

MI-514

DIPLEXER 700/850-900

The Kaelus MI-514 is a bi-directional Diplexer, designed to combine or split 698 - 806 MHz and 824 - 960 MHz bands. The MI-514 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 698 - 806 MHz and 824 - 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	850/900 MHZ
Passband	698 - 806 MHz	824 - 960 MHz
Insertion loss	< 0.35 dB	< 0.35 dB
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 824 - 960 MHz	50 dB minimum in 698 - 806 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	158 x 174 x 62 mm 6.22 x 6.85 x 2.44 in	158 x 174 x 132 mm 6.22 x 6.85 x 5.19 in
Volume	1.7 l	3.2 l
Weight	2.6 kg 5.73 lb	4.3 kg 9.47 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount	

ORDERING INFORMATION

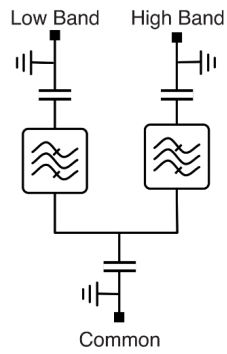
PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-5140n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5141n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-5143n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-5144n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / ASIG CONFIGURATION				
MI-514A	Auto-sense			
MI-514n1	DC Block			
MI-514n2	DC TO ALL			
MI-514n3	DC TO 850/900			
MI-514n4	DC TO 700			
Auto-sense Priority				
MI-514nA.1	FPO to 700 and 850/900			
MI-514nA.2	XOR to 700 and 850/900			
MI-514nA.3	850/900 Priority 1 and 700 Priority 2			
MI-514nA.4	700 Priority 1 and 850/900 Priority 2			

ELECTRICAL BLOCK DIAGRAM

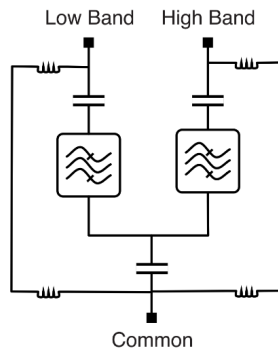
MI-514nA

**DC/ AISG
Auto-Sense**

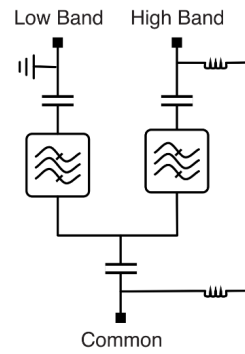
MI-514n1



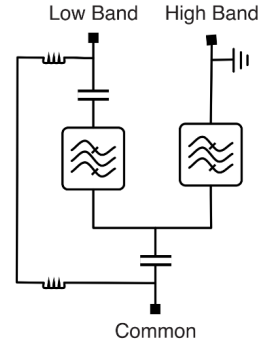
MI-514n2



MI-514n3



MI-514n4



MECHANICAL BLOCK DIAGRAM

