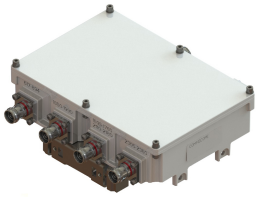
CQX6192123-DS-43 | E12F23P03



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

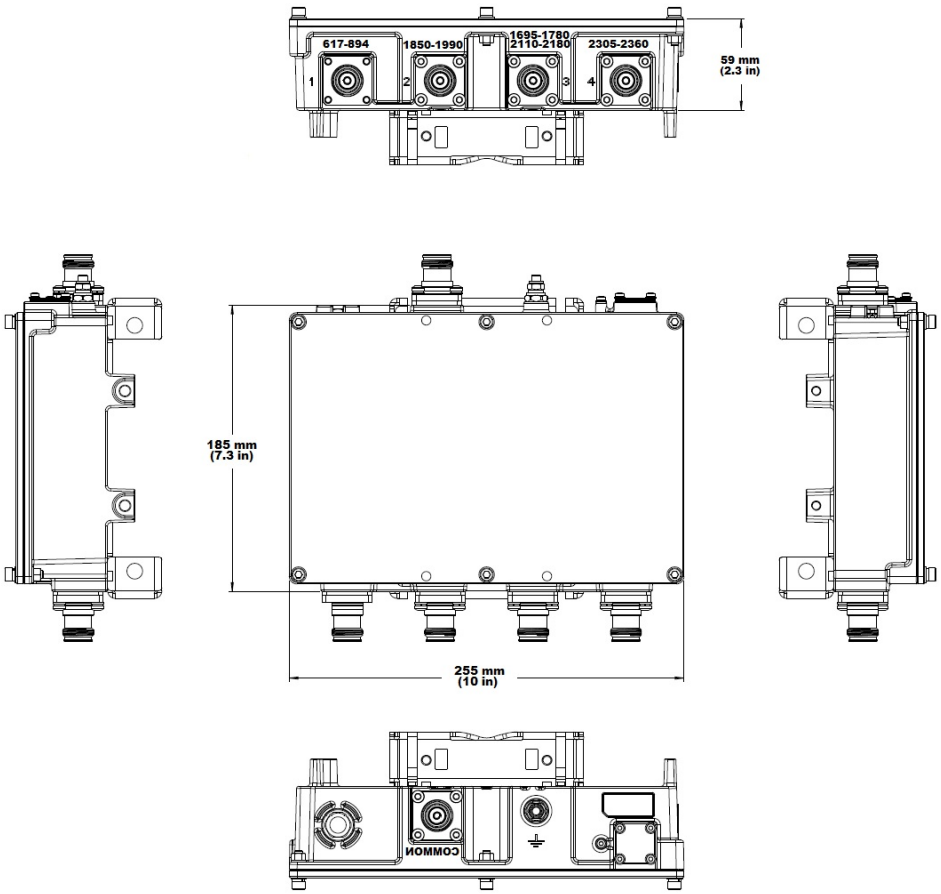
General Specifications

Color	Gray
Common Port Label	Common
Modularity	1-Single
Mounting	Pole | Wall
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	59 mm | 2.323 in
Ground Screw Diameter	6 mm | 0.236 in

Outline Drawing



Electrical Specifications

Impedance	50 ohm
License Band, Band Pass	AWS 1700 | CEL 850 | LMR 750 | PCS 1900 | USA 600 | USA 700 | USA 750 | WCS 2300

Electrical Specifications, dc Power/Alarm

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

Electrical Specifications, AISG

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

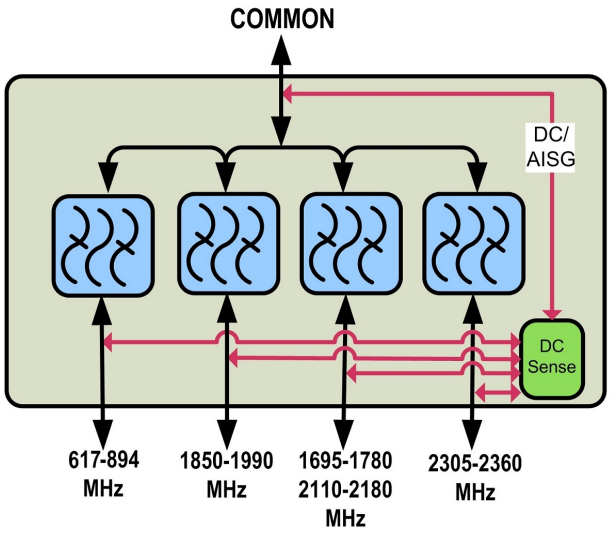
Electrical Specifications

Sub-module	**1**	**1**	**1**	**1**
Branch	1	2	3	4
Port Designation	617-894	PCS	AWS	WCS
License Band	CEL 850, Band Pass USA 700, Band Pass USA 750, Band Pass USA 600, Band Pass	PCS 1900, Band Pass	LMR 750, Band Pass USA 700, Band Pass USA 750, Band Pass	WCS 2300, Band Pass

Electrical Specifications, Band Pass

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

Block Diagram



Logic Table

Combining Mode Operation (Bottom)						
PORT 1 617-894	PORT 2 1850-1990	PORT 3 1695-1780/2110-2180	PORT 4 2305-2360	COMMON		
RF Ports DC Voltage Input					DC/AISG Path Selection	DC/AISG PORT Priority
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" **1850-1990MHz "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)					
RF Ports Impedance DC (Load Sense)					
PORT 1 617-894	PORT 2 1850-1990	PORT 3 1695-1780/2110-2180	PORT 4 2305-2360	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 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	58.0 N @ 150 km/h (13.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	9.0 N @ 150 km/h (2.0 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

Packaging and Weights

Included	Mounting hardware
Volume	2.8 L
Weight, without mounting hardware	4 kg | 8.818 lb