



The Sharelite FDBL Series of diplexers are designed to enable feeder sharing between systems in the 380-960 MHz range and in the 1695-2700 MHz range. RFS's innovative cavity filter design provides a very low insertion loss of 0.1dB 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

- Dual unit for use with X-pol Antennas
- Auto DC Sense
- 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

Product Type		Diplexer/Cross Band Combiner
Application		LTE600, LTE700, Cellular 800, GSM900, GSM1800, LTE1800, UMTS, LTE2100, AWS1, AWS3, AWS4 (U), PCS, LTE2300, LTE2600, WCS, BRS
Configuration		Dual indoor/outdoor



ELECTRICAL SPECIFICATIONS

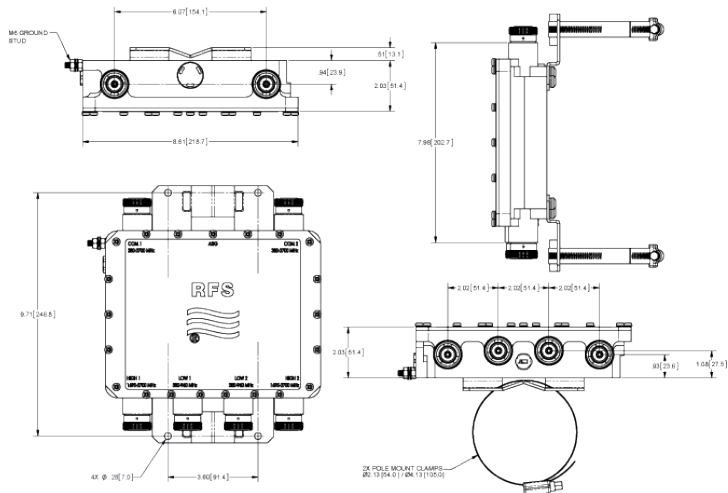
Branch		1, 2
Frequency Range	MHz	380-960 1695-2700
Impedance	Ohms	50, 50
Frequency Band		LTE600, LTE700, Cellular 800, GSM900,, GSM1800, LTE1800, UMTS, LTE2100, AWS1, AWS3, AWS4 (U), PCS, LTE2300, LTE2600, WCS, BRS
DC Pass		Auto DC Sense
Insertion Loss	dB	0.1 typ./ 0.2 max , 0.1 typ./ 0.2 max
Group Delay Variation	ns	0.5, 1
GROUPDELAYNS	ns	2.5 max., 3.0 max.
Total Group Delay	ns	2.5 max., 3.0 max.
Return Loss	dB	22 typ., 22 typ.
Power Handling Continuous, Max.	W	600 at common port, 300 on each path
Input Power, PEP	W	3000
Rejection between bands	dB	50
3rd Order PIM	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; 4 ports in, 2 ports out
Shipping Weight	kg (lb)	3.5 (7.7)
Dimensions, H x W x D	mm (in)	172x 220 x 56 (6.7 x 8.7 x 2.1)
Shipping Dimensions, H x W x D	mm (in)	172x 220 x 56 (6.7 x 8.7 x 2.1)
Mounting		Wall Mounting: With 4 screws (maximum 6mm diameter) Pole Mounting: With included clamp set 40-110mm (1.57-4.33")





Diplexer Auto DC Sense

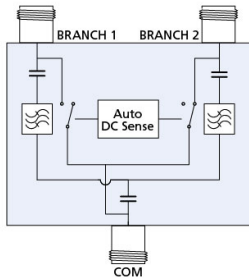
	Branch 1 380-960 MHz	Branch 2 1695-2700 MHz
Priority 1 (Highest)		X
Priority 2 (Lowest)	X	

In case of more than one port supplying DC/AISG signal:

- Higher Priority will automatically bypass to/from the COM port
- Lower Priority will not pass
- DC-Block Jumper can be used if DC Should not be passed per logic above

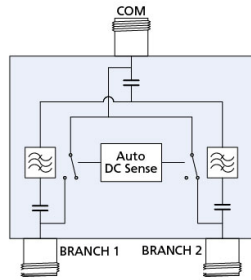
Diplexer Mode (Near Antenna)

- DC Blocks provide a DC open circuit, will not pass DC/AISG
- Antennas connected without a Bias-T provide a DC short circuit, will not pass DC/AISG
- To turn on port after it has been shut off due to short, reset unit by cycling the power



Standard Priority for Diplexer Mode

Combiner Mode (Near BTS)



Standard Priority for Combiner Mode

External Document Links

[RFS Diplexer Field Test Procedure - Click Here](#)

[Installation Instructions - Click Here](#)

Notes