



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 filter 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 an interference-free environment for any technology deployed. The filter design also comprises of lightning protection for additional reliability. Designed to withstand the most severe outdoor environments, it also features an 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 optimizing small cell and in-building applications
- Full DC/AISG pass
- 4.3-10 Connectors - Reduce tower loading with connectors that are 40% smaller and lighter than 7-16 DIN connectors
- Extremely Low Insertion Loss
- High level of Rejection between bands - Protection against interference
- 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>		LTE700, EDD800, LTE800, GSM900
<b>Configuration</b>		Single indoor/outdoor

**ELECTRICAL SPECIFICATIONS**

<b>Branch</b>		1, 2	
<b>Frequency Range</b>	MHz	694-862	880-960
<b>Impedance</b>	Ohms	50, 50	
<b>Frequency Band</b>		LTE700, EDD800, LTE800, GSM900	
<b>DC Pass</b>		Full DC/AISG pass	
<b>Insertion Loss</b>	dB	0.2 typ., 0.2 typ.	
<b>GROUP DELAYNS</b>	ns	<7 typ., 40 max., <9 typ., 35 max.	
<b>Total Group Delay</b>	ns	<7 typ., 40 max., <9 typ., 35 max.	
<b>Return Loss</b>	dB	22 typ., 22 typ.	
<b>Power Handling Continuous, Max.</b>	W	600 at common port, 300 in each path	
<b>Input Power, PEP</b>	W	3000	
<b>Rejection between bands</b>	dB	50	
<b>3rd Order PIM</b>	dBm (dBc)	-118 (-161) @2x43 typ.	

**TESTING AND ENVIRONMENTAL**

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

**MECHANICAL SPECIFICATIONS**

RF Connectors		4.3-10 Female; 2 ports in, 1 port out
Shipping Weight	kg (lb)	3 (6.6)
Dimensions, H x W x D	mm (in)	191 x 172 x 81 (7.5 x 6.8 x 3.2)
Shipping Dimensions, H x W x D	mm (in)	191 x 172 x 81 (7.5 x 6.8 x 3.2)
Mounting		Wall Mounting: With 4 screws (maximum 6mm diameter) Pole Mounting: With included clamp set 40-110mm (1.57-4.33")

## External Document Links

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

## Notes