

Innovative DC/DC Power Modules

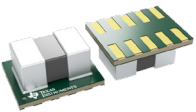
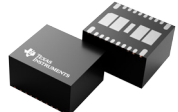
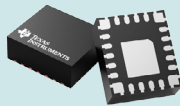
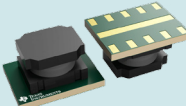

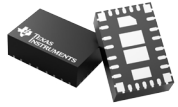


Overview


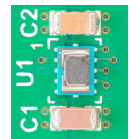
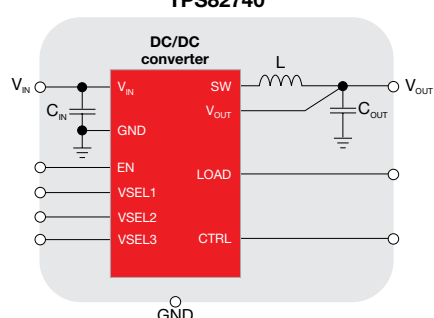
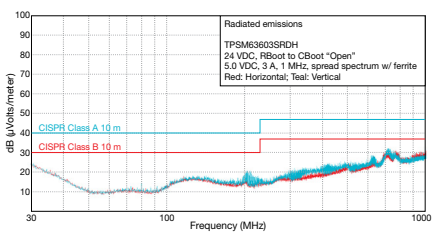
TI's broad portfolio of DC/DC power modules is designed specifically to help engineers get to market faster with validated, high-performance solutions. These power modules integrate inductors, FETs, compensation, and other passive components in a single package to reduce time spent on layout and verification, and speed up time to market with proven reliability.

To browse the entire portfolio and learn more on the latest products, visit: ti.com/powermodules

