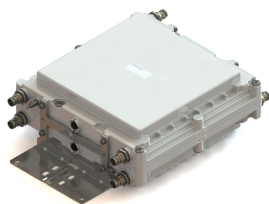


TD-850AB-LTE15-43 | E14Z00P08



Twin In-band Diplexer A&B blocks 850 MHz, DC Sense

- Enables LTE carrier to share the RF path with other CDMA/EVDO services
- LTE port supports the use of dual band 700/850 radios or diplexed radio ports
- Optimized for 5MHz LTE carrier on A-Block CH 2435 and 10MHz LTE carrier on B-Block CH 2560
- Supports 3 CDMA/EVDO carriers F1(283), F2(242), and F3(201)
- Narrow guard band to maximize utilization of licensed spectrum
- Automatic dc switching with dc sense

Product Classification

Product Type In-Band Combiner

General Specifications

Connector Interface 4.3-10 Female

Dimensions

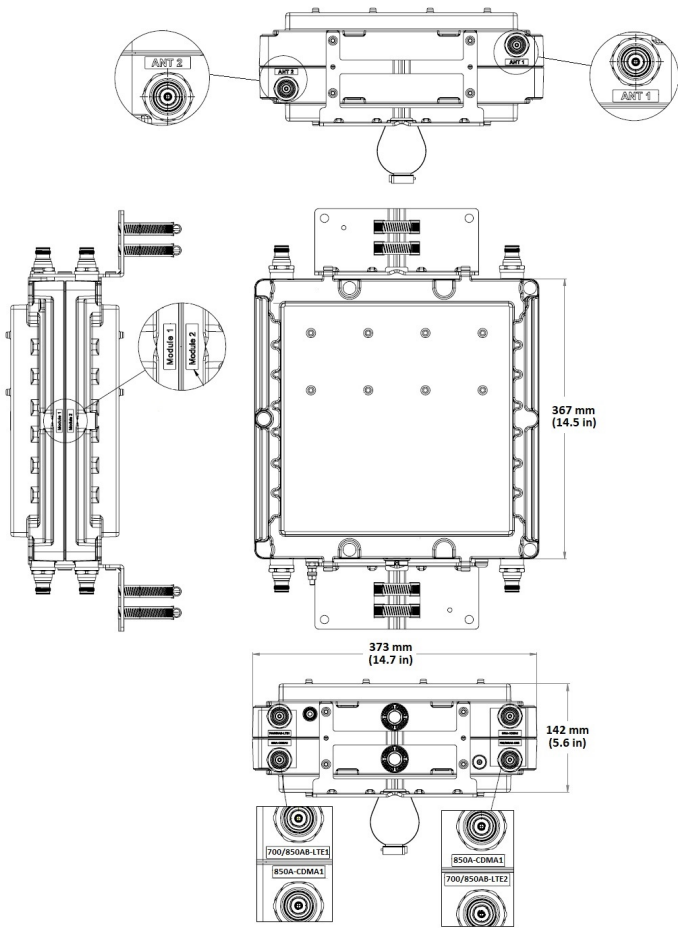
Height 367 mm | 14.449 in

Width 373 mm | 14.685 in

Depth 142 mm | 5.591 in

Ground Screw Diameter 6 mm | 0.236 in

Outline Drawing



Electrical Specifications

5th Order IMD Test Method	Two +43 dBm carriers
5th Order IMD, maximum	-161 dBc
License Band	CEL 850 USA 700 USA 750
Lightning Surge Current	10 kA
Lightning Surge Current Waveform	8/20 waveform

Electrical Specifications, Rx (Uplink)

Frequency Band	777 – 787 MHz 825 – 830 MHz 835 – 845 MHz
Return Loss, minimum	18 dB
Isolation, minimum	28 dB
Port Designation	700/850 LTE

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Total Group Delay, maximum 360 ns

Electrical Specifications 2, Rx (Uplink)

Frequency Band 830.415 – 834.105 MHz

Group Delay Variation at Frequency, maximum 240 ns @ 1.25 MHz

Isolation, minimum 28 dB

Port Designation 850A-CDMA

Total Group Delay, maximum 40 ns

Return Loss, minimum 18 dB

Electrical Specifications, Tx (Downlink)

Frequency Band 746 – 756 MHz | 870 – 875 MHz | 880 – 890 MHz

Isolation, minimum 28 dB

Input Power, PEP, maximum 1500 W

Input Power, RMS, maximum 120 W

Return Loss, minimum 18 dB

Electrical Specifications 2, Tx (Downlink)

Frequency Band 875.415 – 879.105 MHz

Group Delay Variation at Frequency, maximum 240 ns @ 1.25 MHz

Input Power, PEP, maximum 1500 W

Input Power, RMS, maximum 120 W

Return Loss, minimum 18 dB

Total Group Delay, maximum 350 ns

Electrical Performance

Insertion Loss Specifications

850A-CDMA TO ANTENNA PORT		700/850AB-LTE TO ANTENNA PORT	
Channels	Insetion Loss (dB)	Channels	Insetion Loss (dB)
F1 (283)*	1.2 max	700MHz LTE	0.15 max
F2 (242)*	1.2 max	850 LTE CH2560*	0.5 max
F3 (201)*	1.5 max	850 LTE CH2435*	0.6 max

* Specifications are for the average of the freq. band

Frequency Map

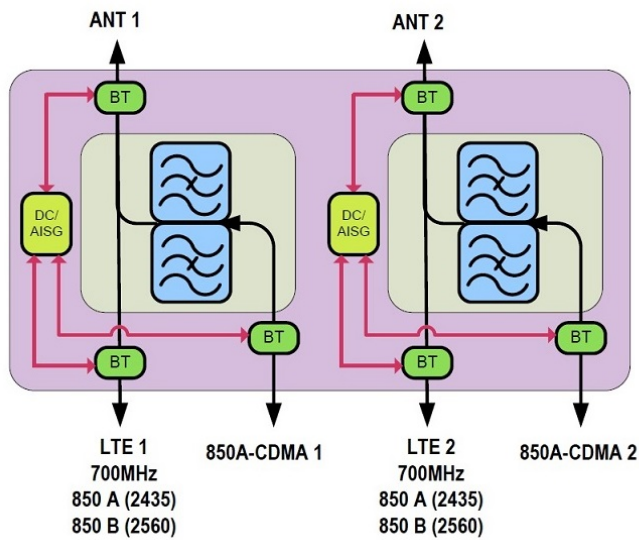
700 MHz	...	A''	A						B						A'	B'		
		1019	37	78	119	160	201	242	283	384	425	466	507	548	589	630	691	770

700 MHz	...	F8	2435 (5 MHz)				F3	F2	F1	2560 (10 MHz)						A'	F8
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Legend

Port 1 (LTE)
Port 2 (CDMA)
Guard Band

Block Diagram



Logic Table

DC input voltage		ANT Port
LTE Port	CDMA Port	DC/AISG path selection
<7	<7	All Ports OFF
7 ≤ V ≤ 30	<7	LTE Port to ANT Port ON CDMA Port to ANT OFF
<7	7 ≤ V ≤ 30	LTE Port to ANT Port OFF CDMA Port to ANT ON
7 ≤ V ≤ 30	7 ≤ V ≤ 30	All Ports OFF

Environmental Specifications

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

Ingress Protection Test Method IEC 60529:2001, IP67

Packaging and Weights

Weight, without mounting hardware 15.2 kg | 33.51 lb