PRODUCT DATASHEET

FDJ85020D7-S

RADIO FREQUENCY SYSTEMS
The Clear Choice®

ShareLite™ 555-806/824-960 MHz Twin Diplexer with Auto DC/AISG Sense, Dual configuration, 7/16 Connectors

The FDJ8 Series of diplexers are designed to enable feeder sharing between systems in the 555-806 MHz range and in the 824-960 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 reliabiltiy. Designed to withstand the most severe outdoor environments, it also features an IP67 class pretection 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 us with X-pol Antennas
- Auto DC Sense to prevent installation mistakes and eliminate teh need for DC stops
- 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		600MHz, LTE700, Cellular 800, GSM900	
Configuration		Dual indoor/outdoor	
ELECTRICAL SPECIFICATIONS			
Branch		1	2
Frequency Range	MHz	555-806	824-960
Impedance	Ohms	50.0	50.0
Frequency Band		600MHz, LTE700	Cellular 800, GSM900
Insertion Loss	dB	.20 typ.	.20 typ.
Group Delay Variation	ns	0.0	0.0
Group delay	ns	<7 typ., 40 max.	<9 typ., 35 max.
Rejection between bands	dB	50	50
PIM at Common Port	dBm (dBc)	-118 (-161) @2x43 typ.	-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		7-16-Female Long-neck; 4 ports in, 2 ports out
Weight	kg (lb)	5.3 (11.7)
Dimensions, H x W x D	mm (in)	191.3 x 172.3 x 157.5 (7.5 x 6.8 6.2)
Mounting		Wall Mounting: With 4 screws (maximum 6mm diameter) Pole Mounting: With included clamp set 40-110mm (1.57-4.33")

Document Links

Notes

External Link Reference

FDJ85020D7 SELECTION GUIDE:

Type	Model Number	No DC Pass	DC Pass High Band	DC Pass Low Band	Full DC Pass	DC Sense
Dual	FDJ85020D7-S					X
Dual	FDJ85020D7-1C				X	
Dual	FDJ85020D7-2C			X		
Dual	FDJ85020D7-3C		X			
Dual	FDJ85020D7-NC	X				

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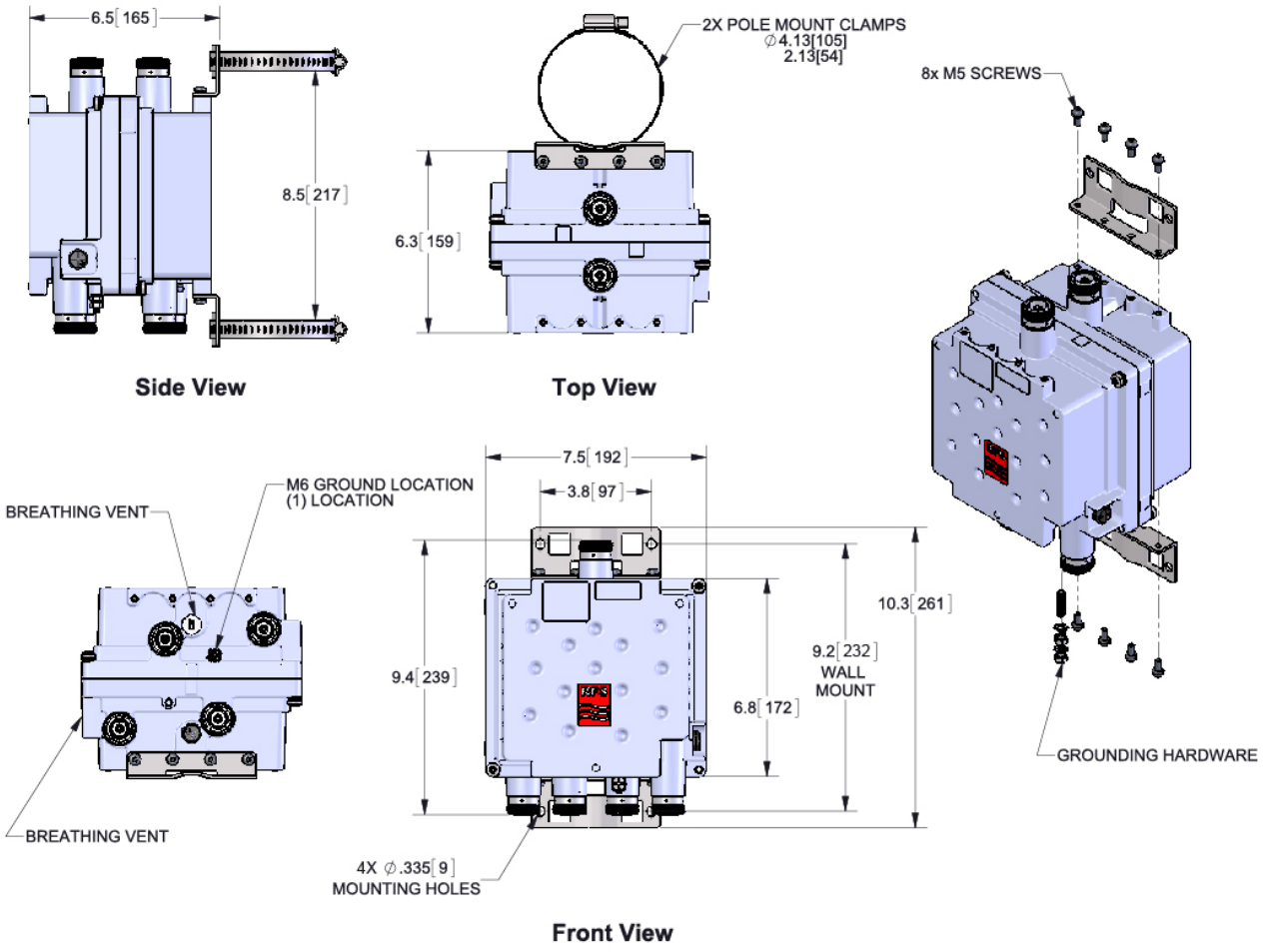

