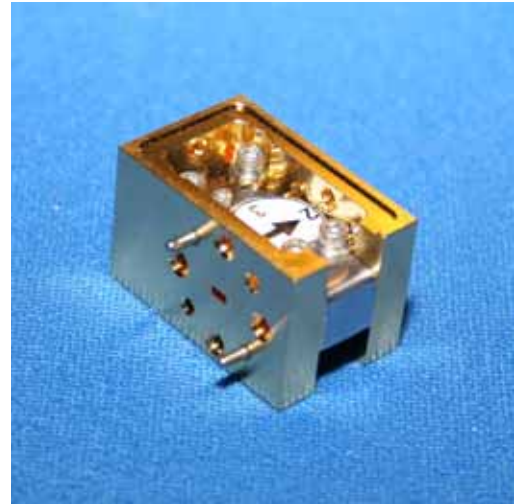


## DESCRIPTION

The HMI AND HMC series broadband ferrite junction isolators and circulators are available from 18 - 120 GHz. They utilize a low loss H-plane structure in a modified Y-junction format to provide minimum loss with maximum isolation and bandwidth. 2 GHz bandwidths with 20 dB of isolation are standard. Wider bandwidth, high power handling and magnetic shielding are available in select units.

The isolators are commonly utilized to buffer mismatches and are often used on amplifier and oscillator outputs. Circulators are commonly employed as signal duplexers on transceivers having a single antenna. The in-line port orientation makes the mechanical interface more convenient than standard Y-junction types. Access pockets on the top and bottom allow for blind flange mating.



## APPLICATIONS

Ferrite Duplexers  
Amplifier Stages  
General RF Matching  
Mismatch Buffers

## FEATURES

20 dB Isolation  
1 to 10% Bandwidths  
H-Plane Design  
In-Line Port Orientation



# Series HMI & HMC Isolators & Circulators

Revised April 2013

Specifications @ 35°C T<sub>CASE</sub>, Specifications subject to change w/o notice.

Narrowband Isolator and Circulators (see next page for wideband models)							
Part Number Isolator	Part Number Circulator	Center Frequency Range (GHz)	Waveguide	Standard Flange	Insertion Loss (dB)	Isolation (dB)	CW Power Handling
HMI42	HMC42	18.0 – 26.5	WR – 42	UG–595/U	0.3	20	1 watt
HMI28	HMC28	26.5 – 40.0	WR – 28	UG–599/U	0.4	20	1 watt
HMI22	HMC22	33.0 – 50.0	WR – 22	UG–599/U	0.4	20	1 watt
HMI19	HMC19	40.0 – 60.0	WR – 19	UG–599/U	0.5	20	1 watt
HMI15	HMC15	50.0 – 75.0	WR – 15	UG–385/U	0.7	20	0.5 watts
HMI12	HMC12	60.0 – 90.0	WR – 12	UG–387/U	0.8	20	0.5 watts
HMI10	HMC10	75.0 – 110.0	WR – 10	UG–387/U-M	0.8	18	0.5 watts
HMI10H	HMC10H	75.0 - 110.0	WR - 10	UG-387/U-M	0.8	18	2 watts
HMI8	HMC8	90.0 - 120.0	WR - 8	UG-387/U-M	1.0	16	0.4 watts

## General Specifications—Narrowband Units

Frequency Bandwidth: 2 GHz nominal  
 Operating Temperature: 0 to +60°C  
 VSWR: 1.20:1 to WR-19, 1.25:1 to WR-10



# Series HMI & HMC Isolators & Circulators

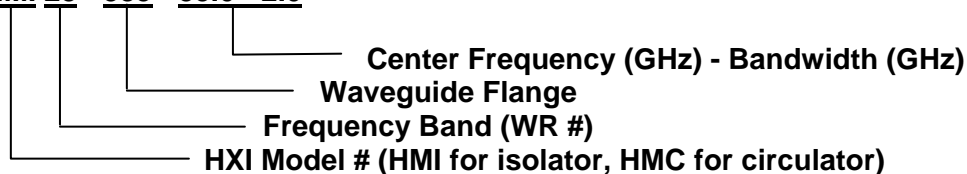
Revised April 2013

Wideband Application Specific Isolators						
Part Number	Frequency Range (GHz)	Waveguide	Standard Flange	Insertion Loss (dB)	Isolation (dB)	CW Power Handling
HMI15-385-60.5-7.0	57.0 - 64.0	WR - 15	UG-385/U	1.0	14	0.5 watts
HMI12-387-73.5	71.0 - 76.0	WR - 12	UG-387/U	1.0	16	0.5 watts
HMI10-387-79.0-4.0	77.0 - 81.0	WR - 10	UG-387/U-M	0.9	16	0.5 watts
HMI12-387-83.5-5.0	81.0 - 86.0	WR - 12	UG-387/U	1.0	16	0.5 watts
HMI10-387-94.0-4.0	92.0 - 96.0	WR - 10	UG-387/U-M	0.8	18	0.5 watts