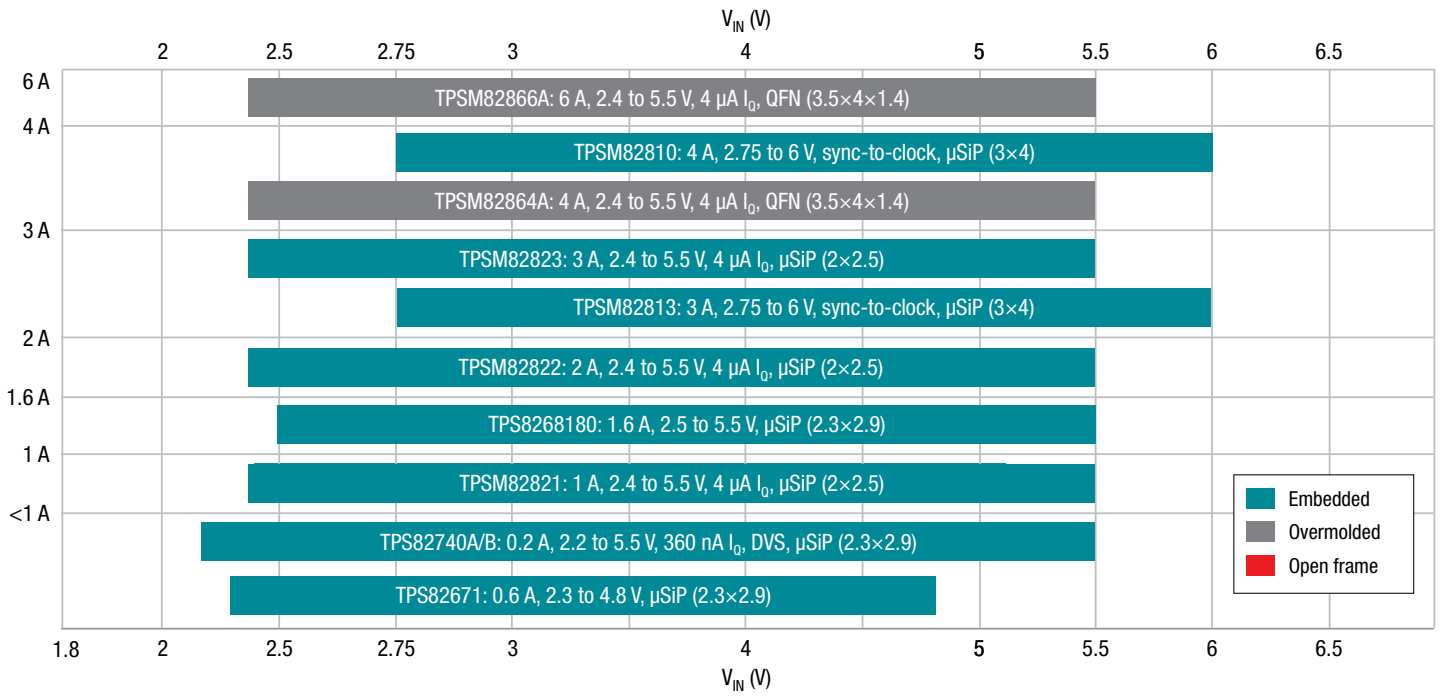
Featured products

<p>TPSM82821/2/3</p> 	<ul style="list-style-type: none"> • 2.4-V to 5.5-V input • 1-A, 2-A, 3-A pin-compatible family • 1% accuracy over temperature, high efficiency up to 95% • 2 mm × 2.5 mm × 1 mm package 	<p>TPSM8A29</p> 	<ul style="list-style-type: none"> • 2.7-V to 16-V input • 15-A I_{OUT} • Reduced external component count with ultra-fast transient response • 6.5 mm × 7.5 mm × 4.0 mm package
<p>TPSM828664A/6A</p> 	<ul style="list-style-type: none"> • 2.4-V to 5.5-V input • 4-A, 6-A pin-compatible family • Selectable low-ripple-forced-PWM mode, 13 selectable fixed or adjustable V_{OUT} options • 3.5 mm × 4 mm × 1.4 mm package 	<p>TPSM265R1</p> 	<ul style="list-style-type: none"> • 3-V to 65-V input • 100-mA I_{OUT} • High light-load efficiency, fixed 3.3 V / 5 V or adjustable V_{OUT} options • 2.8 mm × 3.7 mm × 1.9 mm package
<p>TPSM5D1806</p> 	<ul style="list-style-type: none"> • 4.5-V to 15-V input • Dual-channel 6-A or single 12-A I_{OUT} • Selectable software frequency with sync to external clock capability • 5.5 mm × 8.0 mm × 1.8 mm package 	<p>TLVM13630</p> 	<ul style="list-style-type: none"> • 3-V to 36-V input • 3-A I_{OUT} • FPWM operation, high efficiency up to 95%, 1% accuracy over temperature • 4 mm × 6 mm × 1.8 mm package

