

## Twin Quadplexer, 617-894/PCS/AWS/WCS, DC Sense, 4.3-10

- BTS-to-feeder and feeder-to-antenna application
- Automatic dc switching with dc sense
- Convertible mounting brackets
- New 4.3-10 connectors for improved PIM performance and size reduction
- DC Load Sense in Feeder-to-Antenna applications

## Product Classification

**Product Type** Quadplexer

## General Specifications

**Color** Gray

**Common Port Label** Common

**Modularity** 2-Twin

**RF Connector Interface** 4.3-10 Female

**RF Connector Interface Body Style** Long neck

## Dimensions

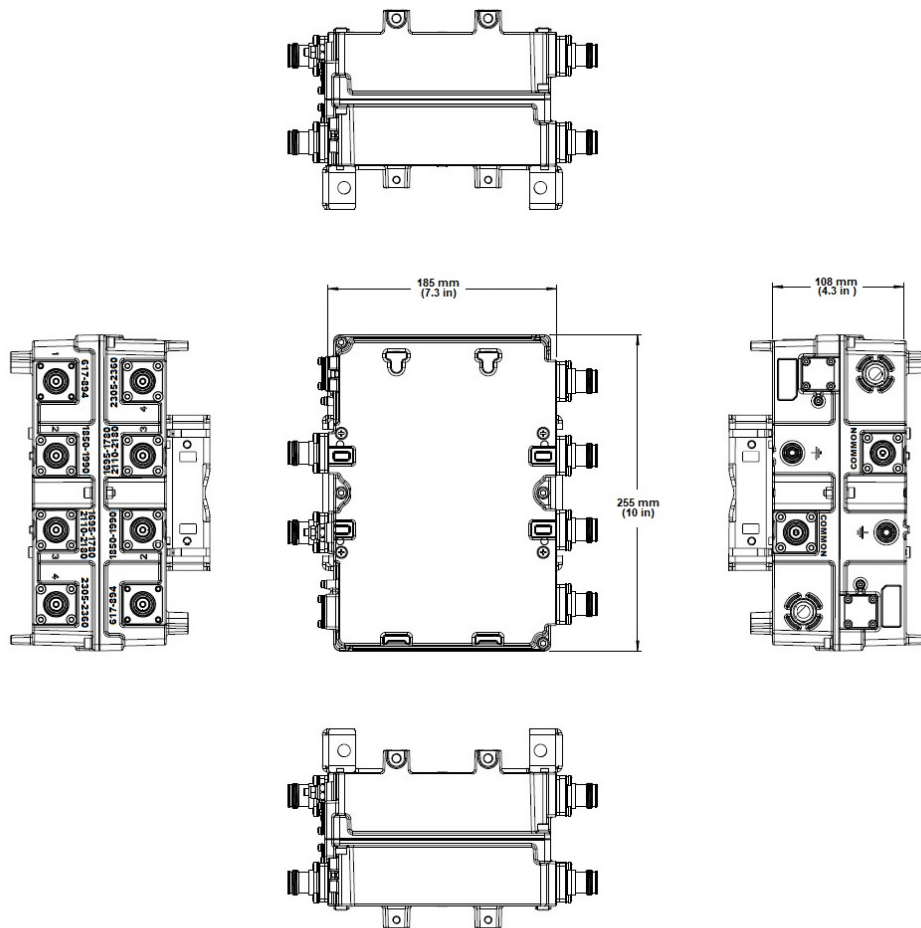
**Height** 185 mm | 7.283 in

**Width** 255 mm | 10.039 in

**Depth** 108 mm | 4.252 in

**Ground Screw Diameter** 6 mm | 0.236 in

## Outline Drawing



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>License Band, Band Pass</b>	APT 700   AWS 1700   CEL 850   LMR 750   PCS 1900   USA 600   USA 700   USA 750   WCS 2300

## Electrical Specifications, dc Power/Alarm

<b>dc/AISG Pass-through Method</b>	Auto sensing
<b>dc/AISG Pass-through Path</b>	See logic table
<b>Lightning Surge Current</b>	10 kA
<b>Lightning Surge Current Waveform</b>	8/20 waveform
<b>Operating Current at Voltage</b>	15 mA @ 12 V   15 mA @ 24 V
<b>Voltage</b>	7–30 Vdc

# CQX6192123T-DS-43 | E12F23P05

## Electrical Specifications, AISG

<b>AISG Carrier</b>	2176 KHz ± 100 ppm
<b>Insertion Loss, maximum</b>	1 dB
<b>Return Loss, minimum</b>	15 dB

