

# CQX782123T-DS-43 | E14F15P26

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## Twin Quadplexer, 700/850/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

**Mounting** Pole | Wall

**RF Connector Interface** 4.3-10 Female

**RF Connector Interface Body Style** Long neck

## Dimensions

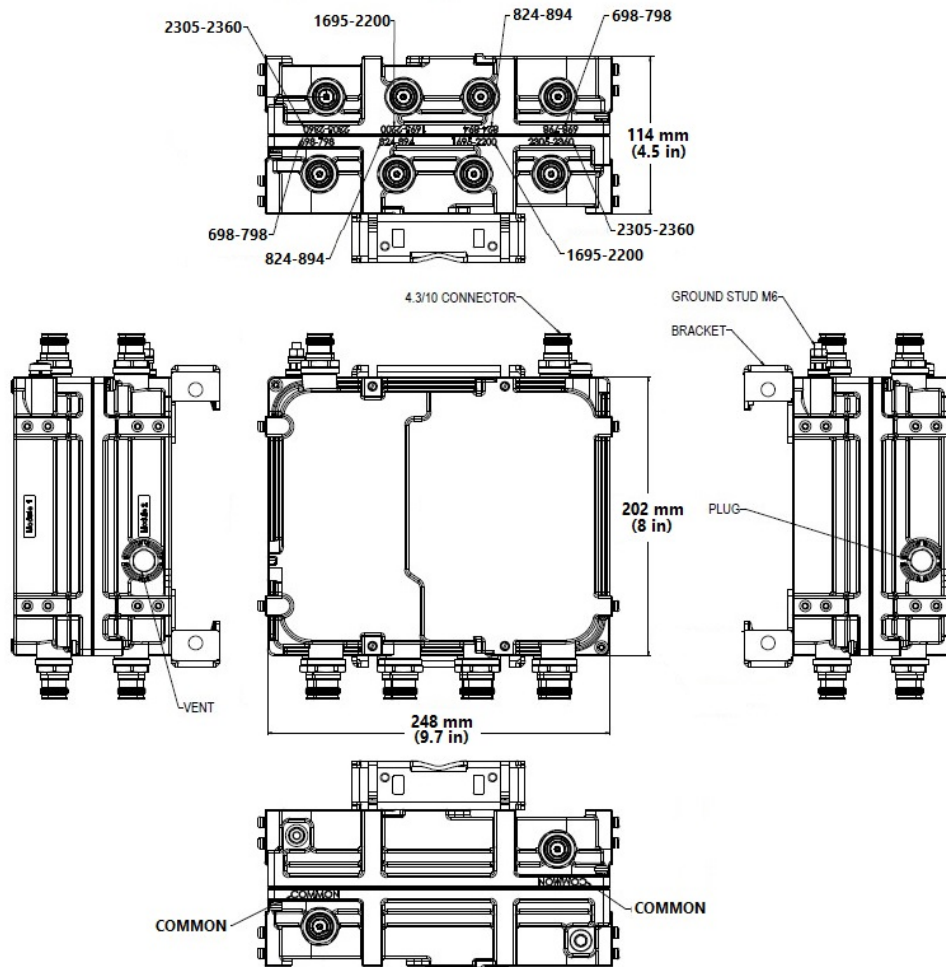
**Height** 202 mm | 7.953 in

**Width** 248 mm | 9.764 in

**Depth** 114 mm | 4.488 in

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

## Outline Drawing



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>License Band, Band Pass</b>	AWS 1700   CEL 850   LMR 750   PCS 1900   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>	5 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

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## 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

