

Powerex is a leading supplier of discrete, modular and integrated high power semiconductor solutions, supporting many markets, including:

AC, DC and Servo Drives (Low and Medium Voltage)

Aircraft

- Electro-Hydrostatic Actuators
- Power Generators

Alternative Energy and Distributed Power

- Wind
- Photovoltaic
- Flywheel
- Fuel Cell
- Microturbine

Electric Vehicles

Induction Heating

Industrial Pump Controls

Medical Power Supplies

- CT
- MRI
- X-Ray

Power Generation and Distribution

Pulsed Power

Transportation

- Propulsion and Auxiliary Power for Rail and Shipboard

Uninterruptible Power Supplies (UPS)

Welding

White Goods and HVAC

Powerex and its strategic partners maintain a commitment to research and innovative product development to meet customer power semiconductor requirements, including:

- Decreased Component Size
- Reduced Costs
- Increased Energy Efficiency
- Switches that
 - Operate at Higher Frequencies
 - Are More Reliable
 - Offer Integrated Functions

This broad product line is enhanced by business units devoted to the development of:

- Custom Modules
- Customer Specific Assemblies

Powerex standard and custom products are all supported by its world-class applications engineering staff.

POWEREX[®]

173 Pavilion Lane, Youngwood, PA 15697

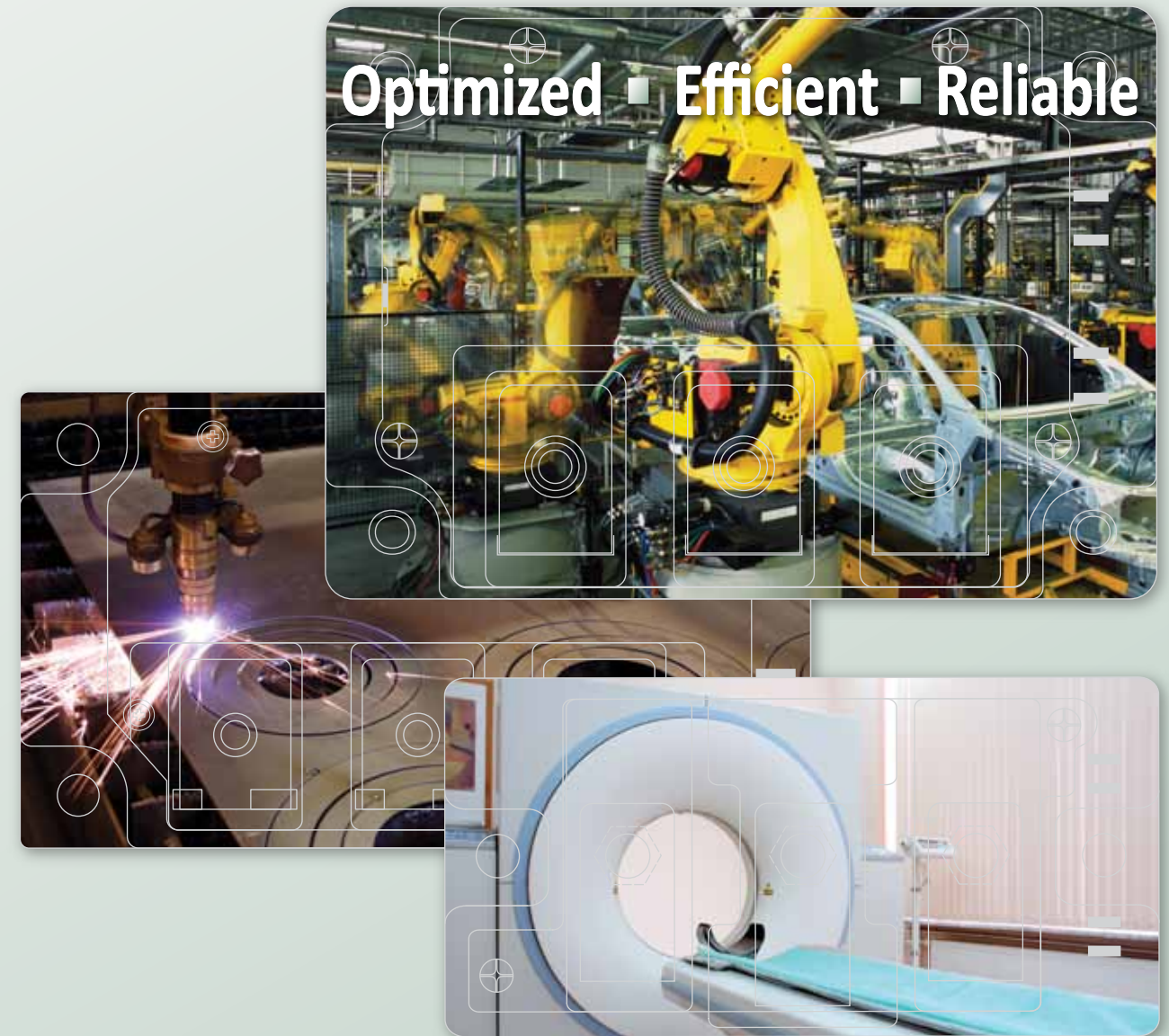
724-925-7272 www.pwrx.com

CSTBT is a registered trademark of Mitsubishi Electric Corp.



POWEREX[®]
Power Semiconductor Solutions

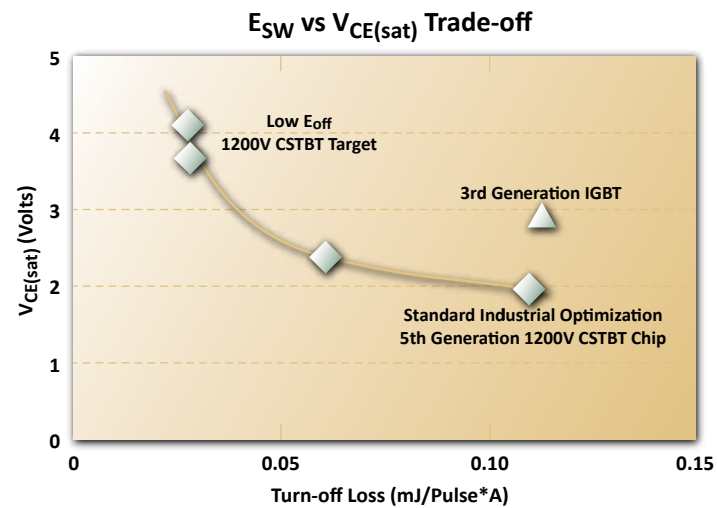
Optimized Efficient IGBT Modules for High Frequency Applications



Optimized

Optimized on-state voltage results in the lowest E_{off} from proven Carrier Stored Trench Gate Bipolar Transistor (CSTBT™) chip technology. The 1200V CSTBT chip utilizes an optimized vertical structure based on Light Punch-Through (LPT) technology providing the efficient high speed switching characteristics as shown in the graph below.

These devices are the industry's fastest switching high current IGBT modules.



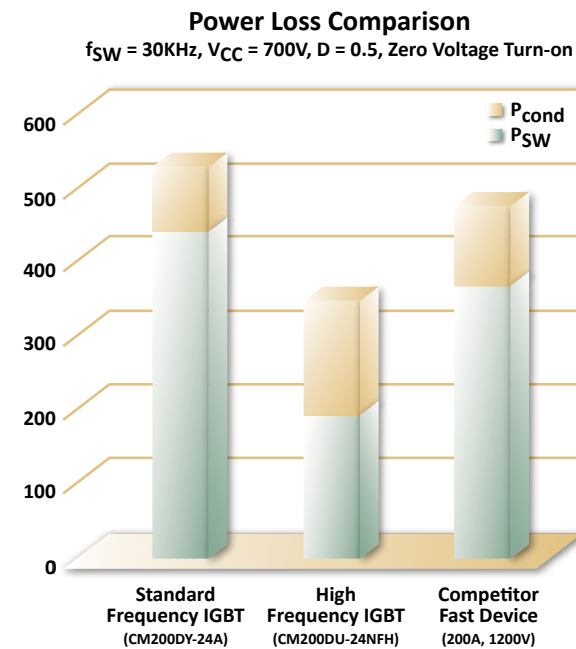
Efficient

The CSTBT chips are packaged, along with optimized free wheel diodes, in a low inductance dual package to provide high performance and simplified design in a variety of high frequency industrial inverter applications. Applications include: X-Ray machines, plasma cutters, industrial welders, and MRI amplifiers.

