Full Band Faraday Isolators, STF Series

FEATURES:

- Frequency coverage: 18.0 to 140 GHz
- Full waveguide band operation
- Moderate insertion loss
- High isolation
- Instrumentation grade

APPLICATIONS:

- Port isolation
- Test setups
- Test instrumentations

DESCRIPTION:

STF series full band Faraday isolators are offered to cover the frequency range of 18 to 140 GHz in eight waveguide bands. These isolators are constructed with a longitudinal magnetized ferrite rod to provide Faraday rotation when the RF signal is presented. Although the typical insertion loss of these isolators is slightly higher than its counterpart, the full band junction isolators (SNF series), their isolation is at least 10 dB higher. In addition, the Faraday isolators cover broader frequency range and possess less insertion phase variation cross the entire waveguide band. These characteristics make them ideally suited for broadband applications, especially in test labs and instrumentations.

Higher isolation within narrow operating bandwidth can be ordered as custom models. Specify your own model number by referring to Custom Designed Models section below when placing the order.

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CATALOG MODELS:

Band	Model Number	Waveguide	Frequency Range (GHz)	Insertion Loss (dB, Max.)	Isolation (dB, Min.)	VSWR (Max)	Power Handling (W, Min.)	Flange Type	Outline
K	STF-42-S1	WR-42	18.0 o 26.5	1.2	28	1.4:1	2.0	UG595/U	TF-K1
Ka	STF-28-S1	WR-28	26.5 to 40.0	1.2	28	1.4:1	1.8	UG599/U	TF-A1
Q	STF-22-S1	WR-22	33.0 to 50.0	1.4	28	1.4:1	1.5	UG383/U	TF-Q1
U	STF-19-S1	WR-19	40.0 to 60.0	1.5	28	1.4:1	1.5	UG383/U-M	TF-U1
V	STF-15-S1	WR-15	50.0 to 75.0	1.7	28	1.4:1	1.2	UG385/U	TF-V1
E	STF--12-S1	WR-12	60.0 to 90.0	1.9	28	1.4:1	1.2	UG387/U	TF-E1
W	STF-10-S1	WR-10	75.0 to 110.0	2.2	28	1.4:1	1.0	UG387/U-M	TF-W1
F	STF-08-S1	WR-08	90.0 to 140.0	2.6	28	1.4:1	1.0	UG387/U-M	TF-F1

CUSTOM DESIGNED MODELS:

Sage Millimeter's custom designed Faraday Isolator model numbers are configured per following format. Customers may refer to the format and specify their own model numbers accordingly when placing the order.

STF- F1N F2N IS - WG - XY

F1N is the start frequency in MHz x 10N. For example: 90.0 GHz = 903
F2N is the stop frequency in MHz x 10N. For example: 100.0 GHz = 104
IS is the isolation in dB. For example: 35 dB = 35
WG is the waveguide size. For example: WR-10 = 10
X, Y are for factory reserve.

Example: STF-90310435-10-01 is a custom designed Faraday isolator covering the frequency range from 90.0 to 100.0 GHz,. Its isolation is 35 dB and the waveguide interface is WR-10. "01" is a factory assigned sequential number.