

MI-553

DIPLEXER 1800/2100

The Kaelus MI-553 is a bi-directional Diplexer, designed to combine or split 1800 MHz and 2100 MHz bands. The MI-553 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 1710 - 1880 MHz and 1920 - 2170 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	1800	2100
Passband	1710 - 1880 MHz	1920 - 2170 MHz
Insertion loss	< 0.2 dB typical	< 0.2 dB typical
Return loss	>18 dB	>18 dB
Maximum input power	250 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 1920 - 2170 MHz	50 dB minimum in 1710 - 1880 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.

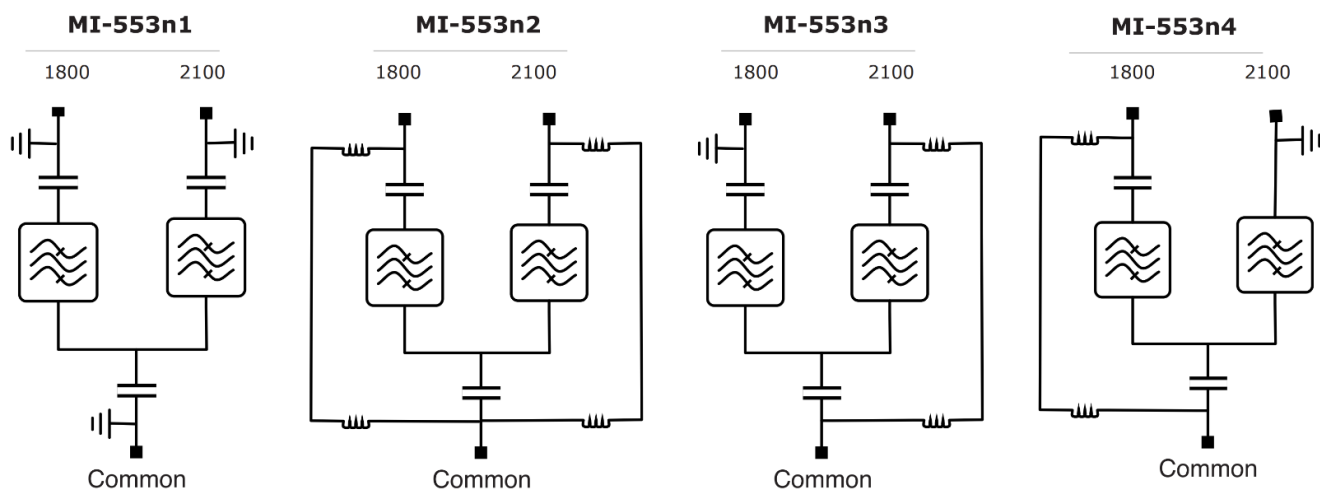
Temperature range	-40 °C to +60 °C -40 °F to +140 °F
Ingress protection	IP67
Lightning protection	5 kA maximum (8/20 us)
MTBF	> 1,000,000 Hours
Compliance	ETSI EN 300 019-1-4 class 4.1E, RoHS

MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	252 x 138 x 48.5 mm 9.92 x 5.43 x 1.91 in	252 x 138 x 89 mm 9.92 x 5.43 x 3.50 in
Volume	1.7 l	3.1 l
Weight	3 kg 6.61 lb	5.3 kg 11.68 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-5530n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5531n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5533n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-5534n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / ASIG CONFIGURATION				
MI-553nA	Auto-sense			
MI-553n1	DC Block			
MI-553n2	DC TO ALL			
MI-553n3	DC TO 2100			
MI-553n4	DC TO 1800			
Auto-sense Priority				
MI-553nA.1	FPO to 1800 and 2100			
MI-553nA.2	XOR to 1800 and 2100			
MI-553nA.3	2100 Priority 1 and 1800 Priority 2			
MI-553nA.4	1800 Priority 1 and 2100 Priority 2			

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