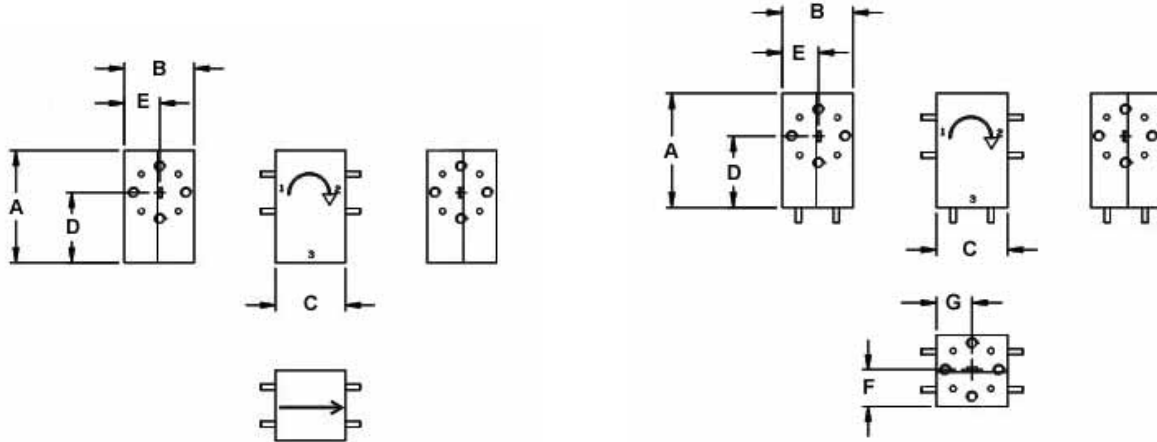
## Requesting quotes

When requesting a quote for HMI and HMC ferrite isolators and circulators, please specify required center frequency, bandwidth and any other required specifications. The part number guide below can be used as a reference for requesting quotes.

**HMI 28 - 385 - 35.0 - 2.0**



## Isolator and Circulator Outlines



Isolator Outline  
(round flange pattern shown)

Circulator Outline  
(round flange pattern shown)

FREQUENCY BAND	WAVEGUIDE SIZE	FLANGE PATTERN	ISOLATOR DIMENSIONS (inches)				
			A	B	C	D	E
Ka	WR-28	UG-599/U	1.25	.75	.75	.88	.38
Q	WR-22	UG-599/U	1.25	.75	.75	.88	.38
		UG-383/U	1.40	1.21	1.13	.84	.61
U	WR-19	UG-599/U	1.25	.75	.75	.88	.38
		UG-383/U	1.40	1.21	1.13	.84	.61
V	WR-15	UG-385	1.20	.75	.75	.75	.38
E	WR-12	UG-387	1.20	.75	.75	.75	.38
W	WR-10	UG-387	1.20	.75	.75	.75	.38

FREQUENCY BAND	WAVEGUIDE SIZE	FLANGE PATTERN	CIRCULATOR DIMENSIONS (inches)						
			A	B	C	D	E	F	G
Ka	WR-28	UG-599/U	1.25	.75	.75	.88	.38	.38	.38
Q	WR-22	UG-599/U	1.25	.75	.75	.88	.38	.38	.38
		UG-383/U	1.40	1.21	1.13	.84	.61	.61	.57
U	WR-19	UG-599/U	1.25	.75	.75	.88	.38	.38	.38
		UG-383/U	1.40	1.21	1.13	.84	.61	.61	.57
V	WR-15	UG-385	1.20	.75	.75	.75	.38	.38	.38
E	WR-12	UG-387	1.20	.75	.75	.75	.38	.38	.38
W	WR-10	UG-387	1.20	.75	.75	.75	.38	.38	.38