

# IBC-850-AB-1PF

LTE-CDMA In-Band Combiner for A or A+B block applications



## IBC-850-AB-1PF

*In-Band 850MHz A+B-Block combiner*

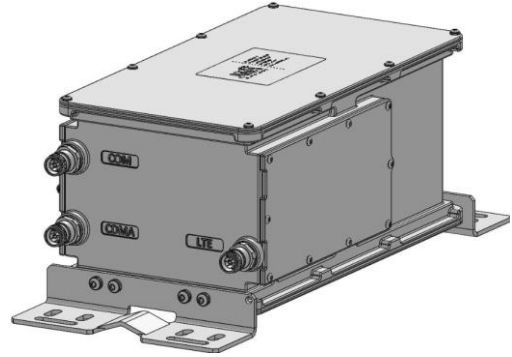
*3 CDMA Carriers on 850 A-Band*

*5 MHz LTE on A-Band*

*10 MHz LTE on 850 B-Band*

*Pole, Rack or wall mount*

*4.3-10 connectors*



- Enables 15MHz of LTE (10+5) use on 850MHz markets with 3 CDMA carriers and 850 LTE to share an antenna and feeder lines
- Up to 3 CDMA carriers, 5MHz LTE on 850 A-Band and 10MHz LTE on 850 B-Band
- 700MHz By-Pass through LTE path. Ideal for Dual Band (700-850) LTE radios
- Low EVM (0.25%) for LTE and very low GD variation for CDMA minimizes impact on CDMA or EVDO carriers
- Very low insertion loss leads to minimal impact on existing CDMA site coverage, and best possible LTE coverage
- High Isolation (>30dB) between CDMA and LTE radios

### Electrical specifications, CDMA

	F1 (Ch. 283) 878.49	F2 (Ch. 242) 877.26	F3 (Ch. 199) [Covers 201] 875.97
<b>DL</b>			
Passband center DL, MHz			
Channel Insertion Loss, dB	0.90	0.90	1.0
Band edge loss, dB	1.05	0.95	1.60
GD, Avg. ns	165	160	250
GD, Max, ns	235	165	450
GD, Variance over Channel, ns	80	30	290
<b>UL</b>			
Passband center UL, MHz	833.49	832.26	830.97
Channel Insertion Loss, dB	0.9	0.90	1.0
Band edge loss, dB	1.05	0.95	1.60
GD, Avg. ns	250	200	210
GD, Max, ns	250	165	450
GD, Variance over Channel, ns	60	30	250
EVM Max, %	1.5	0.4	5.0
RL Min, dB		18dB	
Isolation to LTE Carrier, dB		> 30 DL/>25 UL	
Avg. input power per port, W		200	
Input peak envelop power, W		3000	
PIM 2x+43dBm, dBc		-156	
DC AISG Pass		Yes	

