

CBC78T-DS-43-2X | E14F05P50

4 Pack Diplexer 700MHz/850MHz, DC sense, 4.3-10 Connectors

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

General Specifications

Product Type	Diplexer
Product Family	CBC78
Modularity	4-Quad
Includes	Mounting hardware

Electrical Specifications

Sub-module	1 2 3 4	1 2 3 4	1 2 3 4
Branch		1	2
Port Designation		698-803	824-894
License Band		USA 700 USA 750	CEL 850

Electrical Specifications, Band Pass

Frequency Range	698–798 MHz	698–803 MHz	824–894 MHz
Insertion Loss, typical	0.20 dB	0.30 dB	0.20 dB
Total Group Delay, maximum		45 ns	35 ns
Return Loss, minimum		22 dB	22 dB
Return Loss, typical		24 dB	24 dB
Isolation, minimum	50 dB	35 dB	50 dB
Input Power, RMS, maximum		200 W	200 W
Input Power, PEP, maximum		2000 W	2000 W
3rd Order PIM, minimum		-161 dBc	-161 dBc
3rd Order PIM Test Method		2 x 20 W CW tones	2 x 20 W CW tones

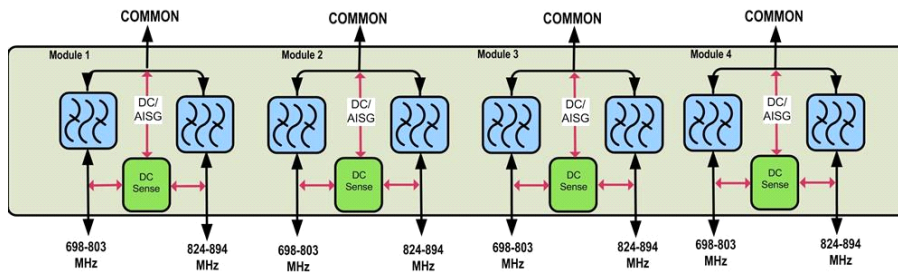
Product Classification

Product Type	Diplexer
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dc Power/Alarm Electrical Specifications

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

Block Diagram



Logic Table

Combining Mode Operation (Ground Based)			
RF Ports Input Voltage			DC/AISG Path Selection
700 MHz	800 MHz	COMMON	
$7 \leq V \leq 30$	$V < 7$	$V < 7$	700 MHz to COMMON "ON" 800 MHz Port "OFF"
$V < 7$	$7 \leq V \leq 30$	$V < 7$	800 MHz to COMMON "ON" 700 MHz "OFF"
$7 \leq V \leq 30$	$7 \leq V \leq 30$	$V < 7$	700 MHz to COMMON "ON" 800 MHz "OFF"
$V < 7$	$V < 7$	$V < 7$	ALL ports OFF

Splitting Mode Operation (Tower Top)			
RF Ports Input Voltage			DC/AISG Path Selection
700 MHz	800 MHz	COMMON	
$V < 7$	$V < 7$	$7 \leq V \leq 30$	700 MHz to COMMON "ON" 800 MHz "OFF"

Mechanical Specifications

RF Connector Interface	4.3-10 Female
RF Connector Interface Body Style	Long neck
Ground Screw Diameter	6.00 mm
Color	Gray
Mount Type	Pole Wall
Mounting Pipe Hardware	Band clamps (2)

Dimensions

Height	162.0 mm 6.4 in
Width	176.0 mm 6.9 in
Depth	245.0 mm 9.6 in
Weight, without mounting hardware	9.4 kg 20.7 lb
Mounting Hardware Weight	0.5 kg 1.1 lb

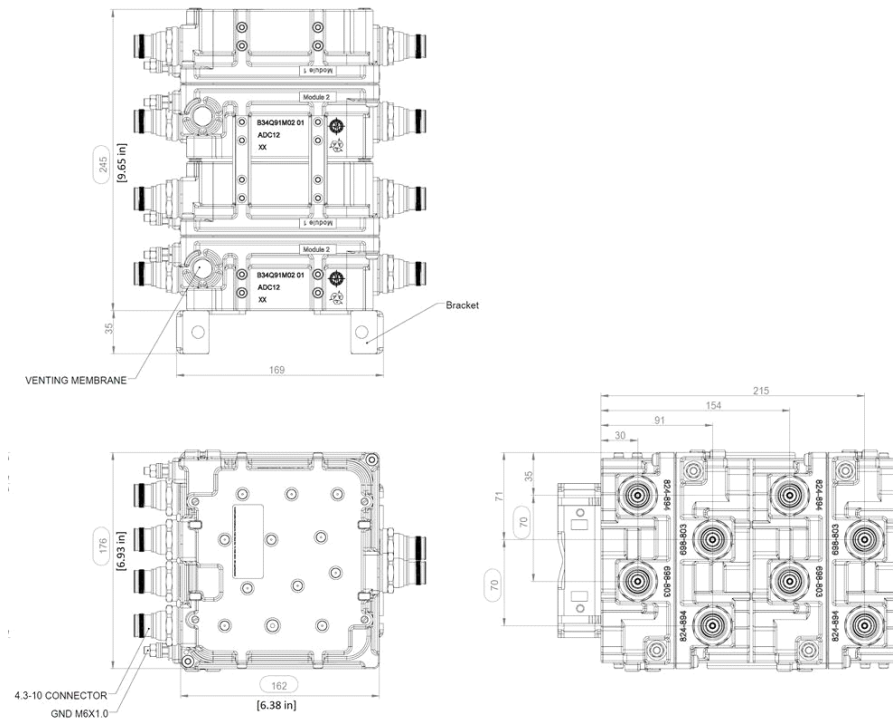
Environmental Specifications

Product Specifications

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Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Relative Humidity	5%–100%
Ingress Protection Test Method	IEC 60529:2001, IP67

Outline Drawing



Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system