

MI-581

DIPLEXER 700/800-900

The Kaelus MI-581 is a bi-directional Diplexer, designed to combine or split 699 - 862 MHz and 876 - 960 MHz bands. The MI-581 provides low insertion loss and high return loss with excellent passive inter-modulation performance in an extremely small and lightweight IP67 capable package



FEATURES

- Enables antenna & coax sharing for 699 - 862 MHz and 876 - 960 MHz bands systems.
- Compact & lightweight - perfect for Small Cell applications
- Low insertion loss & high return loss
- High passive IM performance
- Single and dual models available
- 7/16 (F) or 4.3-10 (F) connectors
- Hard Wired and DC Autosense versions available
- Provisions for wall or mast mounting

TECHNICAL SPECIFICATIONS

PORT NAME	700 MHz	800/900 MHz
Passband	699 - 862 MHz	876 - 960 MHz
Insertion loss	0.2 dB typical, 0.4 dB maximum	0.2 dB typical, 0.4 dB maximum
Return loss	>18 dB	>18 dB
Maximum input power	400 W (average)	
Intermodulation products	-160 dBc with 2 x 43 dBm TX Carrier	-160 dBc with 2 x 43 dBm TX Carrier
Rejection	50 dB minimum in 876 - 960 MHz	50 dB minimum in 699 - 862 MHz

ELECTRICAL

Impedance	50 Ω
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DC / AISG

For hardwired versions, DC/AISG can be fully connected (DC all) or a specific connection can be ordered (DC custom). For DC autosense versions, the DC/AISG path is automatically selected. In bottom of the tower applications (combiner mode), each RF channel port is sequentially checked for the presence of DC voltage. If more than one port has voltage, the port that has the highest (programmed) priority is passed to the common port. If a short circuit is detected on the common port DC/AISG is disabled. In top-of-tower applications (splitter mode), DC/AISG is passed to all ports that do not present a short circuit. If a short circuit is detected, the shorted RF port will be disabled for DC/AISG while other RF ports remain connected.

Insertion loss	1 dB max
Return loss	12 dB min
Input voltage range	8 - 30 V DC max 0.3 W
DC current rating	3 A continuous, Drop max 2.4 V
Compliance	3GPP TS 37.461

ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

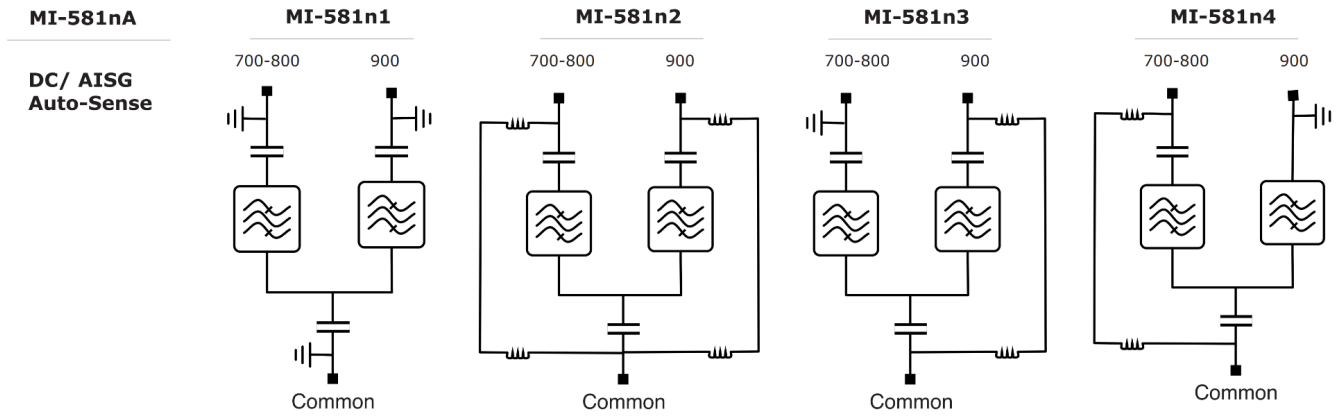
Temperature range	-40 °C to +65 °C -40 °F to +149 °F
Ingress protection	IP67
Lightning protection	5 kA maximum (8/20 us)
MTBF	> 1,000,000 Hours
Compliance	ETSI EN 300 019-1-4 class 4.1E, RoHS

MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	158 x 183 x 58 mm 6.22 x 7.20 x 2.28 in	158 x 183 x 108 mm 6.22 x 7.20 x 4.25 in
Volume	1.4 l	3.1 l
Weight	2.3 kg 5.0 lb	3.9 kg 8.6 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount	
Feature	Single Mount With Auto Sense	Dual Mount With Auto Sense
Dimensions H x D x W	158 x 183 x 69 mm 6.22 x 7.20 x 2.71 in	158 x 183 x 137 mm 6.22 x 7.20 x 5.39 in
Volume	2.0 l	4.0 l
Weight	2.8 kg 6.2 lb	4.9 kg 10.8 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount. Pole Diameter 40 - 140 mm	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-5810n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5811n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5813n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-5814n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / ASIG CONFIGURATION				
MI-581nA	Auto-sense			
MI-581n1	DC Block			
MI-581n2	DC TO ALL			
MI-581n3	DC TO 800/900			
MI-581n4	DC TO 700			
Auto-sense Priority				
MI-581nA.1	FPO to 700 and 800/900			
MI-581nA.2	XOR to 700 and 800/900			
MI-581nA.3	800/900 Priority 1 and 700 Priority 2			
MI-581nA.4	700 Priority 1 and 800/900 Priority 2			

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

