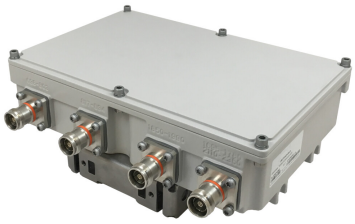
CBC781923-DS-43 | E14F65P01



Quadplexer, 700-750/850/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

Product Classification

Product Type	Quadplexer

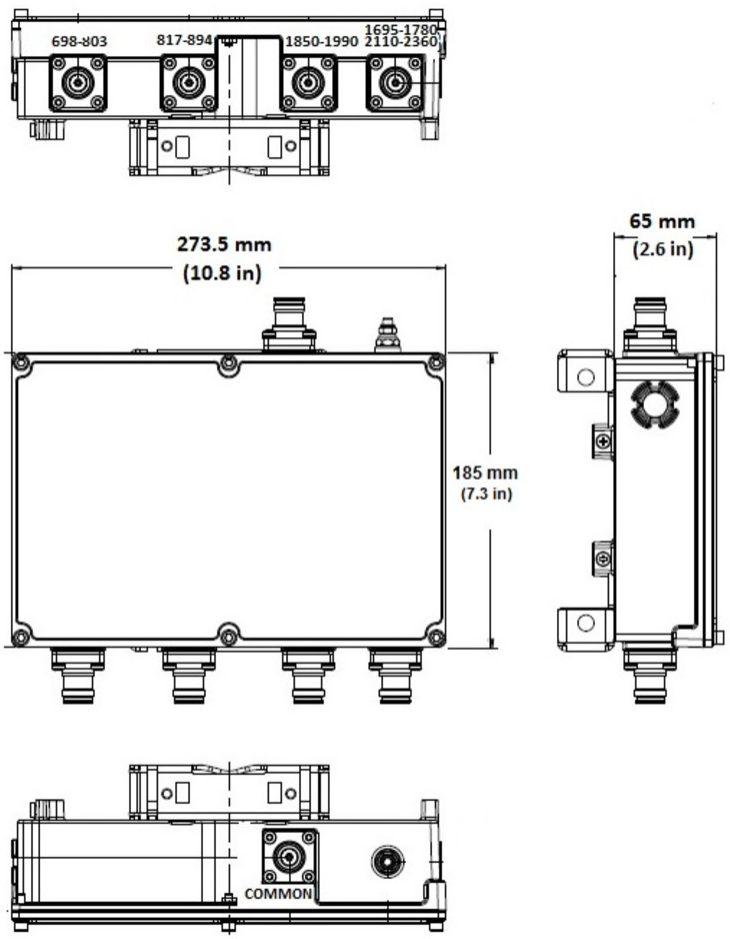
General Specifications

Product Family	CBC781921W
Color	Gray
Common Port Label	Common
Modularity	1-Single
Mounting	Pole | Wall
Mounting Pipe Hardware	Band clamps (2)
RF Connector Interface	4.3-10 Female
RF Connector Interface Body Style	Medium neck

Dimensions

Height	185 mm | 7.283 in
Width	273.5 mm | 10.768 in
Depth	65 mm | 2.559 in
Ground Screw Diameter	6 mm | 0.236 in
Mounting Pipe Diameter Range	40–160 mm

Outline Drawing



Electrical Specifications

Impedance	50 ohm
License Band, Band Pass	AWS 1700 | CEL 850 | LMR 750 | PCS 1900 | 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	5 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

