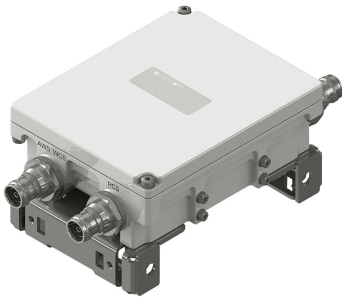


# CBC1923-DS-43 | E14F05P32

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## Diplexer PCS/AWS+WCS, dc Sense, 4.3-10

- New 4.3-10 connectors for improved PIM performance and size reduction
- Automatic dc switching with dc sense
- BTS-to-feeder and feeder-to-antenna application
- Convertible mounting brackets

## Product Classification

**Product Type** Diplexer

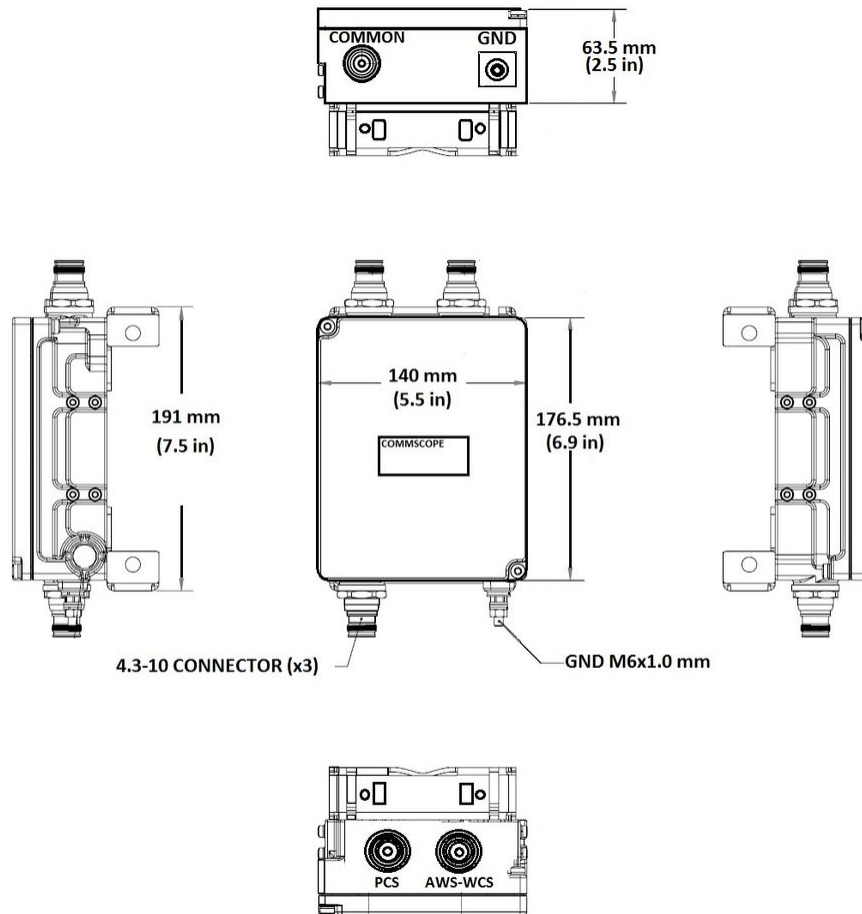
## General Specifications

**Product Family** CBC1923  
**Color** Gray  
**Common Port Label** COMMON  
**Modularity** 1-Single  
**RF Connector Interface** 4.3-10 Female  
**RF Connector Interface Body Style** Long neck

## Dimensions

**Height** 176.5 mm | 6.949 in  
**Width** 140 mm | 5.512 in  
**Depth** 63.5 mm | 2.5 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   PCS 1900   TDD 1900   WCS 2300

## Electrical Specifications, Common Port

<b>Composite Power, RMS</b>	250 W
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## 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

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<b>Lightning Surge Current Waveform</b>	8/20 waveform
<b>Voltage</b>	7–30 Vdc

## 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

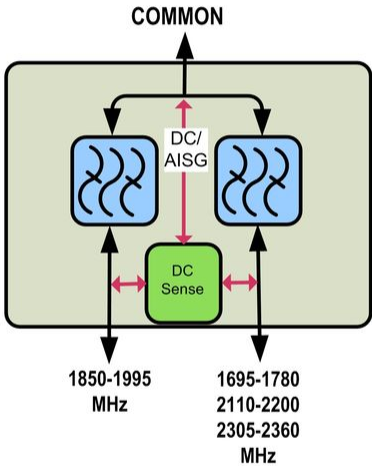
## Electrical Specifications

<b>Sub-module</b>	<b>1</b>	<b>1</b>
<b>Branch</b>	1	2
<b>Port Designation</b>	PCS	AWS-WCS
<b>License Band</b>	PCS 1900, Band Pass	[2, 17]

## Electrical Specifications, Band Pass

<b>Frequency Range, MHz</b>	<b>1850-1995</b>	<b>1695–1780 2110–2200 2305–2360</b>
<b>Insertion Loss, typical, dB</b>	0.2	0.2
<b>Total Group Delay, typical, ns</b>	13	12
<b>Return Loss, typical, dB</b>	22	22
<b>Isolation, typical, dB</b>	58	53
<b>Input Power, RMS, maximum, W</b>	200	200
<b>Input Power, PEP, maximum, W</b>	2000	2000
<b>3rd Order PIM, minimum, dBc</b>	-161	
<b>3rd Order PIM Test Method</b>	2 x 20 W CW tones	
<b>Higher Order PIM, minimum, dBc</b>		-161
<b>Higher Order PIM Test Method</b>		2 x 20 W CW tones

## Block Diagram



## Logic Table

Combining Mode Operation (Ground Based)			
RF Ports Input DC Voltage			
PCS	AWS/WCS	COMMON	DC/AISG Path Selection
$7 \leq V \leq 30$	$<7$	$<7$	PCS to COMMON "ON"
$<7$	$7 \leq V \leq 30$	$<7$	AWS/WCS to COMMON "ON"
$7 \leq V \leq 30$	$7 \leq V \leq 30$	$<7$	AWS/WCS to COMMON "ON"

Splitting Mode Operation (Tower Top)			
RF Ports Impedance DC (Load sensing)			
PCS	AWS/WCS	COMMON	DC/AISG Path Selection
open/load	short	$7 \leq V \leq 30$	COMMON to PCS "ON"
short	open/load	$7 \leq V \leq 30$	COMMON to AWS/WCS "ON"
open/load	open/load	$7 \leq V \leq 30$	ALL ports ON
short	short	$7 \leq V \leq 30$	ALL ports OFF

## Material Specifications

**Finish** Painted

## Mechanical Specifications

**Wind Loading at Velocity, frontal** 31.0 N @ 150 km/h

**Wind Loading at Velocity, lateral** 6.0 N @ 150 km/h

## Environmental Specifications

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

**Relative Humidity** Up to 100%

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

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

## Packaging and Weights

**Included** Mounting hardware

**Mounting Hardware Weight** 0.5 kg | 1.102 lb

**Volume** 1.5 L

**Weight, without mounting hardware** 2.2 kg | 4.85 lb