

MI-512

TRIPLEXER 700-900/1800/2100

The Kaelus MI-512 is a bi-directional Triplexer, designed to combine or split 700-900/1800/2100 MHz. The MI-512 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 700-900/1800/2100 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

BAND NAME	700-900	1800	2100
Passband	698 - 960 MHz	1710 - 1860 MHz	1920 - 2170 MHz
Insertion loss	0.1 dB typical, 0.2 dB maximum	0.2 dB typical, 0.45 dB maximum	0.2 dB typical, 0.5 dB maximum
Return loss	> 18 dB maximum	> 18 dB maximum	> 18 dB maximum
Maximum input power	250 W		
Intermodulation products	-160 dBc at 2 x 43dBm TX Carrier		
Rejection	50 dB minimum in 1710 - 1880 MHz and 1920 - 2170 MHz	50 dB minimum in 698 - 960 and 1920 - 2170 MHz	50 dB minimum in 698 - 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.

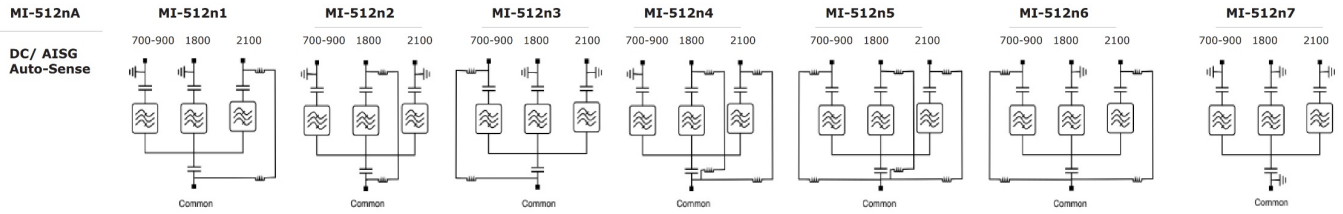
Temperature range	-40 $^{\circ}$ C to +65 $^{\circ}$ C -40 $^{\circ}$ F to +149 $^{\circ}$ F
Ingress protection	IP67
Lightning protection	5 kA maximum (8/20 us)
MTBF	> 1,000,000 Hours
Compliance	ETSI EN 300 019-1-4 class 4.1E, RoHS

MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	190 x 160 x 51 mm 7.48 x 6.3 x 2.0 in	190 x 160 x 94 mm 7.48 x 6.3 x 3.7 in
Volume	1.6 l	2.9 l
Weight	2.8 kg 6.17 lb	5.3 kg 11.68 lb
Finish	Painted, NCS 1502-R (Light Grey)	
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	190 x 160 x 66 mm 7.48 x 6.3 x 2.6 in	190 x 160 x 123 7.48 x 6.3 x 4.84 in
Volume	2.0 l	3.7 l
Weight	4 kg 8.82 lbs	7.4 kg 16.31 lb
Finish	Painted, NCS 1502-R (Light Grey)	
Mounting	Hose clamps or wall mount (Supporter pole Diameter: 40 - 140 mm)	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-5120n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5121n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5123n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-5124n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / AISG CONFIGURATION				
MI-512nA	Auto-sense			
MI-512n1	DC TO 2100			
MI-512n2	DC TO 1800			
MI-512n3	DC TO 700 - 900			
MI-512n4	DC TO 1800 and 2100			
MI-512n5	DC TO ALL			
MI-512n6	DC TO 700 - 900 and 2100			
MI-512n7	DC Block			
Auto-sense Priority				
MI-512nA.1	FPO 700 - 900, 1800 and 2100			
MI-512nA.2	XOR to 700 - 900, 1800 and 2100			
MI-512nA.3	700 - 900 Priority 1, 1800 Priority 2 and 2100 Priority 3			
MI-512nA.4	2100 Priority 1, 1800 Priority 2 and 700 - 900 Priority 3			
MI-512nA.5	1800 Priority 1, 2100 Priority 2 and 700 - 900 Priority 3			
MI-512nA.6	1800 Priority 1, 700 - 900 Priority 2 and 2100 Priority 3			
MI-512nA.7	700 - 900 Priority 1, 2100 Priority 2 and 1800 Priority 3			
MI-512nA.8	2100 Priority 1, 700 - 900 Priority 2 and 1800 Priority 3			

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

