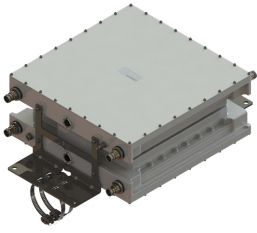


TD-850B-LTE78-43 | E14Z00P06



Twin In-band Diplexer 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
- CDMA port supports carriers F1(384), F2(425), F3(466) and F8(770/777)
- Optimized for 5MHz LTE carrier on B-Block CH 2585 and 10MHz LTE carrier on A-Block CH 2460
- Narrow guard band to maximize utilization of licensed spectrum

Product Classification

Product Type Diplexer

General Specifications

Application Indoor | Outdoor

Antenna Interface 4.3-10 Female

Connector Interface Style Long neck

Dimensions

Height 392 mm | 15.433 in

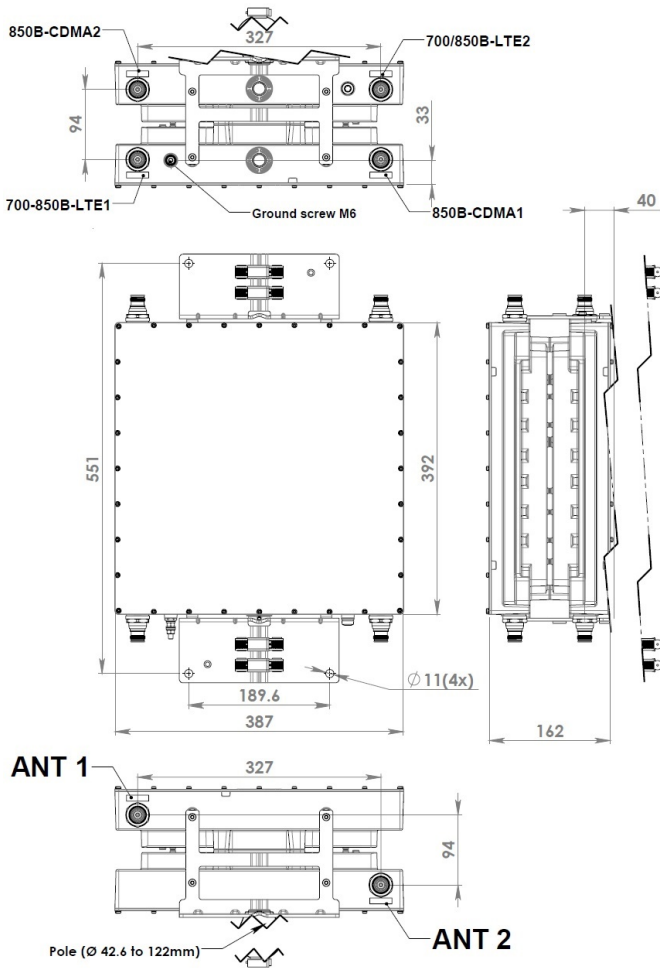
Width 387 mm | 15.236 in

Depth 162 mm | 6.378 in

Ground Screw Diameter 6 mm | 0.236 in

Outline Drawing

TD-850B-LTE78-43 | E14Z00P06



Electrical Specifications

5th Order IMD Test Method	Two +43 dBm carriers
5th Order IMD, maximum	-161 dBc
Lightning Surge Current	10 kA
Lightning Surge Current Waveform	8/20 waveform

Electrical Specifications, Rx (Uplink)

Frequency Band	777 – 787 MHz 825.5 – 834.5 MHz 840.25 - 844.75 MHz
Return Loss, minimum	18 dB
Isolation, minimum	28 dB
Port Designation	700/850 LTE
Total Group Delay, maximum	320 ns

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Electrical Specifications 2, Rx (Uplink)

Frequency Band	835.905 – 839.595 MHz 847.485 - 848.925 MHz
Isolation, minimum	28 dB
Port Designation	850B CDMA
Total Group Delay, maximum	320 ns
Return Loss, minimum	18 dB

