

TBC0042F1V51-1

TRIPLEXER 700/850/1900-AWS-WCS

Designed to combine 700, 850, and 1900 / AWS / WCS technologies, the Kaelus TBC0042 saves significant capital and operational expenses by limiting feeder runs, and components needed on the tower. Available in an outdoor package the TBC0042 has the following features:

FEATURES

- Combines 700, 850 and 1900 / AWS / WCS bands
- Very low insertion loss
- Designed for low passive intermodulation
- DC/AISG bypass field settable
- Wall or pole mounting
- AWS 3 & 4 ready.



TECHNICAL SPECIFICATIONS

PORT NAME	700 BAND	850 BAND	AWS/1900/WCS BAND
Passband	698 - 798MHz	824 - 894MHz	1695 - 2690MHz
Insertion loss	0.25dB typical	0.25dB typical	0.25dB typical
Maximum input power	300W (average) / 3kW (PEP)	500W (average) / 5kW (PEP)	150W (average) / 1.5kW (PEP)
Rejection in 700	N/A	35dB typical @793-798MHz, 40dB typical @698-793MHz	50dB typical
Rejection in 850	35dB typical @824-849MHz, 45dB typical @849-894MHz	N/A	50dB typical
Rejection in 1900/AWS/WCS	50dB typical	50dB typical	N/A

ELECTRICAL

Impedance	50Ohms
Return loss	21dB minimum, 24dB typical
Intermodulation products	-153dBc typical all ports with 2 x 20W carriers
Phase linearity variation over any 10MHz	< 10°
Group delay variation over any 10MHz	< 20ns

DC / AISG

A field selectable DC/AISG path is achieved via mechanical links on a IEC60130-9, 8-pin female connector (see mechanical 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
Compliance	AISG 1.1/2.0

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
Altitude	3,000m 10,000ft maximum
Lightning protection	IEC61312-1, RF: ±5kA maximum (8/20us)
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1, RoHS

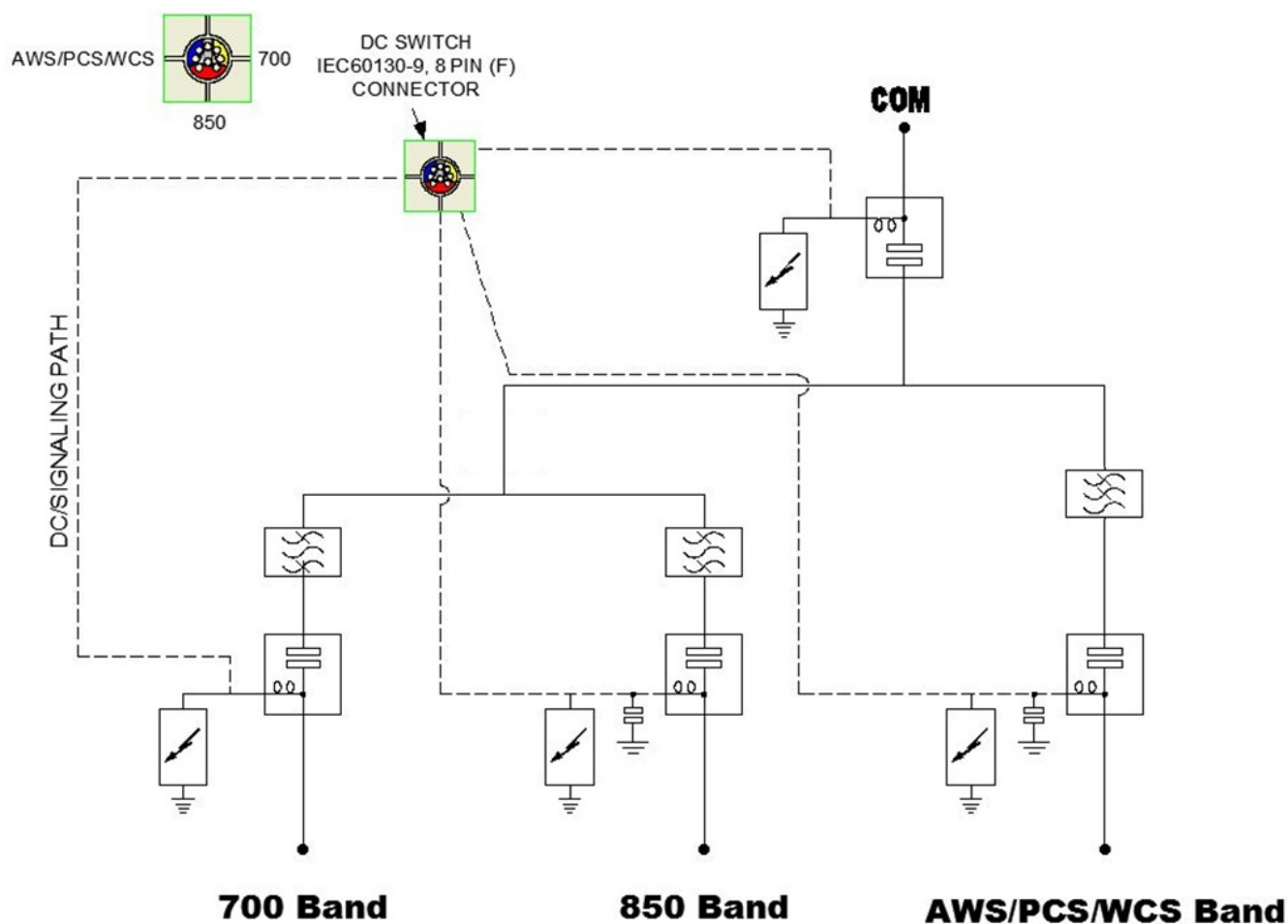
MECHANICAL	
Dimensions H x D x W (single unit)	208 x 175 x 79mm 8.19 x 6.89 x 3.11in Excluding brackets & connectors
Dimensions H x D x W (twin unit)	208 x 175 x 169mm 8.19 x 6.89 x 6.65in Excluding brackets & connectors
Weight	5kg 11.02lbs (single unit) 10.5kg 23.15lbs (twin unit)
Finish	Painted, light grey (RAL7035)
Connectors	DIN 4.3-10 (F) x 4 long neck (single unit) DIN 4.3-10 (F) x 8 long neck (twin unit)
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
TBC0042F1V51-1	SINGLE 1 in / 3 out	DC SWITCH	4.3-10 (F)	FIELD CONFIGURABLE
TBC0042F1V51-2	TWIN 2 in / 6 out	DC SWITCH	4.3-10 (F)	FIELD CONFIGURABLE

ELECTRICAL BLOCK DIAGRAM

NOTE: SINGLE UNIT SHOWN.



MECHANICAL BLOCK DIAGRAM

NOTE: SINGLE UNIT SHOWN.