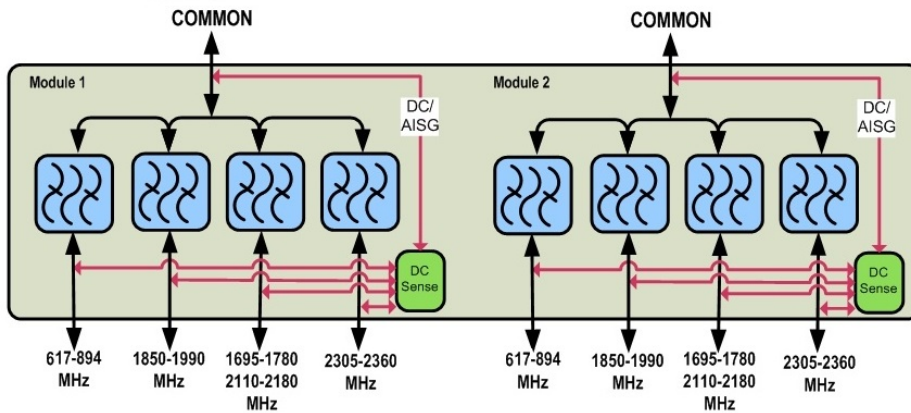
## Electrical Specifications

<b>Sub-module</b>	<b>1   2</b>	<b>1   2</b>	<b>1   2</b>	<b>1   2</b>
<b>Branch</b>	1	2	3	4
<b>Port Designation</b>	617-894MHz	1850-1990	AWS	WCS
<b>License Band</b>	APT 700, Band Pass CEL 850, Band Pass LMR 750, Band Pass USA 700, Band Pass USA 750, Band Pass USA 600, Band Pass	PCS 1900, Band Pass	AWS 1700, Band Pass	WCS 2300, Band Pass

## Electrical Specifications, Band Pass

<b>Frequency Range, MHz</b>	<b>617-894</b>	<b>1850-1990</b>	<b>1695-1780 2110-2180</b>	<b>2305-2360</b>
<b>Insertion Loss, typical, dB</b>	0.3	0.3	0.3	0.3
<b>Total Group Delay, maximum, ns</b>	5	30	25	25
<b>Return Loss, minimum, dB</b>	21	21	21	21
<b>Isolation, minimum, dB</b>	50	50	50	50
<b>Input Power, RMS, maximum, W</b>	200	200	200	200
<b>Input Power, PEP, maximum, W</b>	2000	2000	2000	2000
<b>3rd Order PIM, minimum, dBc</b>	-155	-155	-155	
<b>3rd Order PIM Test Method</b>	2 x 20 W CW tones	2 x 20 W CW tones	1 x 20 W AWS CW tone 1 x 20 W PCS CW tone	
<b>Higher Order PIM, minimum, dBc</b>				-155
<b>Higher Order PIM Test Method</b>				2 x 20 W CW tones

## Block Diagram



## Logic Table

Combining Mode Operation (Bottom)					DC/AISG Path Selection	DC/AISG PORT Priority
PORT 1 617-894	PORT 2 1850-1990	PORT 3 1695-1780/2110-2180	PORT 4 2305-2360	COMMON		
RF Ports DC Voltage Input						
Any*	Any*	7 ≤ V ≤ 30	Any*	<7	617-894 MHz "OFF" 1850-1990 MHz "OFF" 1695-1780/2110-2180 MHz to COMMON "ON" 2305-2360 MHz "OFF"	PORT 3 [Highest] PORT 1 PORT 2 PORT 4 [Lowest]
7 ≤ V ≤ 30	Any*	<7	Any*	<7	617-894 MHz to COMMON "ON" 1850-1990 MHz "OFF" 1695-1780/2110-2180 MHz "OFF" 2305-2360 MHz "OFF"	
<7	7 ≤ V ≤ 30	<7	Any*	<7	617-894 MHz "OFF" 1850-1990 MHz "ON" 1695-1780/2110-2180 MHz "OFF" 2305-2360 MHz to COMMON "OFF"	
<7	<7	<7	7 ≤ V ≤ 30	<7	617-894 MHz "OFF" 1850-1990 MHz to COMMON "OFF" 1695-1780/2110-2180 MHz "OFF" 2305-2360 MHz "ON"	
<7	<7	<7	<7	<7	ALL PORTS OFF	

\* Any DC voltage applied in the ON (7-30V) or OFF (<7V) ranges  
 Note: When two or more DC/AISG signals are available, port with higher priority is bypassed to common

Splitting Mode Operation (Tower Top)					DC/AISG Path Selection	
PORT 1 617-894	PORT 2 1850-1990	PORT 3 1695-1780/2110-2180	PORT 4 2305-2360	COMMON		
RF Ports Impedance DC (Load Sense)						
Short	Short	Short	Short	7 ≤ V ≤ 30	ALL PORTS OFF	
Open/ Load	Open/ Load	Open/ Load	Open/ Load	7 ≤ V ≤ 30	ALL PORTS ON	
One or more port(s) are Open/ Load					7 ≤ V ≤ 30	DC/AISG will be passed to ALL Open/Load port(s)

Note: In this mode DC/AISG will be passed to all detected ports and blocked at shorted ones

## Mechanical Specifications

**Wind Loading @ Velocity, frontal** 64.0 N @ 150 km/h (14.4 lbf @ 150 km/h)

**Wind Loading @ Velocity, lateral** 17.0 N @ 150 km/h (3.8 lbf @ 150 km/h)

## Environmental Specifications

**Operating Temperature** -40 °C to +65 °C (-40 °F to +149 °F)

**Corrosion Test Method** IEC 60068-2-11, 30 days

**Ingress Protection Test Method** IEC 60529:2001, IP67

# CQX6192123T-DS-43 | E12F23P05

---

## Packaging and Weights

<b>Included</b>	Mounting hardware
<b>Volume</b>	5.1 L
<b>Weight, without mounting hardware</b>	6.8 kg   14.991 lb