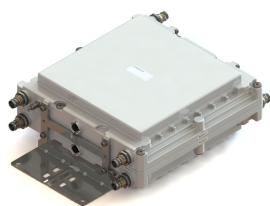


# TD-850AB-LTE15-43 | E14Z00P08

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## 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

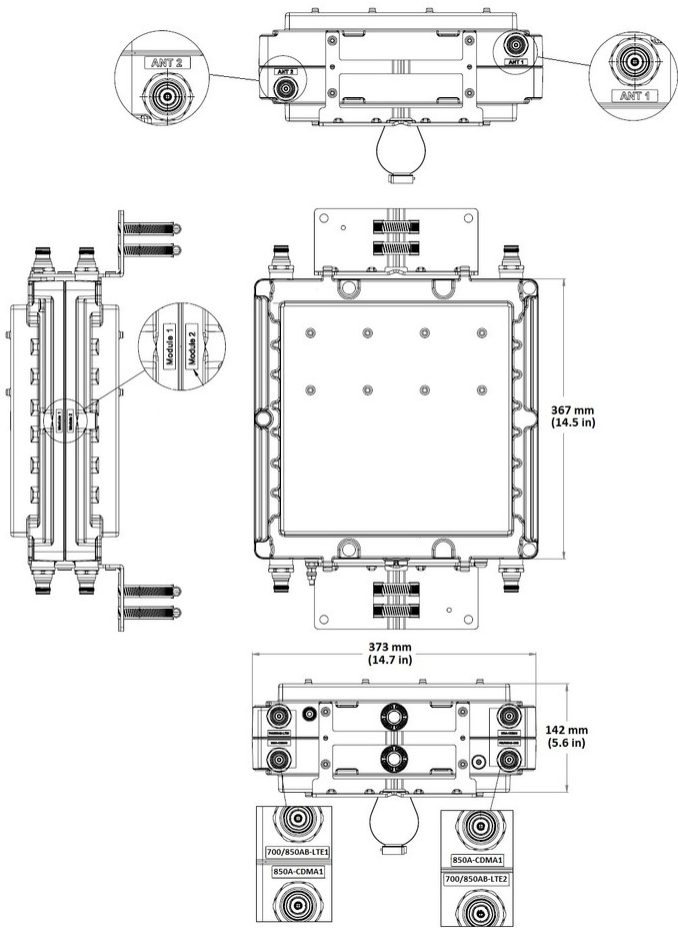
**Width** 373 mm | 14.685 in

**Depth** 142 mm | 5.591 in

**Ground Screw Diameter** 6 mm | 0.236 in

## Outline Drawing

# TD-850AB-LTE15-43 | E14Z00P08



## Electrical Specifications

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

## Electrical Specifications, Rx (Uplink)

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

# TD-850AB-LTE15-43 | E14Z00P08

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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

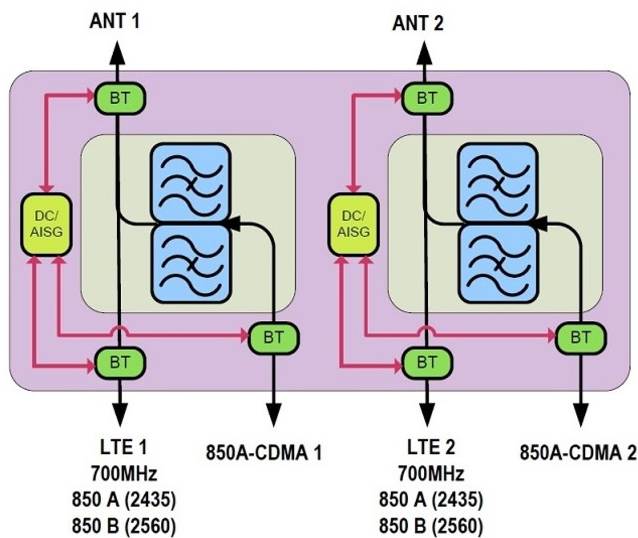
700 MHz	...	A''	A						B						A'	B'		
		1019	37	78	119	160	201	242	283	384	425	466	507	548	589	630	691	770

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
<b>7 ≤ V ≤ 30</b>	<7	<b>LTE Port to ANT Port ON</b> CDMA Port to ANT OFF
<7	<b>7 ≤ V ≤ 30</b>	LTE Port to ANT Port OFF <b>CDMA Port to ANT ON</b>
<b>7 ≤ V ≤ 30</b>	<b>7 ≤ V ≤ 30</b>	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