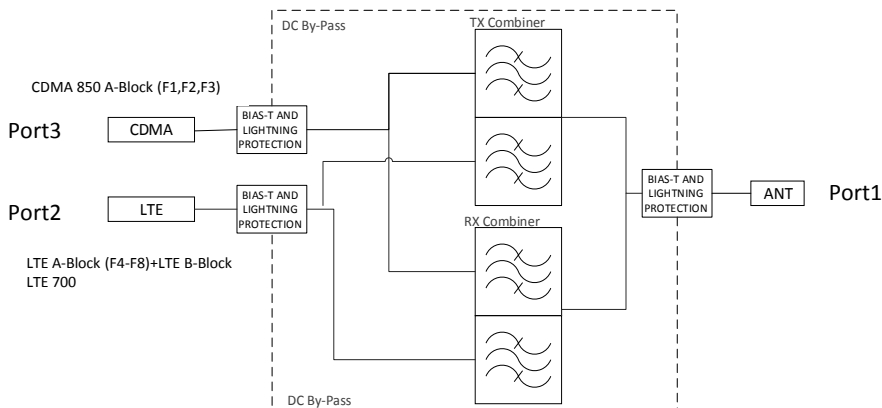
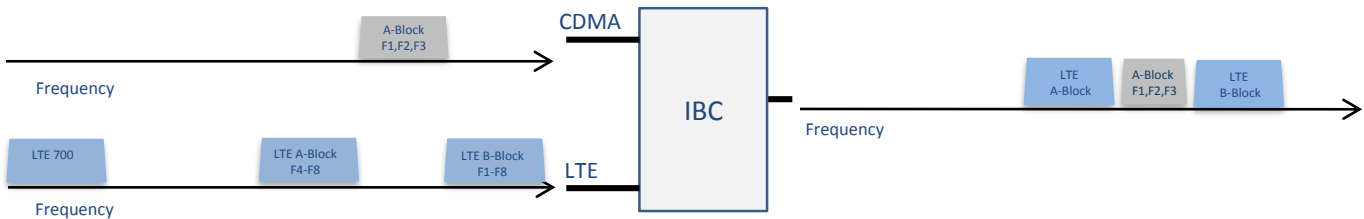
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Electrical specifications, LTE 850		
	LTE A-Block Earfcn 2435	LTE B-Block Earfcn 2560
Passband DL / UL, MHz	Fc DL872.5 MHz / UL827.5MHz 870.25–874.75/825.25–829.75	Fc DL885 MHz /UL840 MHz 880.5–889.5 / 835.5–844.5
LTE Carrier Insertion Loss, dB	0.6	0.55
Band Edge Loss Max, dB	1.5	1.0
RL Min, dB	18	18
Group Delay, Avg. ns	70	35
Group Delay, DL / UL, Max, ns	360	145
Group Delay variance over carrier, ns	350	140
EVM, DL LTE center frequency	< 0.03%, Center RB < 0.25%, Full LTE Transmission BW EVM	< 0.03%, Center RB < 0.25%, Full LTE Transmission BW EVM
Isolation to CDMA Channels, dB	>30 (DL), >25(UL)	
Avg. input power per port, W	200	
Input peak envelop power, W	3000	
PIM 2x+43dBm, dBc	-156	
DC AISG Pass	Yes	
LTE 700MHz By-pass		
LTE 700 By-pass, MHz	746 - 787	
Insertion Loss, dB	0.45	
Return Loss, dB	18dB	

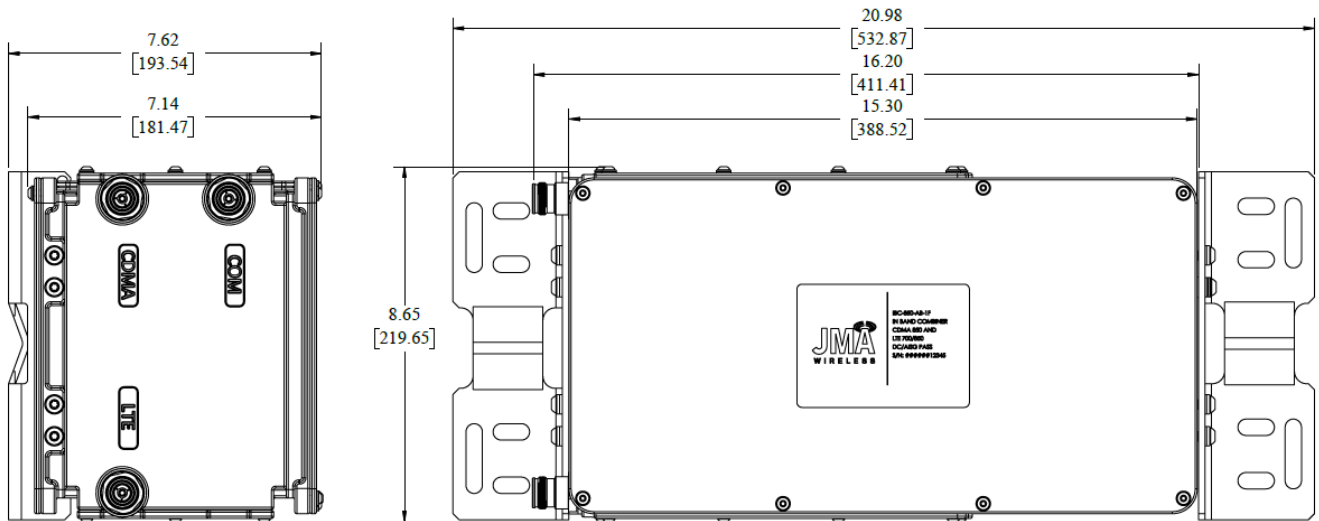
850 CDMA + 850 LTE Spectrum Illustration  
(Downlink Only for clarity)



