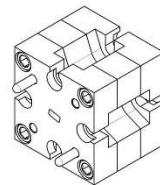
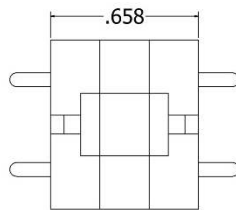
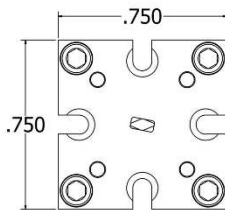
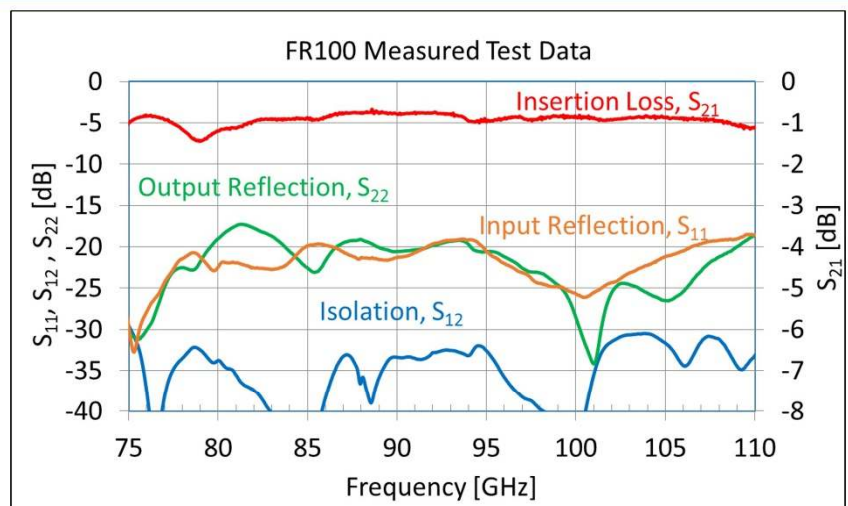
Isolator webpage

A typical specification sheet is shown below. Every component is thoroughly RF tested and the data for each individual component is shared with the customer. Our isolators employ a unique diamond heatsink for improved power handling and reliability. All our products are fully warranted. We design and manufacture all our products in the United States. Yet with all these advantages, our components remain competitively priced.

Model: FR100M2

Specifications	
Flange	WR-10
Frequency (GHz)	75-110
Insertion Loss (dB, typ)	0.8
Insertion Loss (dB, max)	1.8
Isolation (dB, typ)	30
Isolation (dB, min)	18
Input Return Loss (dB, typ)	20
Output Return Loss (dB, typ)	22
VSWR (max)	1.4:1
Maximum Power (W)	1.3
Diamond Heatsink	Yes

Every isolator is tested on a vector network analyzer to ensure conformity.



January 25, 2021

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