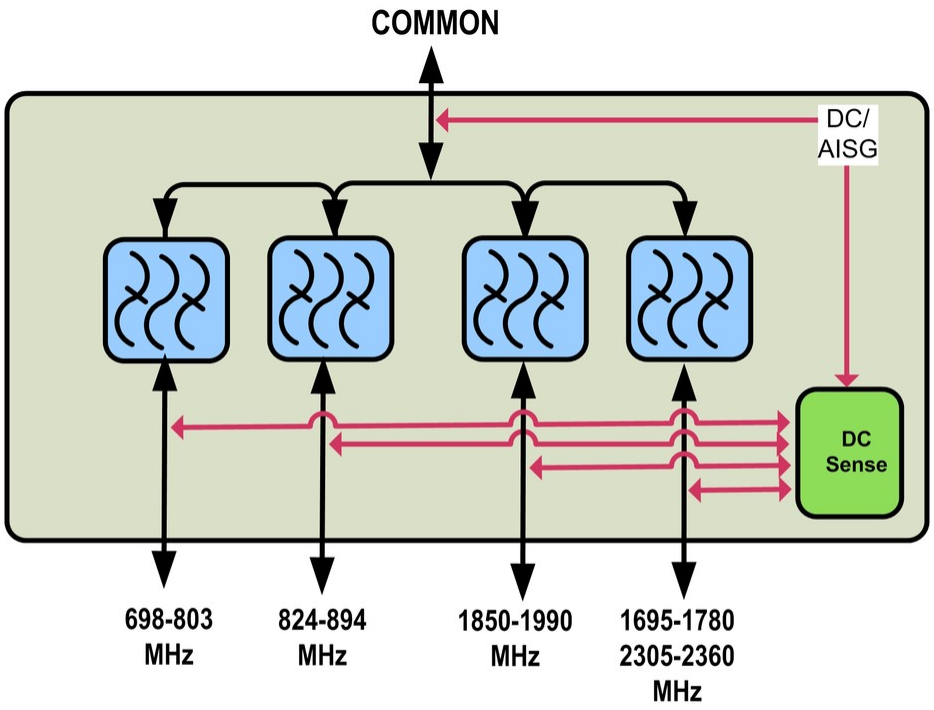
Electrical Specifications

Sub-module	**1**	**1**	**1**	**1**	**1**
Branch	1	2	3	4	4
Port Designation	698–803	824–894	1850–1990	AWS-WCS	AWS-WCS
License Band	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	**698–803**	**824–894**	**1850–1990**	**1695–1780 2110–2200**	**2305–2360**
Insertion Loss, maximum, dB	0.5	0.5	0.5	0.5	0.4
Insertion Loss, typical, dB	0.3	0.3	0.3	0.3	0.2
Total Group Delay, maximum, ns	50	55	55	25	25
Return Loss, minimum, dB	20	20	20	20	20
Return Loss, typical, dB	22	22	22	22	22
Isolation, minimum, dB	50	50	50	50	50
Isolation, typical, dB	65	55	55	55	55
Input Power, RMS, maximum, W	200	200	200	200	200
Input Power, PEP, maximum, W	2000	2000	2000	2000	2000
3rd Order PIM, typical, dBc	-161	-161	-161	-161	
3rd Order PIM Test Method	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	
Higher Order PIM, typical, dBc					-161
Higher Order PIM Test Method					2 x 20 W CW tones

Block Diagram



Logic Table

Combining Mode Operation (Ground Based)					
RF Ports Input Voltage					
700 MHz	850 MHz	PCS	AWS/WCS	COMMON	DC/AISG Path Selection
7 ≤ V ≤ 30	<7	<7	<7	<7	700 MHz to COMMON "ON"
<7	7 ≤ V ≤ 30	<7	<7	<7	850 MHz to COMMON "ON"
<7	<7	7 ≤ V ≤ 30	<7	<7	PCS to COMMON"ON"
<7	<7	<7	7 ≤ V ≤ 30	<7	AWS/WCS to COMMON "ON"
Any 2 or more ports active 7 ≤ V ≤ 30				<7	Path selection will follow below priority: AWS (1), 700MHz (2), PCS (3), 850MHz (4)

Splitting Mode Operation (Tower Top)					
RF Ports Impedance DC (Load sensing)					
700 MHz	850 MHz	PCS	AWS/WCS	COMMON	DC/AISG Path Selection
open/load	short	short	short	7 ≤ V ≤ 30	COMMON to 700 MHz "ON"
short	open/load	short	short	7 ≤ V ≤ 30	COMMON to 850 MHz "ON"
short	short	open/load	short	7 ≤ V ≤ 30	COMMON to PCS "ON"
short	short	short	open/load	7 ≤ V ≤ 30	COMMON to AWS/WCS "ON"
Any 2 or more ports open/load impedance				7 ≤ V ≤ 30	DC/AISG will be routed to ALL ports with open/load impedance

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
Mounting Hardware Weight	0.5 kg | 1.102 lb
Weight, without mounting hardware	4.4 kg | 9.7 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted