

TD-850AB-L78-43 | E14Z00P11



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

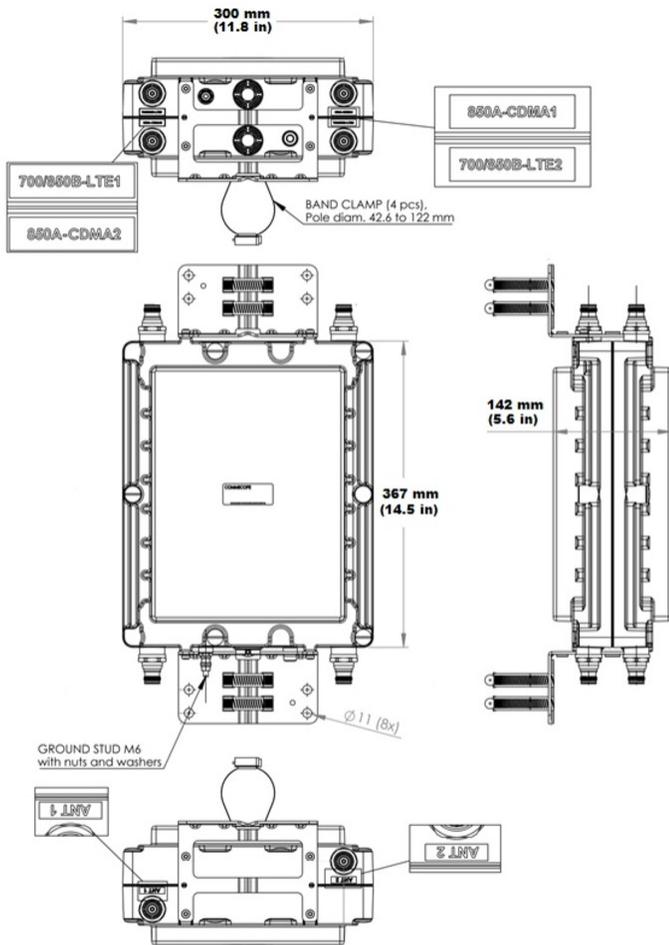
Width 300 mm | 11.811 in

Depth 142 mm | 5.591 in

Ground Screw Diameter 6 mm | 0.236 in

Outline Drawing

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Electrical Specifications

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

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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

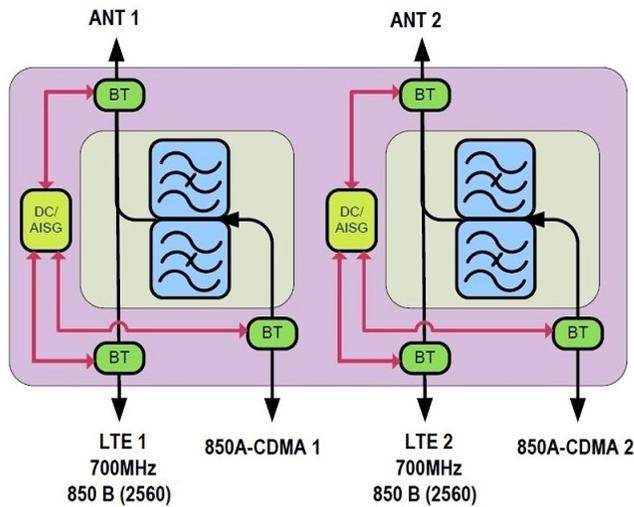
Frequency Map

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
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 13 kg | 28.66 lb