

QBC0002F3V51-1

QUADRUPLER 700/850/1900/AWS

Designed to combine 700, 850, 1900 and AWS technologies, the Kaelus QBC0002 provides a low loss combiner with excellent insertion loss and passive inter-modulation performance. The Kaelus QBC0002 saves significant capital and operational expenses by limiting feeder runs and components needed on the tower. Available in an outdoor package the QBC0002 has the following features:

FEATURES

- Minimize capital expenditure with minimal feeders and antennas
- Enables the sharing of antennas by 700, 850, 1900 and AWS networks
- Multiple DC bypass/AISG configurations field settable
- Offers low insertion loss and high isolation and low passive IM performance
- AWS 3 and 4 ready
- Wall or mast mounting



TECHNICAL SPECIFICATIONS

RF PERFORMANCE				
BAND NAME	700	850	1900	AWS
Passband	698 - 798MHz	824 - 894MHz	1850 - 1990MHz	1695 - 1780MHz / 2110 - 2200MHz
Insertion loss	0.25dB typical	0.25dB typical	0.25dB typical	0.3dB typical
Maximum input power	150W (average) / 1.5kW (PEP)	500W (average) / 5kW (PEP)	250W (average) / 2.5kW (PEP)	150W (average) / 1.5kW (PEP)
Rejection in 700	N/A	50dB minimum, 59dB typical (698 - 793 MHz) 40dBmin, 45dB typical (793 - 798 MHz)	75dB minimum, 80dB typical	75dB minimum, 80dB typical
Rejection in 850	45dB minimum, 50dB typical (824-849) 50dB minimum (849-894)	N/A	75dB minimum, 80dB typical	75dB minimum, 80dB typical
Rejection in 1900	78dB minimum, 85dB typical	65dB minimum, 75dB typical	N/A	45dB minimum, 50dB typical 1850 - 1910MHz 50dB minimum, 55dB typical 1930 - 1990MHz
Rejection in AWS	70dB minimum, 75dB typical @ 1695-1780MHz 55dB minimum, 65dB typical @ 2110-2200MHz	50dB minimum, 60dB typical	50dB minimum, 58dB typical	N/A

ELECTRICAL	
Impedance	50Ohms
Return loss	22dB minimum, 24dB typical
Intermodulation products	-153dBc typical / -150dBc maximum all ports with 2 x 20W carriers
Phase linearity over any 10MHz	10° maximum
Group delay variation over any 10MHz	15ns maximum

DC / AISG

A field selectable DC/AISG path is achieved via mechanical links on a IEC60130-9, 8-pin female connector (see electrical block diagram). It is Kaelus's recommendation that due to AISG link budget reasons that a maximum of 2 DC/AISG paths are activated simultaneously without active repeating of the AISG signal

Passband	0 - 3MHz
Insertion loss, single DC/AISG pass	1dB maximum
Return loss, single DC/AISG pass	12dB minimum
Insertion loss, two DC/AISG pass	4.5dB typical
Return loss, two DC/AISG pass	9dB typical
Input voltage range	± 31V
DC current rating	2A continuous, 4A peak

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	IEC61000-4-5, RF: ±5kA maximum (8/20us)
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1, RoHS

