

MI-552

DIPLEXER L-BAND/1800-2100

The Kaelus MI-552 is a bi-directional Diplexer, designed to combine or split 1400 - 1500 MHz and 1800 - 2100 MHz bands. The MI-552 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 1427 - 1517 MHz and 1710 - 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	1400-1500 MHZ	1800-2100 MHZ
Passband	1427 - 1517 MHz	1710 - 2170 MHz
Insertion loss	< 0.25 dB typical	< 0.25 dB typical
Return loss	> 18 dB	> 18 dB
Maximum input power	250 W (average)	
Intermodulation products	-145 dBc with 2 x 43 dBm TX Carrier	-160 dBc with 2 x 43 dBm TX Carrier
Rejection	50 dB minimum in 1710 - 2170 MHz	50 dB minimum in 1427 - 1517 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 orderd (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	118 x 140 x 61 mm 4.64 x 5.51 x 2.40 in	118 x 140 x 127mm 4.65 x 5.51 x 5 in
Volume	1.0 l	1.9 l
Weight	1.8 kg 3.97 lb	3.2 kg 7.05 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount (Supporter Pole Diameter: 40-140 mm)	
Feature	Single Mount with Auto-Sense	Dual Mount with Auto-sense
Dimensions H x D x W	118 x 140 x 72 mm 4.64 x 5.51 x 2.83 in	118 x 140 x 143 mm 4.65 x 5.51 x 5.62 in
Volume	1.2 l	2.4 l
Weight	1.9 l 4.19 lb	3.4 kg 7.49 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount (Supporter Pole Diameter: 40-140 mm)	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-5520n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5521n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5523n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-5524n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / AISG CONFIGURATION				
MI-552A	Auto-sense			
MI-552n1	DC Block			
MI-552n2	DC TO ALL			
MI-552n3	DC TO 1800-2100			
MI-552n4	DC TO 1400-1500			
Auto-sense Priority				
MI-552nA.1	FPO to 1400 - 1500 and 1800 - 2100			
MI-552nA.2	XOR to 1400 - 1500 and 1800 - 2100			
MI-552nA.3	1800-2100 Priority 1 and 1400 - 1500 Priority 2			
MI-552nA.4	1400 - 1500 Priority 1 and 1800 - 2100 Priority 2			

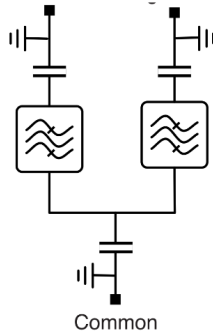
ELECTRICAL BLOCK DIAGRAM

MI-552nA

**DC/ AISG
Auto Sense**

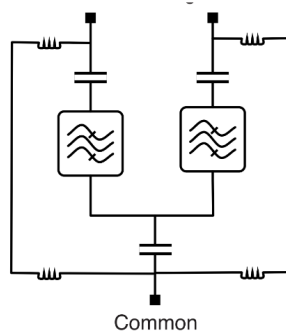
MI-552n1

L-band 1800-2100



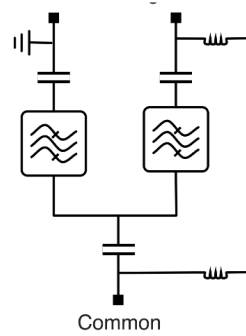
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L-band 1800-2100



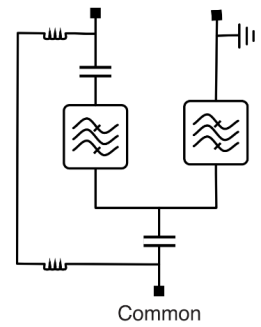
MI-552n3

L-band 1800-2100



MI-552n4

L-band 1800-2100



MECHANICAL BLOCK DIAGRAM

