

# CBC782123-DS | E11F23P07



## Quadplexer, 700/850/PCS-AWS/WCS,DC Sense

- BTS-to-feeder and feeder-to-antenna application
- Automatic dc switching with dc sense
- Convertible mounting brackets

### OBSOLETE

This product was discontinued on: May 31, 2019

#### Replaced By:

CQX782123-DS-43  
E14F15P25

Quadplexer, 700/850/PCS-AWS/WCS,DC Sense, 4.3-10

## Product Classification

**Product Type** Quadplexer

## General Specifications

**Product Family** CBC782123  
**Color** Gray  
**Common Port Label** COMMON  
**Modularity** 1-Single  
**Mounting** Pole | Wall  
**Mounting Pipe Hardware** Band clamps (2)  
**RF Connector Interface** 7-16 DIN Female  
**RF Connector Interface Body Style** Long neck

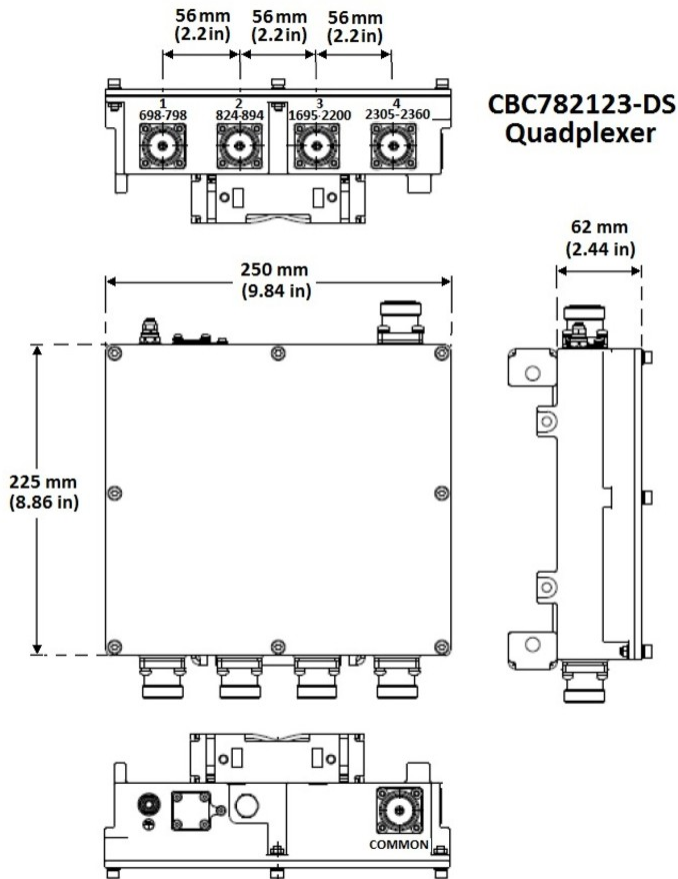
## Dimensions

**Height** 250 mm | 9.843 in  
**Width** 225 mm | 8.858 in  
**Depth** 62 mm | 2.441 in  
**Ground Screw Diameter** 6 mm | 0.236 in  
**Mounting Pipe Diameter Range** 40–160 mm



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## 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

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**Voltage** 7–30 Vdc

## Electrical Specifications, AISG

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

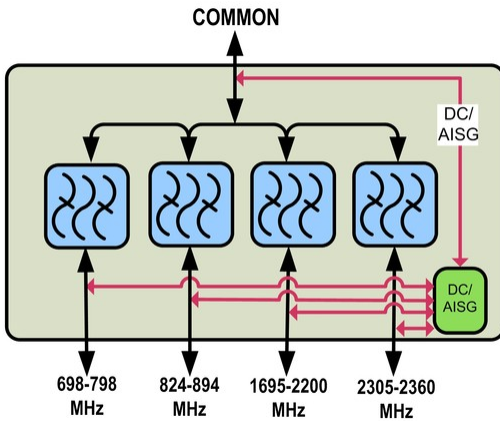
## Electrical Specifications

Sub-module	1	1	1	1
<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 AWS 1700, Band Pass	WCS 2300, Band Pass

## Electrical Specifications, Band Pass

Frequency Range, MHz	698–798	824–894	1695–1780 1850–1990 2110–2200	2305–2360
<b>Insertion Loss, typical, dB</b>	0.35	0.35	0.3	0.3
<b>Total Group Delay, maximum, ns</b>	40	40	20	25
<b>Total Group Delay, typical, ns</b>	25	27	11	17
<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, typical, dBc</b>	-155	-155	-155	
<b>3rd Order PIM Test Method</b>	2 x 20 W CW tones	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					COMMON	DC/AISG Path Selection
698-798 MHz	824-894 MHz	1695-2200 MHz	2305-2360 MHz			
$7 \leq V \leq 30$	<7	<7	<7	<7	<7	698 - 798 MHz COMMON "ON" 824-894 MHz "OFF" 1695-2200 MHz "OFF" 2305-2360 MHz "OFF"
<7	$7 \leq V \leq 30$	<7	<7	<7	<7	698-798 MHz "OFF" 824-894 MHz to COMMON "ON" 1695-2200 MHz "OFF" 2305-2360 MHz "OFF"
<7	<7	$7 \leq V \leq 30$	<7	<7	<7	698-798 MHz "OFF" 824-894 MHz "OFF" 1695-2200 MHz to COMMON "ON" 2305-2360 MHz "OFF"
<7	<7	<7	$7 \leq V \leq 30$	<7	<7	698-798 MHz "OFF" 824-894 MHz "OFF" 1695-2200 MHz "OFF" 2305-2360 MHz to COMMON "ON"
$V < 7$ or $V > 30$	$V < 7$ or $V > 30$	$V < 7$ or $V > 30$	$V < 7$ or $V > 30$	$V < 7$ or $V > 30$	$V < 7$ or $V > 30$	ALL ports OFF
Any 2 or more ports $7 \leq V \leq 30$						ALL ports OFF

Splitting Mode Operation (Tower Top)						
RF Ports Input Voltage					COMMON	DC/AISG Path Selection
698-798 MHz	824-894 MHz	1695-2200 MHz	2305-2360 MHz			
<7	<7	<7	<7	$7 \leq V \leq 30$	$7 \leq V \leq 30$	ALL PORTS ON*
$7 \leq V \leq 30$	<7	<7	<7	$7 \leq V \leq 30$	$7 \leq V \leq 30$	ALL ports OFF (Verified at Start Up)
<7	$7 \leq V \leq 30$	<7	<7	$7 \leq V \leq 30$	$7 \leq V \leq 30$	ALL ports OFF (Verified at Start Up)
<7	<7	$7 \leq V \leq 30$	<7	$7 \leq V \leq 30$	$7 \leq V \leq 30$	ALL ports OFF (Verified at Start Up)
<7	<7	<7	$7 \leq V \leq 30$	$7 \leq V \leq 30$	$7 \leq V \leq 30$	ALL ports OFF (Verified at Start Up)

\* DC/AISG will pass to all 4 Band RF Ports, External DC blocks required for proper installation

### 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

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## Packaging and Weights

<b>Included</b>	Mounting hardware
<b>Weight, net</b>	5.9 kg   13.007 lb