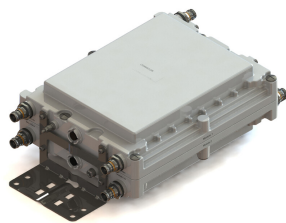


# TD-850AB-L78-43 | E14Z00P11

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## Twin In-Band Diplexer, A CDMA/ B 850/700 LTE, 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
- Narrow guard band to maximize utilization of licensed spectrum
- Automatic dc switching with dc sense

## Product Classification

**Product Type** In-Band Combiner

## Dimensions

**Height** 367 mm | 14.449 in

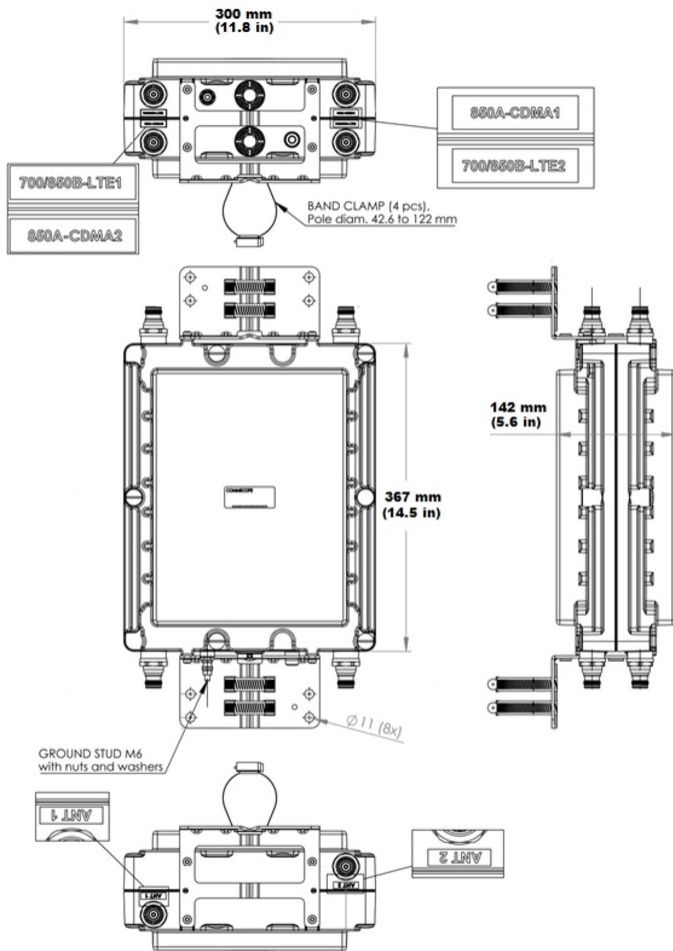
**Width** 300 mm | 11.811 in

**Depth** 142 mm | 5.591 in

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

## Outline Drawing

# TD-850AB-L78-43 | E14Z00P11



## Electrical Specifications

<b>5th Order IMD Test Method</b>	Two +43 dBm carriers
<b>5th Order IMD, maximum</b>	-155 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   835.5 – 849 MHz
<b>Return Loss, minimum</b>	18 dB
<b>Isolation, minimum</b>	28 dB
<b>Port Designation</b>	700/850 LTE

# TD-850AB-L78-43 | E14Z00P11

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**Total Group Delay, maximum** 120 ns

## Electrical Specifications 2, Rx (Uplink)

**Frequency Band** 824.265 – 834.105 MHz

**Group Delay Variation at Frequency, maximum** 140 ns @ 1.25 MHz

**Isolation, minimum** 28 dB

**Port Designation** 850A-CDMA

**Total Group Delay, maximum** 210 ns

**Return Loss, minimum** 18 dB

## Electrical Specifications, Tx (Downlink)

**Frequency Band** 746 – 756 MHz | 880.5 – 894 MHz

**Isolation, minimum** 28 dB

**Input Power, PEP, maximum** 120 W

**Input Power, RMS, maximum** 1500 W

**Total Group Delay, maximum** 120 ns

**Return Loss, minimum** 18 dB

## Electrical Specifications 2, Tx (Downlink)

**Frequency Band** 869.265 – 879.105 MHz

**Group Delay Variation at Frequency, maximum** 150 ns @ 1.25 MHz

**Input Power, PEP, maximum** 120 W

**Input Power, RMS, maximum** 1500 W

**Isolation, minimum** 28 dB

**Return Loss, minimum** 18 dB

**Total Group Delay, maximum** 220 ns

## Electrical Performance

## Insertion Loss Specifications

850A-CDMA TO ANTENNA PORT		700/850B-LTE TO ANTENNA PORT	
Channels	Insetion Loss (dB)	Channels	Insetion Loss (dB)
F1, F2, F3, F4, F5, F6, F7, F8	0.9 max (Avg 1.25MHz)	700MHz LTE	0.15 max
		850B LTE CH2560*	0.5 max

\* Specifications are for the average of the freq. band

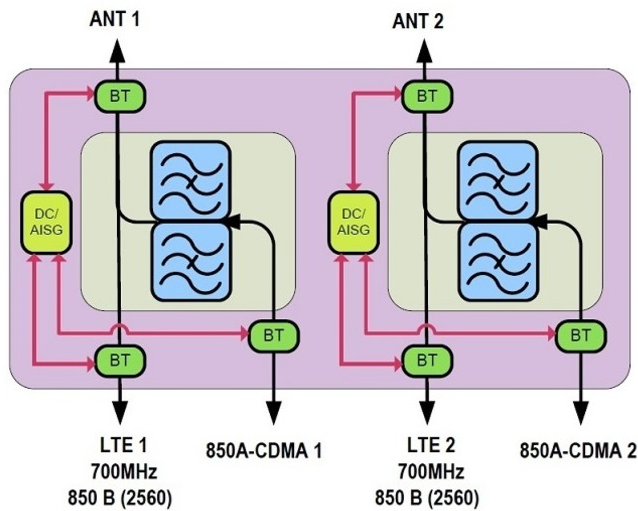
## Frequency Map

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	F7	F6	F5	F4	F3	F2	F1	2560 (10 MHz)						A'	F8	

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** 13 kg | 28.66 lb