

MI-241

DIPLEXER 1800-2100/2300-2400 MHZ

The Kaelus MI-241 is a bi-directional Diplexer, designed to combine or split 1800 - 2100 and 2300-2400 MHz. The MI-241 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 - 2100 and 2300-2400 MHz bands system
- 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 - 2100 MHZ	2300-2400 MHZ
Passband	1710-2170 MHz	2300-2400 MHz
Insertion loss	0.15 dB typical, 0.2 db maximum	0.15 dB typical, 0.2 db maximum
Return loss	20 dB typical, 18 dB minimum	
Maximum input power	250 W	
Intermodulation products	-159 dBc with 2 x 43 dBm TX Carrier	
Rejection	50 dB minimum in 2300-2400 MHz	50 dB minimum in 1710-2170 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 18 dB min
Input voltage range	8 - 30 V DC max 0.3 W
DC current rating	2 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	3 kA 10/350 us, 10 kA 8/20 us
MTBF	>1.000.000
Compliance	ETSI EN 300 019-1-4 class 4.1E, RoHS

MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	126 x110 x 48 mm 4.96 x 4.33 x 2.05 in	126 x 110 x 90 mm 4.96 x 4.33 x 3.78 in
Volume	0.7 l	1.4 l
Weight	1.8 kg/1.4kg 3.97 lb/3.09 lb	3.6 kg/3.0 kg 7.94 lb/6.61 lb
Finish	Painted, NCS 1502-R	
Mounting	Hose clamps or wall mount. Supporter pole diameter: 40-140mm	

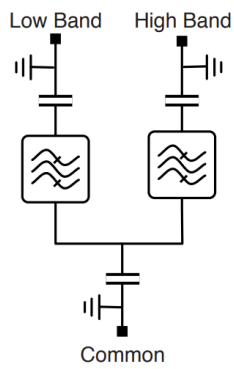
ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-2410n	Single Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-2411n	Dual Mount	BASE MODEL	7/16 (F)	Refer to DC /AISG table
MI-2413n	Single Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
MI-2414n	Dual Mount	BASE MODEL	4.3-10 (F)	Refer to DC /AISG table
DC / ASIG CONFIGURATION				
MI-241nA	Auto-sense			
MI-241n1	DC Block			
MI-241n2	DC to all			
MI-241n3	DC to 2300			
MI-241n4	DC to 1800 - 2100			
Auto-sense Priority				
MI-241A.1	FPO to 1800 - 2100 and 2300 - 2400			
MI-241nA.2	XOR to 1800 - 2100 and 2300 - 2400			
MI-241nA.3	2300 - 2400 Priority 1 and 1800 - 2100 prority 2			
MI-241nA.4	1800 - 2100 Priority 1 and 2300 - 2400 Priority 2			

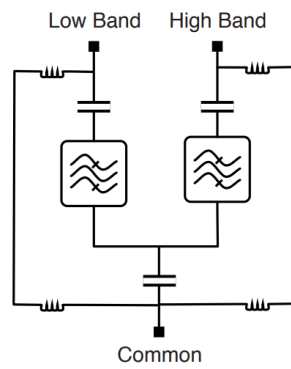
ELECTRICAL BLOCK DIAGRAM

MI-241nA

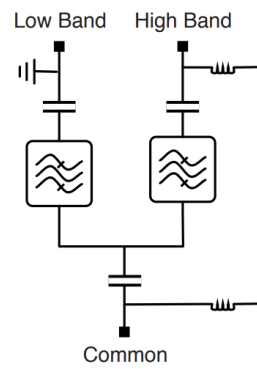
**DC/ AISG
Auto-Sense**



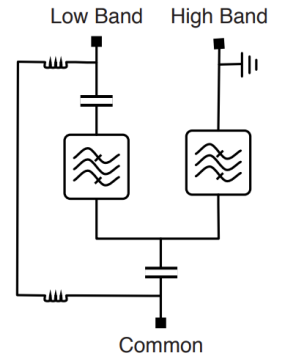
MI-241n1



MI-241n2



MI-241n3



MI-241n4

MECHANICAL BLOCK DIAGRAM

