

MI-299

DIPLEXER 1800/2100-2300

The Kaelus MI-299 is a bi-directional Diplexer, designed to combine or split 1800 and 2100-2300 MHz bands. The MI-299 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 1800 and 2100-2300 MHz bands systems
- Compact & lightweight - perfect for Small Cell applications
- Low insertion loss & high return loss
- Low passive IM performance
- Single twin and dual twin models available
- 7/16 (F) or 4.3-10 (F) connectors
- Hard Wired and DC Autosense versions available
- Provisions for wall or mast mounting

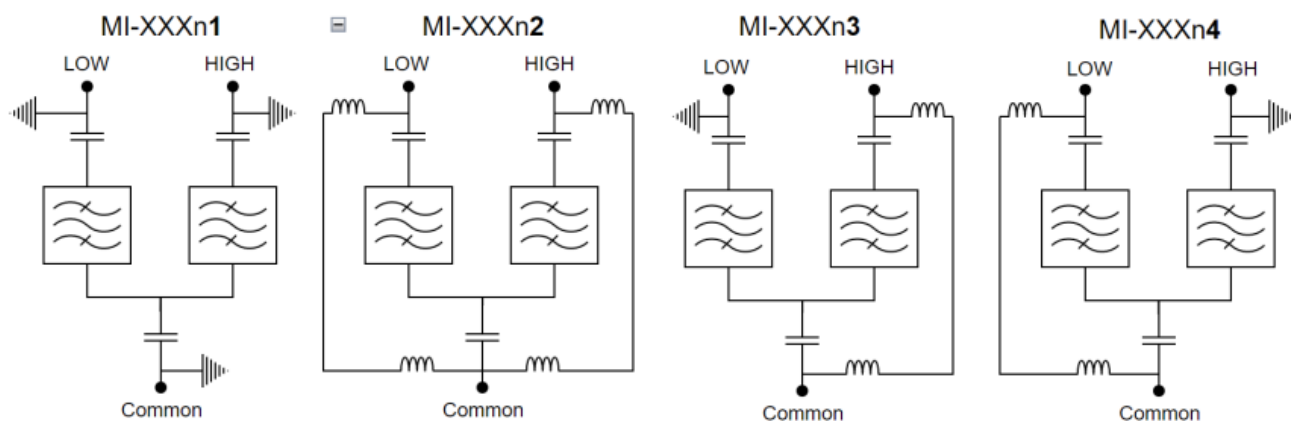
TECHNICAL SPECIFICATIONS

PORT NAME	1800(LOW BAND)	2100-2300(HIGH BAND)
Passband	1710 - 1880 MHz	1920 - 2170 MHz & 2300-2400 MHz
Insertion loss	0.15dB typical, 0.2dB maximum	1920-1980MHz 0.25dB typical 2110-2170 MHz & 2300-2400 MHz 0.15dB typical
Return loss	20dB typical, 18dB minimum	
Maximum input power	250W (average), 2kW Peak	250W (average), 2kW Peak
Intermodulation products	-153dBc with 2 x 20W carriers	
Rejection	50dB minimum in High Band	50dB minimum in Low Band
ELECTRICAL		
Impedance	50Ohms	
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.		
DC current rating	3A	
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	3kA maximum (10/350us),10kA maximum (8/20us)	
Compliance	ETSI 300 019-1-4 Class 4.1E (OPERATIONAL) ETSI 300 019-1-1 Class 1.2 (STORAGE)	
MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	163 x 50 x 185mm 6.42 x 1.97 x 7.28in	163 x 92 x 185mm 6.42 x 3.62 x 7.28in
Weight	2.6kg 5.7lb	
Finish	Painted, NCS 1502-R	
Mounting	Pole/wall bracket supplied with two metal clamps for 45-178 mm diameter poles	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-2990n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG tabel
MI-2991n	Daul Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG tabel
MI-2993n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG tabel
MI-2994n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG tabel
DC / AISG CONFIGURATION				
MI-299nA	Auto-Sense			
MI-299n1	NO DC Path			
MI-299n2	DC to Low and High Band			
MI-299n3	DC to High Band			
MI-299n4	DC to Low Band			
Auto-Sense Priority				
MI-299nA.1	FPO to Low and High Band			
MI-299nA.2	XOR to Low and High Band			
MI-299nA.3	High Band Priority 1 and Low Band Priority 2			
MI-299nA.4	Low Band Priority 1 and High Band Priority 2			

ELECTRICAL BLOCK DIAGRAM



Note: single mount shown

MECHANICAL BLOCK DIAGRAM