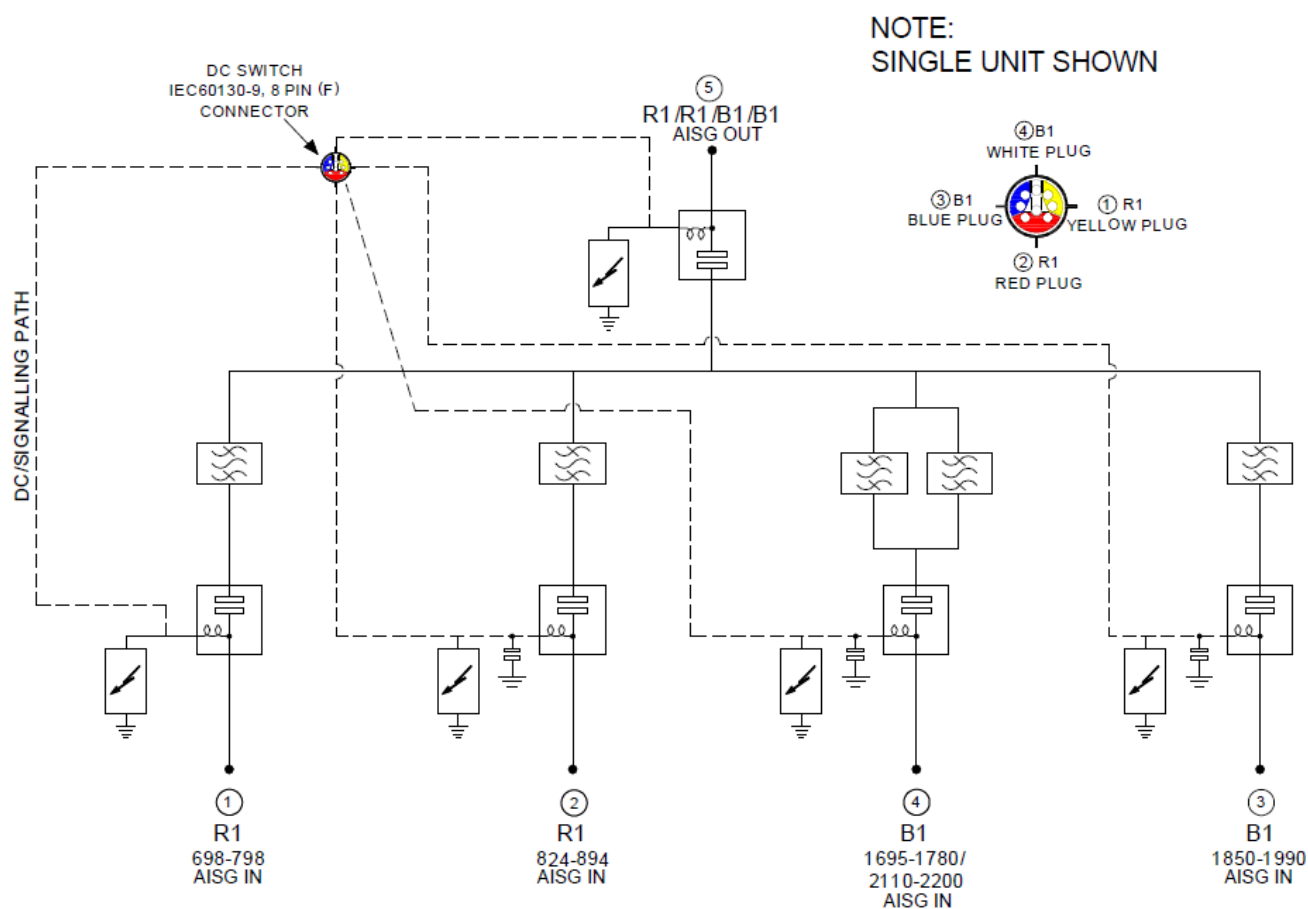
MECHANICAL

Dimensions H x D x W (single unit)	246 x 223 x 90mm 9.7 x 8.7 x 3.5in
Dimensions H x D x W (twin unit)	246 x 223 x 208mm 9.7 x 8.7 x 8.2in
Weight	7 kg 15.4lb (single unit) 14 kg 30.8lb (twin unit)
Finish	Painted, light grey (RAL7035)
Connectors	DIN 7-16 (F) x 5 long neck
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
QBC0002F3V51-1	SINGLE 1 in / 4 out	DC SWITCH	7/16 (F)	FIELD CONFIGURABLE
QBC0002F3V51-2	TWIN 2 in / 8 out	DC SWITCH	7/16 (F)	FIELD CONFIGURABLE
QBC0002F3V51-6R	RACK 6 in / 24 out	DC SWITCH	7/16 (F)	FIELD CONFIGURABLE

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

