



40V PowerBlox™

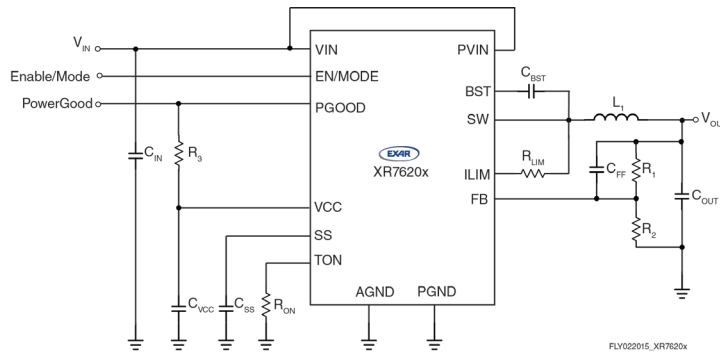
3A/5A/8A Synchronous Step Down Regulators

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- The graph shows Line Regulation (%) on the y-axis (ranging from -1.50 to 1.50) versus V_{IN} (V) on the x-axis (ranging from 0 to 40). Two curves are plotted: a green curve labeled 'Standard COT' and an orange curve labeled 'XR76208'. The 'Standard COT' curve starts at approximately -1.25% at $V_{IN} = 5V$ and rises to about -0.1% at $V_{IN} = 35V$. The 'XR76208' curve starts at approximately -0.1% at $V_{IN} = 5V$ and remains relatively flat, ending at about 0.1% at $V_{IN} = 35V$.
- Below the graph, three EXAR XR76200 series chips are shown, labeled with their respective current ratings: 3A, 5A, and 8A.

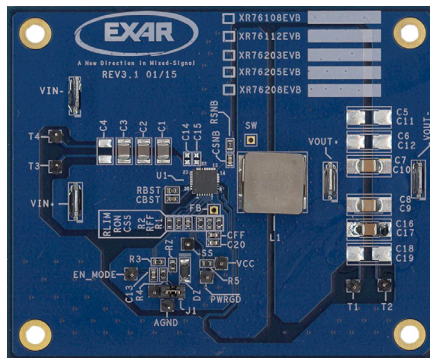
- Excellent line and load regulation compared to standard COT
- Emulated valley current mode
- Stable with ceramic output capacitors
- No compensation required
- Selectable CCM or CCM/DCM modes
- Programmable 150ns – 2μs on-time
- Constant 100kHz – 800kHz switching frequency

Part Number	I _{OUT}	V _{IN} Range	V _{OUT} Range	Frequency	Efficiency	Package	Features
XR76203	3A	3V – 40V	0.6V – 30V	100kHz – 800kHz	95%	5mm x 5mm QFN	Patented COT provides fast transient response with excellent line and load regulation.
XR76205	5A						UVLO, OTP, soft start, adjustable hiccup current limit and short circuit protection.
XR76208	8A						

Exar's COT architecture provides excellent line and load regulation with ceramic capacitors without reducing transient performance.



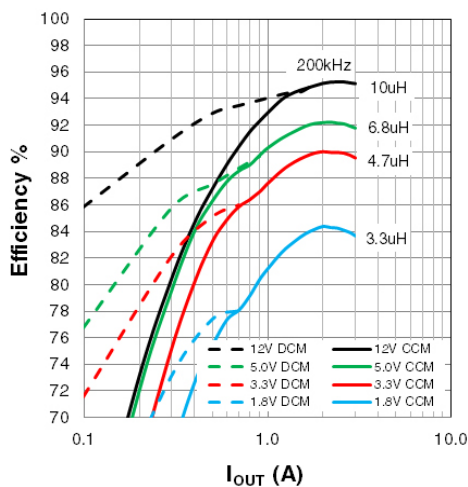
- Adjustable frequency and current limit
- Internal V_{CC} regulator
- No switch node feed-forward compensation components required
- P_{VIN} range 3V – 40V



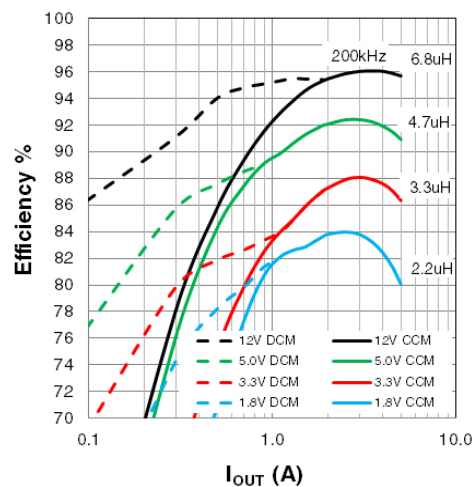
XR76203/5/8 Evaluation Board

Contact customersupport@exar.com for additional information.

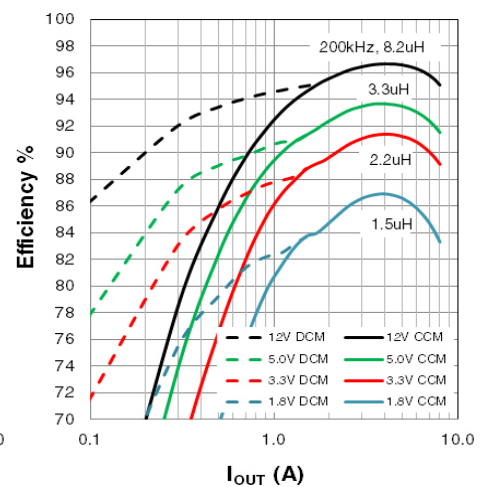
XR76203 Efficiency



XR76205 Efficiency



XR76208 Efficiency



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