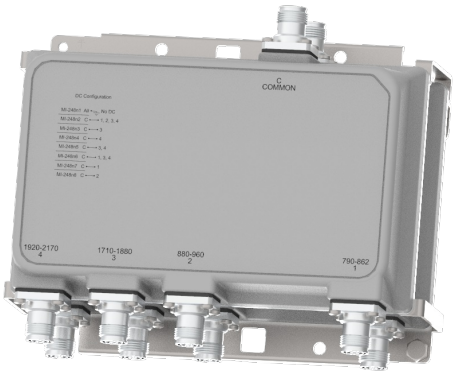
MI-248

QUADRUPLEXER 800/900/1800/2100

The Kaelus MI-248 is a bi-directional Quadruplexer, designed to combine or split 800/900/1800/2100 MHz. The MI-248 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 800/900/1800/2100 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	800	900	1800	2100
Passband	790 - 862 MHz	880 - 960 MHz	1710 - 1880 MHz	1920 - 2170 MHz
Insertion loss	0.2 dB typical, 0.5 dB maximum	0.2 dB typical, 0.5 dB maximum	0.2 dB typical, 0.4 dB maximum	0.2 dB typical, 0.5 dB maximum
Return loss	>18 dB	>18 dB	>18 dB	>18 dB
Intermodulation products	-160 dBc at 2 x 43dBm TX Carrier	-160 dBc at 2 x 43dBm TX Carrier	-160 dBc at 2 x 43dBm TX Carrier	-168 dBc at 2 x 43dBm TX Carrier
Rejection	50 dB minimum in 880 - 2170 MHz	50 dB minimum in 790 - 862 and 1710 - 1710 - 2170 MHz	50 dB minimum in 790 - 960 and 1920 - 2170 MHz	50 dB minimum in 790 - 1880 MHz

ELECTRICAL	
Impedance	50 Ω

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 ºC to +65 ºC | -40 ºF to +149 ºF
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

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MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	264 x 160 x 58 mm I 10.39 x 6.3 x 2.28 in	264 x 160 x 124 mm I 10.39 x 6.3 x 4.86 in
Volume	2.4 l	5.2 l
Weight	4.5 kg I 9.92 lb	10.4 kg I 22 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-2480n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-2481n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-2483n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-2484n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / ASIG CONFIGURATION				
MI-248nA	Auto-sense			
MI-248n1	DC block			
MI-248n2	DC TO All			
MI-248n3	DC TO 1800			
MI-248n4	DC TO 2100			
MI-248n5	DC TO 1800 and 2100			
MI-248n6	DC TO 800, 1800 and 2100			
MI-248n7	DC TO 800 and 900			
Auto-sense Priority				
MI-248nA.1	FPO TO 800, 900, 1800 and 2100			
MI-248nA.2	XOR TO 800, 900, 1800 and 2100			
MI-248nA.3	2600 priority 1, 1800 - 2100 priority 2, 900 priority 3 and 800 priority 4			
MI-248nA.4	800 Priority 1, 900 Priority 2 and 1800 - 2100 Priority 3 and 2600 priority 4			

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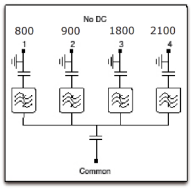
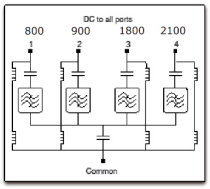
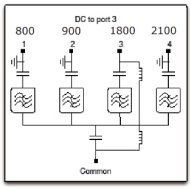
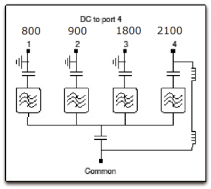
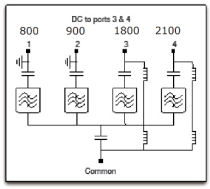
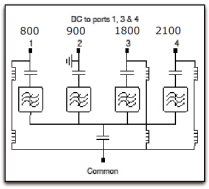
ELECTRICAL BLOCK DIAGRAM