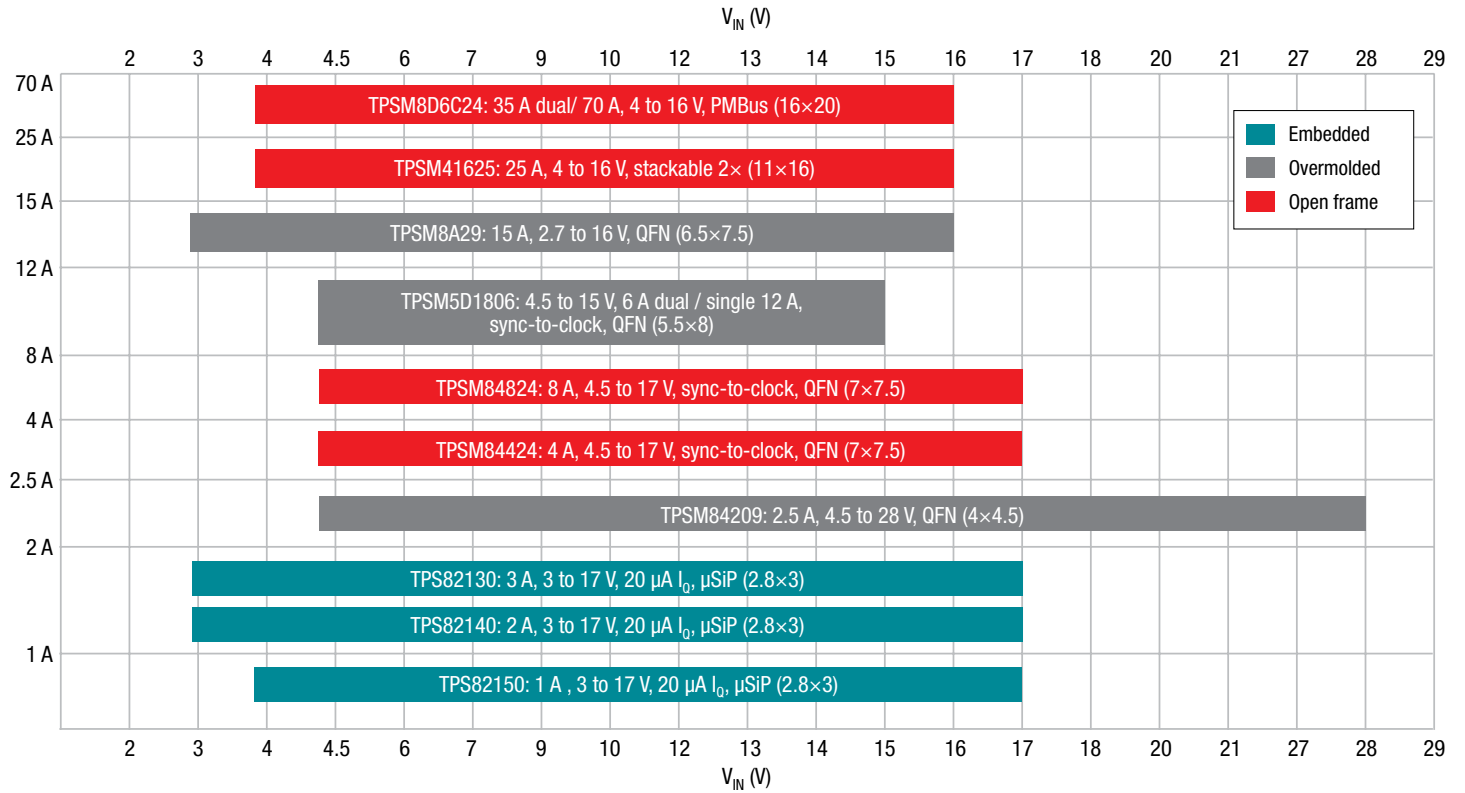
Why power modules?

