



The FDEG Series of diplexers are designed to enable feeder sharing between systems in the 694-862 MHz range and in the 880-960 MHz range. RFS's innovative cavity lter design provides a very low insertion loss of 0.2dB typical while keeping the product extremely compact and lightweight. The usage of highly selective filters also guarantees a high isolation level of 50dB between ports, to ensure a interference-free environment for any technology deployed. The filter design also comprises a lightning protection for additional reliability. Designed to withstand the most severe outdoor environments, it also features a IP67 class protection with a vented enclosure to avoid any possible effects of condensation and pressure instability, thus providing a long lasting, extremely reliable solution to any network.

FEATURES / BENEFITS

- Single unit
- DC/AISG 1.1/2.0 pass through all ports
- Extremely Low Insertion Loss
- High level of Rejection between bands – Protection against interferences
- Extremely High Power Handling Capability
- Very compact & small size design – Easy installation and reduced tower load
- Exceptional reliability & environmental protection (IP 67)
- Mounting hardware for Wall and Pole mount provided (P/N SEM2-1A)
- Grounding already provided through the mounting bracket

Technical features

GENERAL SPECIFICATIONS

Product Type		Diplexer/Cross Band Combiner
Application		Wireless Communication
Configuration		Single indoor/outdoor

ELECTRICAL SPECIFICATIONS

Frequency Range 1	MHz	694 - 862
Frequency Range 2	MHz	880 - 960
Return Loss All Ports	dB	19 Min/22 Typ.
Power Handling Continuous, Max	W	500
Impedance	Ω	50
Insertion Loss, Path 1	dB	.20 typ.
Insertion Loss, Path 2	dB	.20 typ.
Rejection Between Bands Min/Typ	dB	50 Min.
Group Delay Variation	ns	<1 typ., 18 max. within any 10 MHz
Group Delay, Path 1	ns	<7 typ., 40 max.
Group Delay, Path 2	ns	<9 typ., 35 max.
Rejection between Bands, Min	dB	50
IMP Level at the COM Port	dBm (dBc)	-118 (-161) @2x43 typ.
DC Pass in Path 1		Yes
DC Pass in Path 2		Yes



MECHANICAL SPECIFICATIONS

Mounting		Wall Mounting: With 4 screws (maximum 6mm diameter) Pole Mounting: With included clamp set 40-110mm (1.57-4.33)
RF Connectors		7-16-Female Long-neck; 2 ports in, 1 port out
Shipping Weight	kg (lb)	3 (6.6)
Dimensions, H x W x D	mm (in)	191.3 x 172.3 x 86.3 (7.5 x 6.8 x 3.4)
Shipping Dimensions, H x W x D	mm (in)	191.3 x 172.3 x 86.3 (7.5 x 6.8 x 3.4)

TESTING AND ENVIRONMENTAL

Temperature Range	°C (°F)	-40 to 65 (-40 to 149)
Environmental		ETSI 300-019-2-4 Class 4.1E
Ingress Protection		IP 67
Lightning Protection		EN/IEC61000-4-5 Level 4

External Document Links

- [RFS Diplexer Field Test Procedure](#)
- [Installation Instructions](#)

Notes