

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 LabelCommonModularity1-Single

MountingPole | WallMounting Pipe HardwareBand clamps (2)RF Connector Interface4.3-10 FemaleRF Connector Interface Body StyleMedium neck

Dimensions

 Height
 185 mm | 7.283 in

 Width
 273.5 mm | 10.768 in

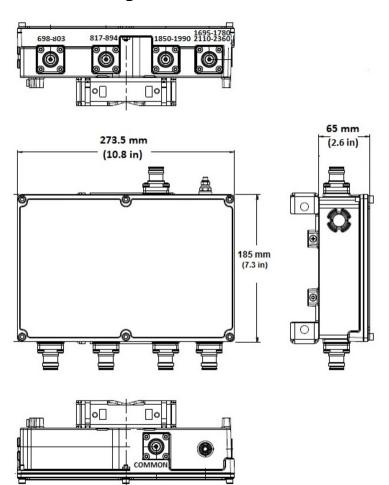
 Depth
 65 mm | 2.559 in

 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

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Voltage 7–30 Vdc

Electrical Specifications, AISG

AISG Carrier 2176 KHz ± 100 ppm

Insertion Loss, maximum1 dBReturn Loss, minimum15 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 Pas	s PCS 1900, Band Pass	AWS 1700, Band Pass	WCS 2300, Band Pass

Electrical Specifications, Band Pass

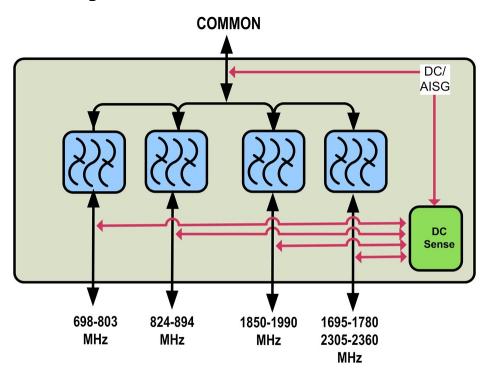
Frequency Range, MHz	698-803	824-894	1850-1990	1695-1780 2110-2200	2305-2360
Insertion Loss, maximum, dB	0.5	0.5	0.5	0.5	0.4
Insertion Loss, typical, dB	0.3	0.3	0.3	0.3	0.2
Total Group Delay, maximum, ns	50	55	55	25	25
Return Loss, minimum, dB	20	20	20	20	20
Return Loss, typical, dB	22	22	22	22	22
Isolation, 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					
DC/AISG Path Selectio	COMMON	AWS/WCS	PCS	850 MHz	700 MHz	
700 MHz to COMMON "C	<7	<7	<7	<7	7 ≤ V ≤ 30	
850 MHz to COMMON "C	<7	<7	<7	7 ≤ V ≤ 30	<7	
PCS to COMMON"ON'	<7	<7	7 ≤ V ≤ 30	<7	<7	
AWS/WCS to COMMON "	<7	7 ≤ V ≤ 30	<7	<7	<7	
Path selection will follow below AWS (1), 700MHz (2), PCS (3), 8	<7	Any 2 or more ports active 7 ≤ V ≤ 30				

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

Environmental Specifications

Operating Temperature $-40 \,^{\circ}\text{C} \text{ to } +65 \,^{\circ}\text{C} \, (-40 \,^{\circ}\text{F to } +149 \,^{\circ}\text{F})$

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

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Ingress Protection Test Method IEC 60529:2001, IP67

Packaging and Weights

IncludedMounting hardwareMounting Hardware Weight0.5 kg | 1.102 lbWeight, without mounting hardware4.4 kg | 9.7 lb

Regulatory Compliance/Certifications

Agency Classification

CHINA-ROHS Above maximum concentration value

ROHS Compliant/Exempted UK-ROHS Compliant/Exempted