MI-248nA	MI-248n1	MI-248n2	MI-248n3	MI-248n4	MI-248n5	MI-248n6
DC/ AISG Auto-Sense						

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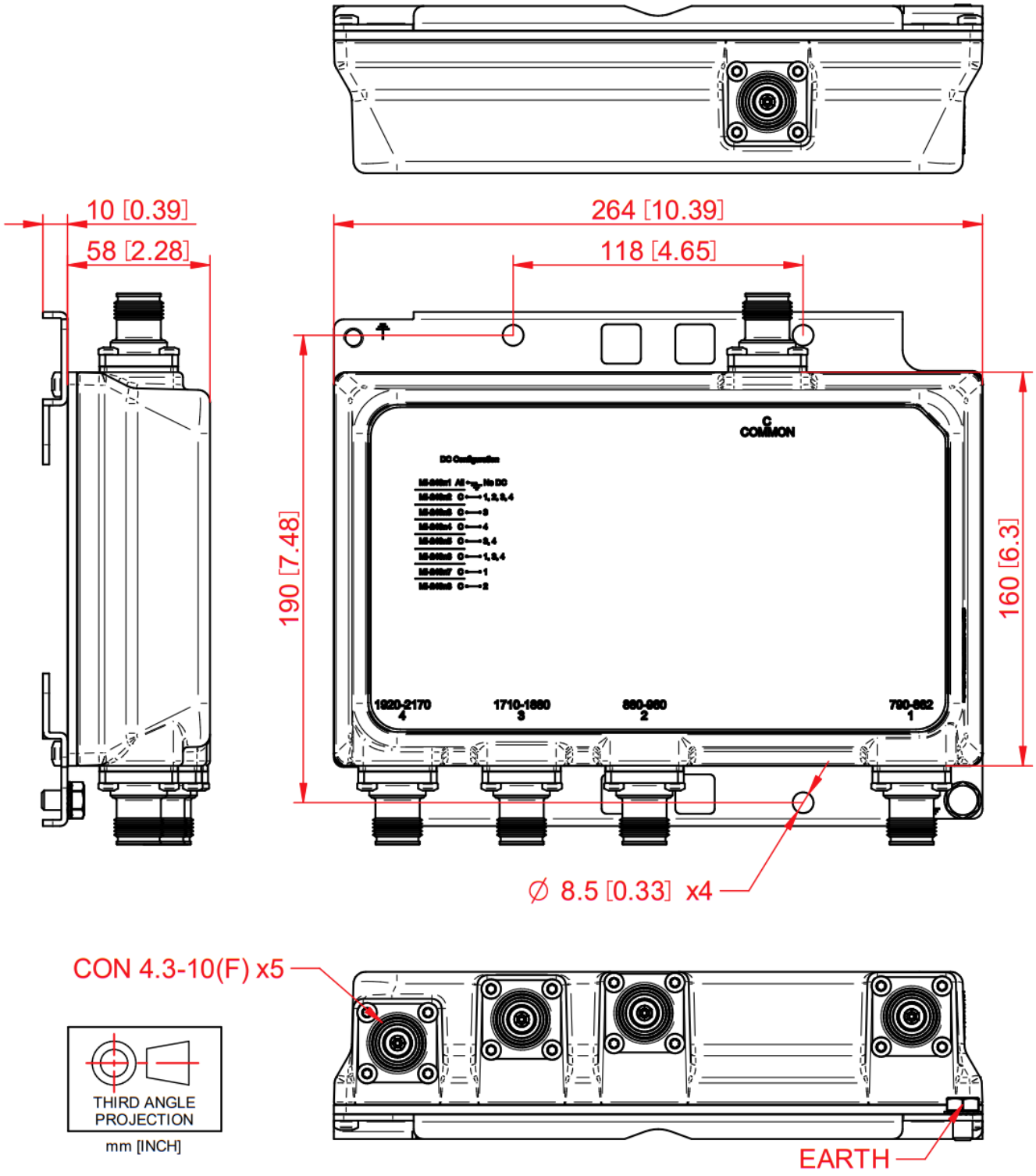
MECHANICAL BLOCK DIAGRAM



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