Electrical Specifications, Tx (Downlink)

Frequency Band	746 – 756 MHz 870.5 – 879.75 MHz 885.25 - 889.75 MHz
Isolation, minimum	28 dB
Input Power, PEP, maximum	1500 W
Input Power, RMS, maximum	120 W
Total Group Delay, maximum	320 ns
Return Loss, minimum	18 dB

Electrical Specifications 2, Tx (Downlink)

Frequency Band	880.905 – 884.595 MHz 892.485 - 893.925 MHz
Input Power, PEP, maximum	1500 W
Input Power, RMS, maximum	120 W
Isolation, minimum	28 dB
Return Loss, minimum	18 dB
Total Group Delay, maximum	320 ns

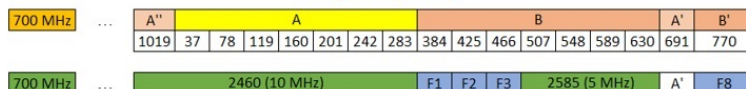
Electrical Performance

Insertion Loss Specifications

850B-CDMA TO ANTENNA PORT		700/850AB-LTE TO ANTENNA PORT	
Channels	Specification (dB)	Channels	Specification (dB)
384, 425, 770, 777*	1.2 max	700 LTE	0.15 max
466*	1.5 max	850 LTE 2585, 2460*	0.9 max

* Specifications are for the average of the freq. band

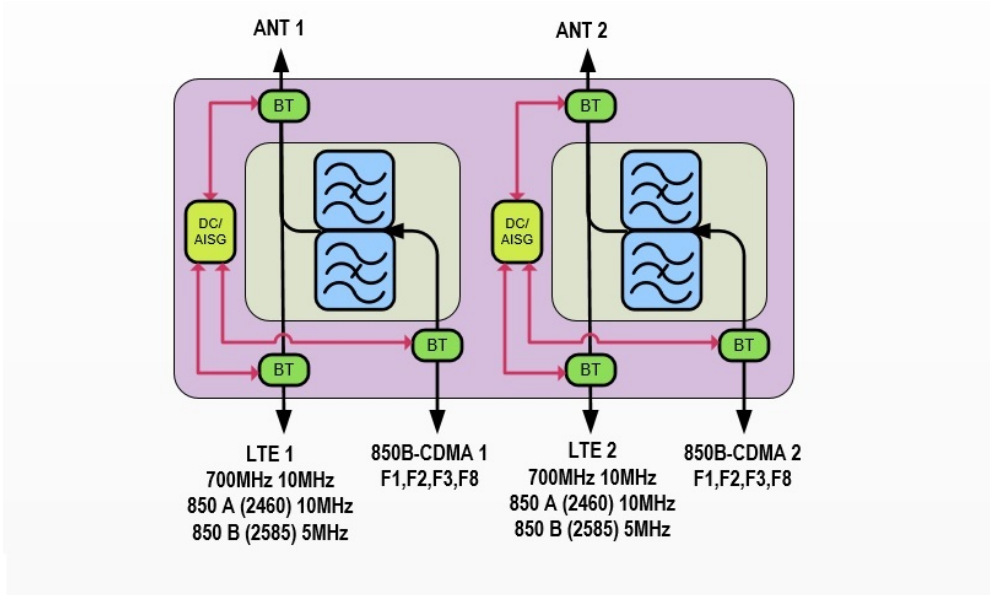
Frequency Map



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
$7 \leq V \leq 30$	<7	LTE Port to ANT Port ON CDMA Port to ANT OFF
<7	$7 \leq V \leq 30$	LTE Port to ANT Port OFF CDMA Port to ANT ON
$7 \leq V \leq 30$	$7 \leq V \leq 30$	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

Included Brackets

Weight, net 24 kg | 52.911 lb