<p>Smaller size</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="121 1606 324 1837"> <p>LM5165</p>  <p>120 mm²</p> </div> <div data-bbox="397 1606 527 1837"> <p>TPSM265R1</p>  <p>60 mm²</p> </div> </div>	<p>Simple solutions</p> <p>TPS82740</p>  <p>DC/DC converter</p> <p>Inputs: V_{IN}, GND, EN, VSEL1, VSEL2, VSEL3</p> <p>Outputs: SW, V_{OUT}, LOAD, CTRL</p> <p>External components: C_{IN}, L, C_{OUT}</p>	<p>Low EMI</p>  <p>Radiated emissions</p> <p>TPSM63603SRDH</p> <p>24 VDC, Rload to CBoot "Open"</p> <p>5.0 VDC, 9 A, 1 MHz, spread spectrum w/ ferrite</p> <p>Red: Horizontal; Teal: Vertical</p> <p>Legend: CISPR Class A 10 m, CISPR Class B 10 m</p>
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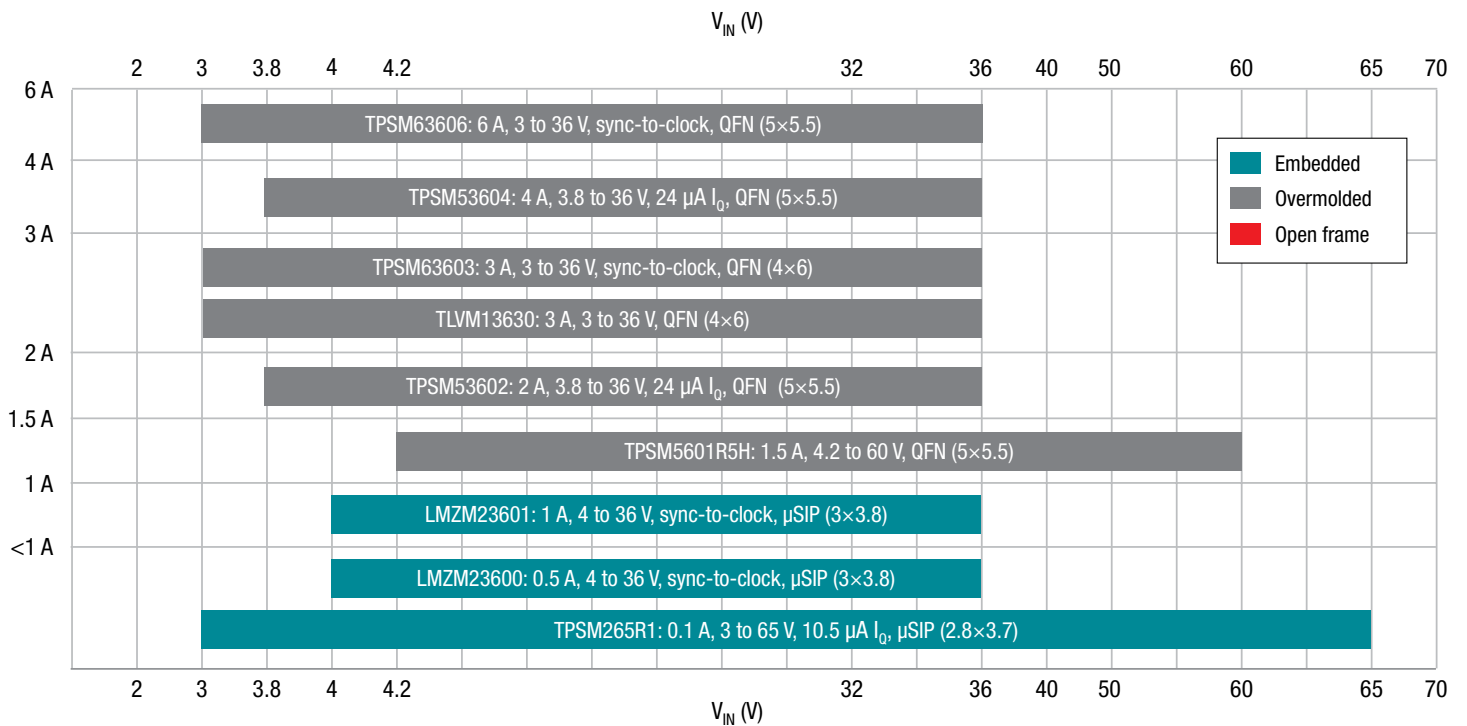
Low V_{IN} (<7 V)



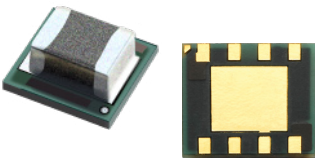
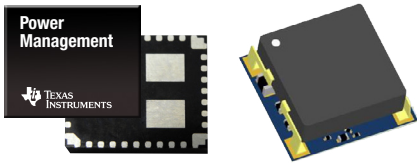
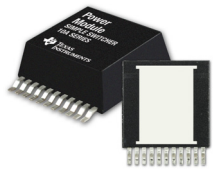
Mid V_{IN} (7 V to 30 V)



Wide V_{IN} (>30 V)



TI module packages

	Embedded	QFN	Leaded
Package outline	BGA / LGA (QFN-like) 	QFN style 	TO-style 
Description	<ul style="list-style-type: none"> LGA QFN pinless package Embedded die in FR laminate (LGA or BGA pads) MSL2/3 Highest-density package 	<ul style="list-style-type: none"> QFN-style pinless package Single copper leadframe MSL3 Size-optimized package Excellent thermals 	<ul style="list-style-type: none"> TO-style pinned package Dual copper leadframe 7- and 11-pin versions MSL3 Large single-thermal pad Easy to use

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