Connectorized Ferrite Isolators and Circulators

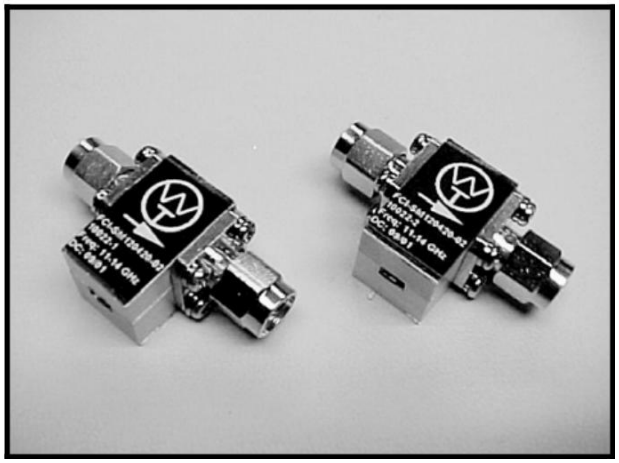
Bulletin No. FIC & FCC

FEATURES

❖ Low cost, high quality
❖ Compact size, light weight ❖ High performance
❖ Wide operation temperature range ❖ Common Radar and wireless bands

APPLICATIONS

❖ Ports isolation
❖ Module integration
❖ Transceiver subsystems



FIC & FCC Series

DESCRIPTION

FIC and FCC series narrow band connectorized isolators and circulators cover common Radar and wireless communication frequency bands up to 20 GHz. The isolator is an ideal device where the port isolation is required, while the circulator is commonly used as a duplexer for transceiver subsystems where the transmitter and receiver ports share a single antenna port. The connectorized isolators and circulators equipped with either SMA(F) or SMA(M) connectors for ease connections. The low cost **FIC** and **FCC** series isolators and circulators offer very compact sizes that can be easily inserted into the sub-assembly with minimum size increase. While the standard specifications are shown below, the custom ones with wider bandwidth and higher isolation are available.

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SPECIFICATIONS

Frequency Range (GHz)	0.8 to 1.2		1.2 to 2.4		2.0 to 3.5		3.5 to 5.0		5.0 to 8.0		8.0 to 18.0	
Bandwidth (MHz min)	25	70	70	200	200	400	300	500	100	600	300	1000
Isolation (dB min)	23	20	23	20	23	20	23	20	20	20	23	20
Insertion Loss (dB max)	0.3	0.4	0.3	0.4	0.3	0.5	0.3	0.4	0.3	0.4	0.4	0.4
VSWR (max)	1.20	1.25	1.20	1.25	1.20	1.25	1.20	1.25	1.25	1.25	1.20	1.25
Power Handling (W, min)	60		10		10		10		10		10	
Outline Drawings	WT-D-3 and/or WT-D-4											
Temperature Range	0 to +50°C											

HOW TO ORDER

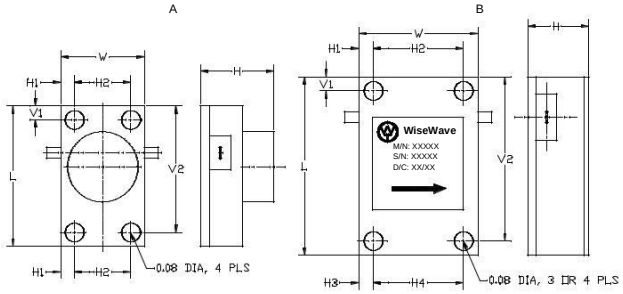
Specify Model Number

FXC - CF BW IL IS - XX ← Factory Reserve

I = Isolator
C = Circulator
Center Frequency in GHz
Isolation in dB
Insertion Loss in 1/10 dB
Bandwidth in 1/10 GHz

Example: To order a center frequency 18 GHz circulator with 1.0 GHz bandwidth, 0.4 dB maximum insertion loss and 20 dB, minimum isolation, specify FCC-18100420-XX.

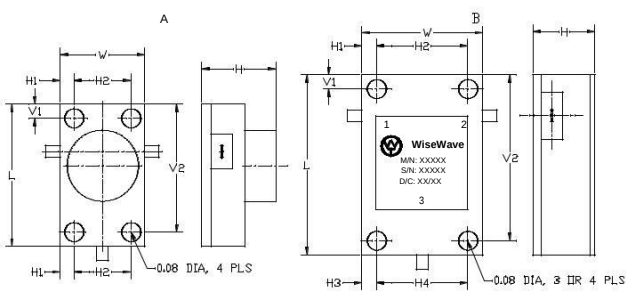
WT-D-1 Drop-in Isolator



Freq. Range	DWG	W	L	H	H1	H2	H3	H4	V1	V2
0.8~1.2 GHz	A	1.00	1.25	0.27	0.09	0.82	NA	NA	0.09	0.82
1.2~2.4 GHz	B	1.00	1.00	0.47	0.09	0.82	0.09	0.82	0.09	0.82
2.0~3.5 GHz	B	0.71	0.98	0.39	0.16	0.39	0.10	NA	0.08	0.83
3.5~5.0 GHz	B	0.63	1.02	0.41	0.31	NA	0.08	0.47	0.09	0.54
5.0~8.0 GHz	B	0.47	0.79	0.37	0.08	0.31	0.08	0.31	0.08	0.63
8.0~18.0 GHz	A	0.35	0.59	0.31	0.06	0.24	NA	NA	0.06	0.47