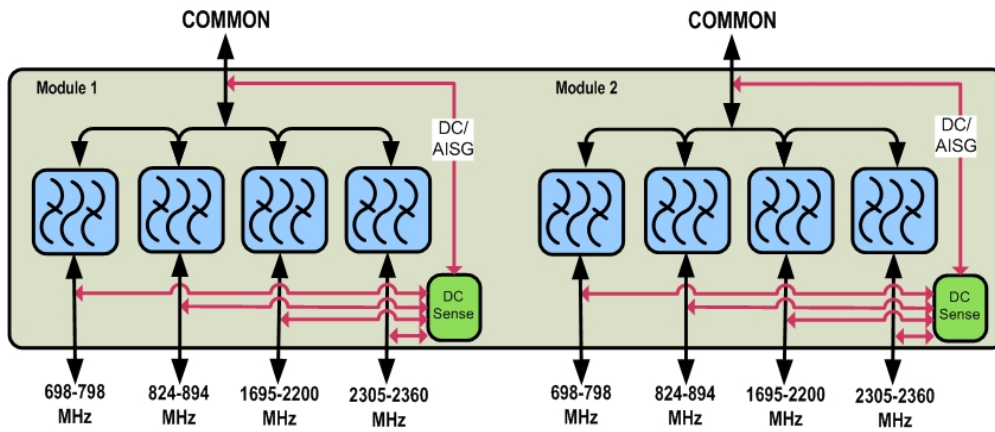
## Electrical Specifications

<b>Sub-module</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Branch</b>	1	2	3	4
<b>Port Designation</b>	698–798	824–894	AWS-PCS	WCS
<b>License Band</b>	LMR 750, Band Pass USA 700, Band Pass USA 750, Band Pass	CEL 850, Band Pass	PCS 1900, Band Pass	WCS 2300, Band Pass

## Electrical Specifications, Band Pass

	<b>698–798</b>	<b>824–894</b>	<b>1695–2200</b>	<b>2305–2360</b>
<b>Frequency Range, MHz</b>				
<b>Insertion Loss, typical, dB</b>	0.3	0.3	0.3	0.3
<b>Total Group Delay, maximum, ns</b>	40	40	20	25
<b>Return Loss, minimum, dB</b>	20	20	20	20
<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)					
RF Ports Input Voltage					
698-798 MHz	824-894 MHz	1695-2200 MHz	2305 to 2360 MHz	COMMON	DC/AISG Path Selection
Any*	Any*	7 ≤ V ≤ 30	Any*	<7	698-798 MHz "OFF" 824 to 894 MHz "OFF" 1695-2200 MHz to COMMON "ON" 2305 to 2360 MHz "OFF"
7 ≤ V ≤ 30	Any*	<7	Any*	<7	698-798 MHz to COMMON "ON" 824-894 MHz "OFF" 1695-2200 MHz "OFF" 2305 to 2360 MHz "OFF"
<7	Any*	<7	7 ≤ V ≤ 30	<7	698-798 MHz "OFF" 824-894 MHz "OFF" 1695-2200 MHz "OFF" 2305 to 2360 MHz to COMMON "ON"
<7	7 ≤ V ≤ 30	<7	<7	<7	698-798 MHz "OFF" 824-894 MHz to COMMON "ON" 1695-2200 MHz "OFF" 2305 to 2360 MHz "OFF"
<7	<7	<7	<7	<7	ALL PORTS OFF

\* Any DC voltage applied in the ON (7-30V) or OFF (<7V) ranges

Splitting Mode Operation (Tower Top)					
RF Ports Impedance DC (Load Sense)					
698-798 MHz	824-894 MHz	1695-2200MHz	2305 to 2360 MHz	COMMON	DC/AISG Path Selection
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

## 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

## Packaging and Weights

**Included** Mounting hardware

**Volume** 5.7 L

**Weight, without mounting hardware** 6.8 kg | 14.991 lb

## Regulatory Compliance/Certifications

**Agency****Classification**

CHINA-ROHS

Below maximum concentration value

REACH-SVHC

Compliant as per SVHC revision on [www.commscope.com/ProductCompliance](http://www.commscope.com/ProductCompliance)

ROHS

Compliant

UK-ROHS

Compliant/Exempted

