



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**

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

**ELECTRICAL SPECIFICATIONS**

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

**MECHANICAL SPECIFICATIONS**

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

**TESTING AND ENVIRONMENTAL**

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

**External Document Links**[RFS Diplexer Field Test Procedure](#)[Installation Instructions](#)**Notes**