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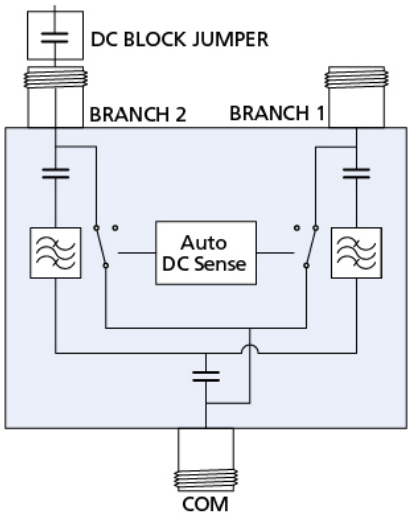
Diplexer Auto DC Sense

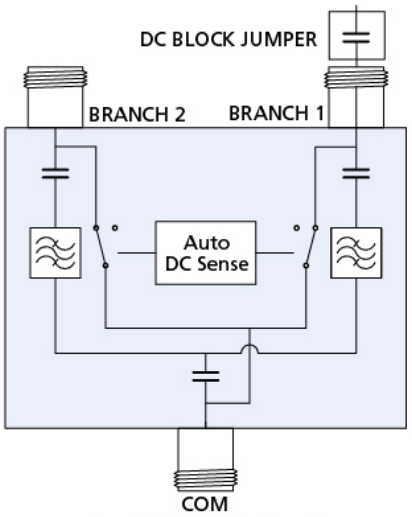
FDJ85020D7-S Models ONLY

Diplexer Mode (Near Antenna)

- DC/AISG pass on all ports if no short detected
- Antennas connected without a Bias-T provide a DC short circuit
- To turn on port after it has been shut off due to short, reset unit by cycling the power
- DC-Block Jumper must be used with this diplexer on 850MHz port as a default.



Standard Installation Method
(Pass DC on Branch 1)

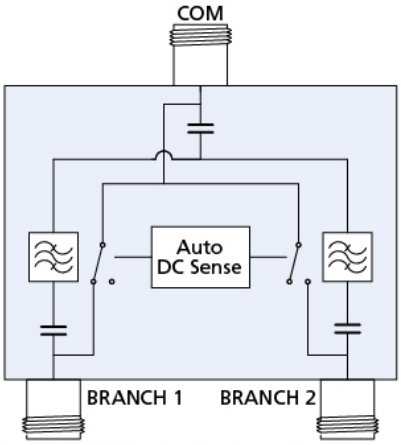


Installation Method
To Pass DC on Branch 2

Combiner Mode (Near BTS)	Port 1 555-806 MHz	Port 2 824-960 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 the COM port
- Lower Priority will not pass
- DC-Block Jumper can be used if DC Should not be passed per logic above



Standard Priority for Combiner Mode