Dimensions are in inches

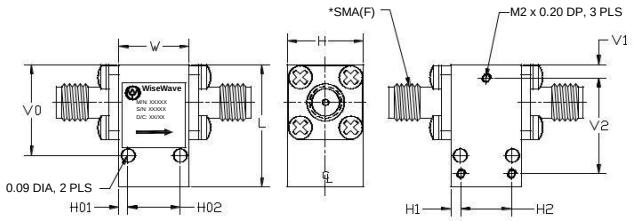
WT-D-2 Drop-in Circulator



Freq. Range	DWG	W	L	H	H1	H2	H3	H4	V1	V2
0.8~1.2 GHz	A	1.00	1.00	0.27	0.09	0.82	NA	NA	0.09	0.82
1.2~2.4 GHz	B	1.00	1.00	0.47	0.09	0.82	0.09	0.82	0.09	0.82
2.0~3.5 GHz	B	0.79	0.98	0.45	0.39	NA	0.14	0.51	0.06	0.83
3.5~5.0 GHz	B	0.63	0.87	0.41	0.31	NA	0.08	0.47	0.09	0.54
5.0~8.0 GHz	B	0.50	0.67	0.24	0.06	0.38	0.06	0.38	0.06	0.55
8.0~18.0 GHz	A	0.35	0.49	0.31	0.06	0.24	NA	NA	0.06	0.37

Dimensions are in inches

WT-D-3 Coaxial Isolator

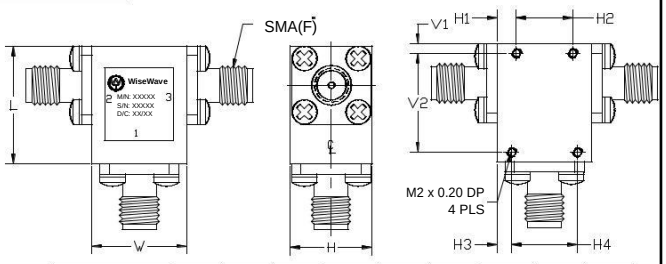


Freq. Range	W	L	H	V0	H01	H02	H1	H2	V1	V2
0.9~2.0 GHz	0.98	1.16	0.59	0.71	0.12	0.75	NA	NA	NA	NA
2.0~3.5 GHz	0.98	1.16	0.59	0.71	0.12	0.75	NA	NA	NA	NA
3.5~6.5 GHz	0.63	1.02	0.55	0.63	0.10	0.43	0.10	0.43	0.09	0.78
6.5~18.0 GHz	0.47	0.79	0.51	0.55	0.08	0.31	NA	NA	NA	NA

*SMA(M) is available per request

Dimensions are in inches

WT-D-4 Coaxial Circulator

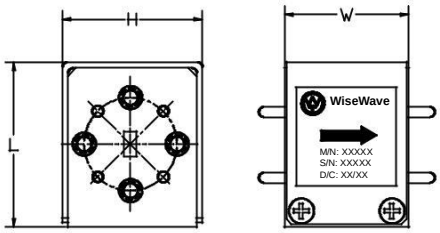


Freq. Range	W	L	H	H1	H2	H3	H4	V1	V2
0.9~2.0 GHz	0.98	0.98	0.59	0.18	0.63	0.12	0.75	0.12	0.75
2.0~3.5 GHz*	0.98	0.98	0.59	0.12	0.75	NA	NA	0.71	NA
3.5~6.5 GHz	0.63	0.83	0.55	NA	NA	NA	NA	NA	NA
6.5~18.0 GHz	0.59	0.75	0.51	0.16	0.28	0.12	0.35	0.12	0.47

* SMA(M) is available per request

Dimensions are in inches

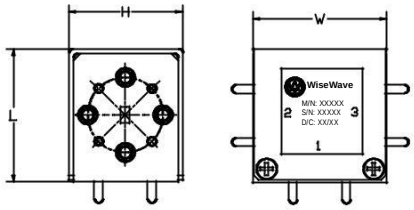
WT-D-5 Junction Isolator



BAND	H	L	W
K	0.88	1.26	0.50
Ka	0.75	1.10	0.39
Q & U	1.18	1.26	0.59
V,E & W	0.85	1.00	0.75

Dimensions are in inches

WT-D-6 Junction Circulator



BAND	H	L	W
K	0.88	1.06	0.94
Ka	0.75	0.94	0.83
Q	1.22	1.34	1.22
U	1.22	1.34	1.34
V,E & W	0.85	1.00	1.00

Dimensions are in inches

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details.
The outline drawings shown are standard versions. Contact factory for your specific package requirements.