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Mechanical specifications	
Connectors RF	4.3-10 (F)
Ground stud	M6 x 1 (hex nut included)
Connectors quantity	3
Dimensions, excluding brackets and connectors L x W x H mm (in.)	388.5 x 220 x 182 (15.3 x 8.65 x 7.1)
Weight: kg (lbs.)	15 (43)
Mounting	19" Rack mount HW included. Pole/wall bracket optional, including metal clamps for 45-178 mm diameter poles



Environmental specifications	
Environmental rating	ETSI EN 300 019 class 4.1, RoHS
Ingress protection	IP66, unmated
Temperature range, °C	-40 to +65
Temperature range, °F	-40 to +149
Lightning protection all ports	RF port: ±10kA max. (8/20us), IEC 61000-4-5
Altitude	3,000 m max.   10,000 ft. max.
Mean time between failures (MTBF)	>10 <sup>6</sup>

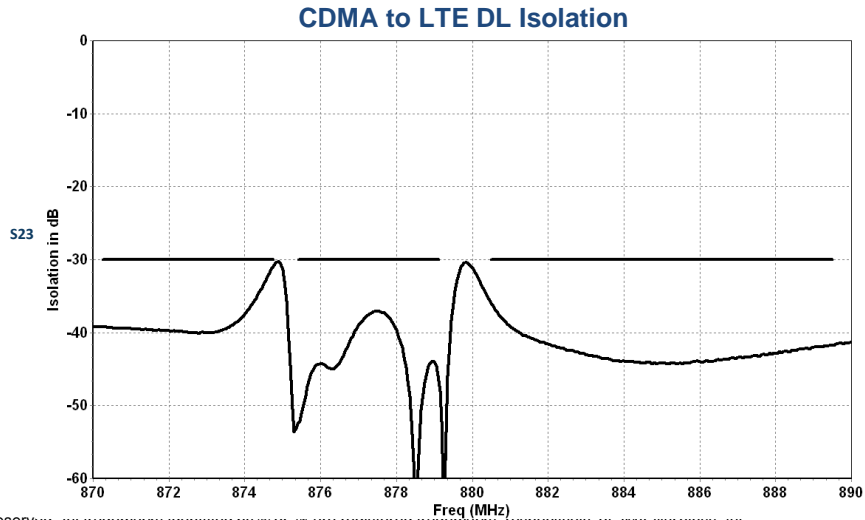
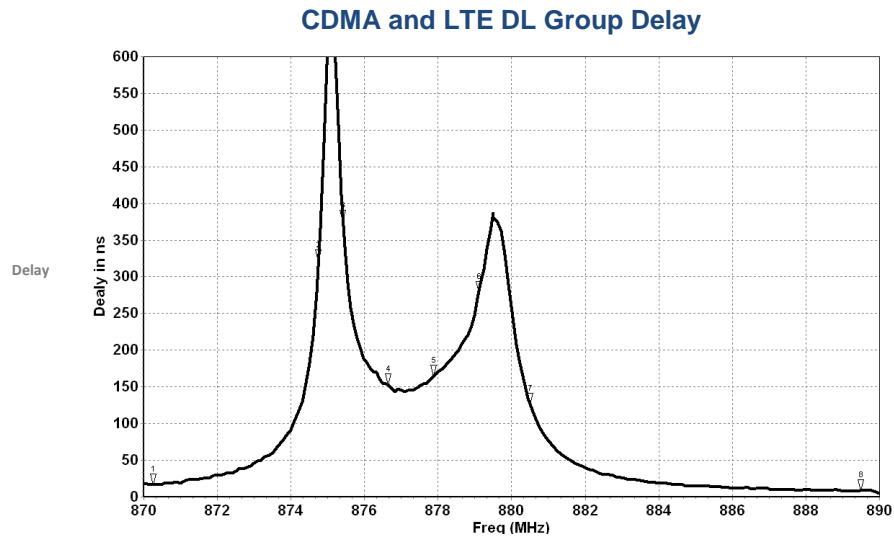
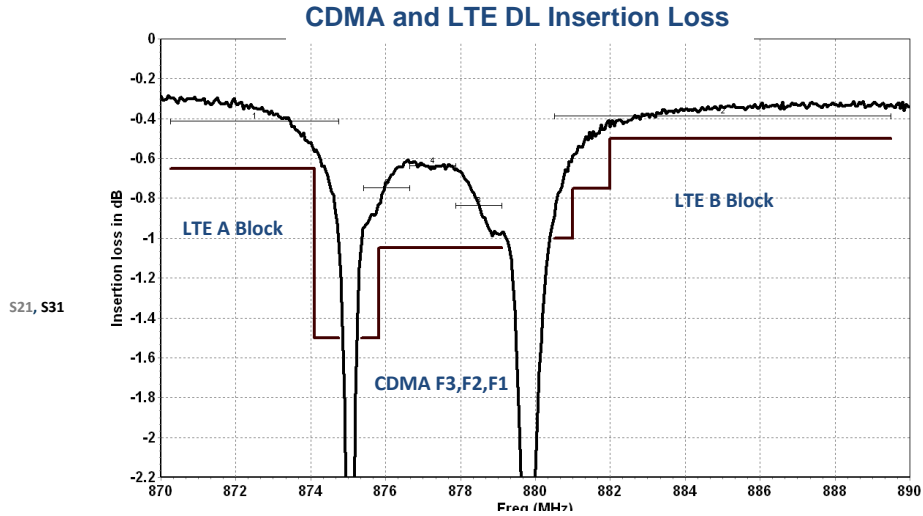
Ordering information	
IBC-850-AB-1PF	In-Band Combiner, 850MHz A+B, Single, DC/AISG-Pass

