

MI-541

DIPLEXER 1695-1780, 2110-2360/1850-1995

The Kaelus MI-541 is a bi-directional Diplexer, designed to combine or split AWS, WCS and PCS bands. The MI-541 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 AWS, WCS and PCS bands systems.
- Compact & lightweight - perfect for Small Cell applications
- Low insertion loss & high return loss
- High passive IM performance
- Single twin and dual twin models available
- 4.3-10 (F) connectors
- Provisions for wall or mast mounting



TECHNICAL SPECIFICATIONS

PORT NAME	AWS/WCS	PCS
Passband	1695 - 1780 MHz and 2110 - 2360 MHz	1850 - 1995 MHz
Insertion loss	< 0.2 dB typical < 0.3 dB maximum	< 0.2 dB typical < 0.3 dB maximum
Return loss	>20 dB	>20 dB
Maximum input power	100 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 1850 - 1995 MHz	50 dB minimum in 1695 - 1780 MHz, 2110 - 2360 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.

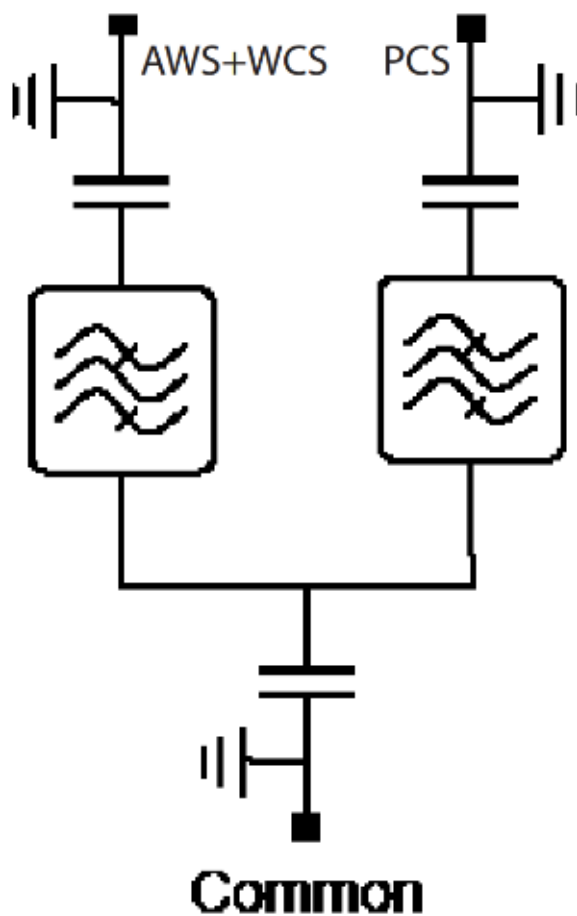
Temperature range	-40 °C to +65 °C -40 °F to +149 °F
Ingress protection	IP67
Lightning protection	5 kA maximum (8/20 us)
MTBF	> 1,000,000 Hours
Compliance	ETSI EN 300 019-1-4 class 4.1E, RoHS

MECHANICAL		
Feature	Single Mount	Dual Mount
Dimensions H x D x W	210 x 107 x 42 mm 8.26 x 4.21 x 1.65 in	210 x 107 x 76 mm 8.26 x 4.21 x 2.99 in
Volume	0.9 l	1.7 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, Supporter Pole Diameter: 40-140 mm	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
MI-54111	Single Mount	BASE MODEL	4.3-10 (F)	DC BLOCK
MI-54131	Dual Mount	BASE MODEL	4.3-10 (F)	DC BLOCK

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