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850MHz DL sweep plots. Uplink performance is symmetric to DL.



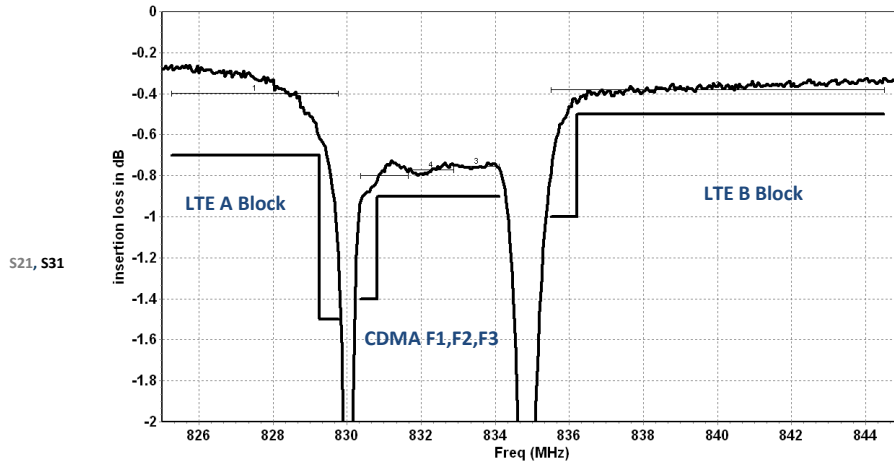
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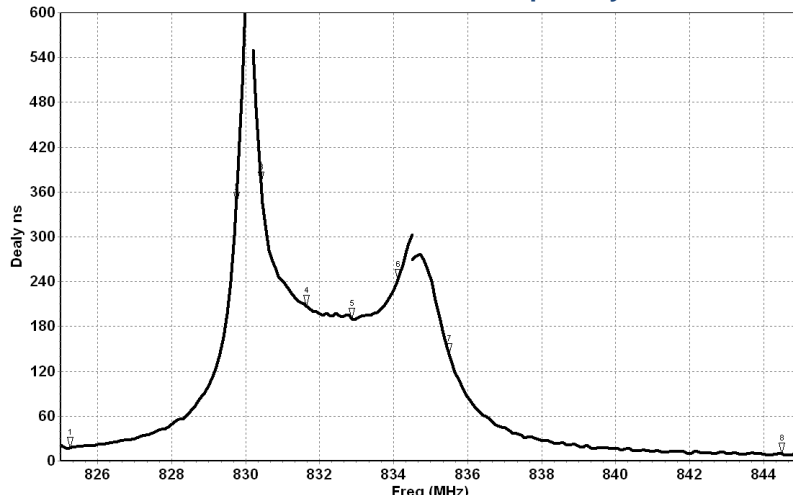


850MHz DL sweep plots. Uplink performance is symmetric to UL.

CDMA and LTE UL Insertion Loss



CDMA and LTE UL Group Delay



CDMA to LTE UL Isolation