The optimized IGBTs provide ~60% reduction in total power loss compared to the conventional IGBT in higher frequency applications.

Other key features include:

- Excellent performance in soft switching applications (resonant modes).
- Significant improvement in power cycling capability
- RoHS Compliant



Reliable

These high frequency IGBT modules are designed to provide a simplified, cost-effective, reliable alternative to many parallel discrete MOSFETs typically used in high frequency industrial applications.

Find Out More


Applications Support

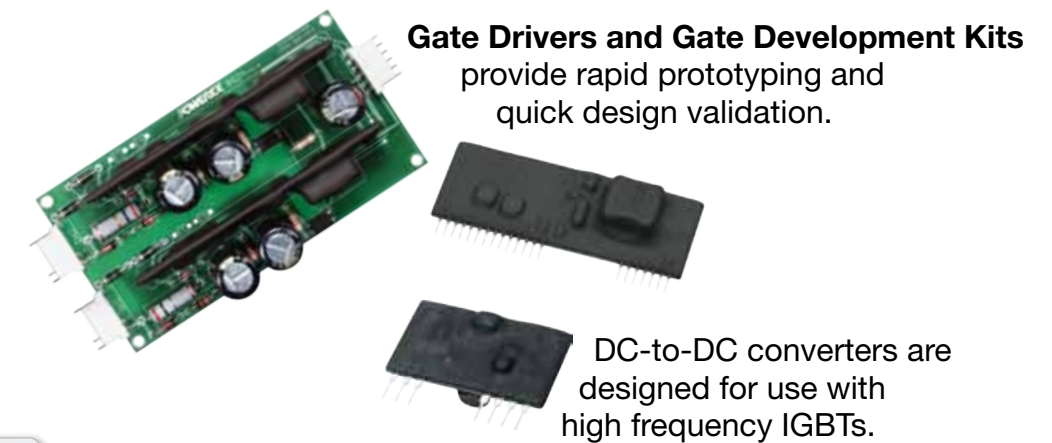
Do you need help to determine the optimal solution for your application?

Contact our Applications Engineering Team at HFhelp@pwr.com.

Powerex Tools for Rapid Design and Validation

Powerex tools help you achieve efficient, reliable designs that go to market faster.

 **MITSUBISHI ELECTRIC** Mitsubishi Power Module Loss Simulator (MELCOSIM) software, available at www.pwr.com, validates device selection based on your specific conditions.



110mm X 80mm

600V Duals	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM600DU-12NFH	600	600	VLA502-01	VLA502-01	BG2A

1200V Duals	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM400DU-24NFH	1200	400	VLA502-01	VLA502-01	BG2A-NFH
CM400DU-24NFJ	1200	400	VLA502-01	VLA502-01	BG2A-NFH
CM600DU-24NFH	1200	600	VLA502-01	VLA502-01	BG2A-NFH

1200V Dual	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM300DX1-24NFJ 152mm X 62mm	1200	300	VLA513-01	VLA106-15242 or VLA106-24242	BG2A-NFH

108mm X 62mm

600V Duals	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM300DU-12NFH	600	300	VLA503-01	VLA106-15242	BG2B-5015
CM400DU-12NFH	600	400	VLA503-01	or VLA106-24242	

1200V Duals	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM200DU-24NFH	1200	200	VLA502-01	VLA502-01	BG2A-NFH
CM300DU-24NFH	1200	300	VLA502-01	VLA502-01	BG2A-NFH

1200V Choppers	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM300E3Y6-24NFH	1200	300	VLA502-01	VLA502-01	BG2A-NFH
CM400E376-24NFH	1200	400	VLA502-01	VLA502-01	BG2A-NFH

94mm X 48mm

600V Duals	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM100DUS-12F	600	100	VLA504-01	VLA106-15242	
CM150DUS-12F	600	150	VLA504-01	or VLA106-24242	BG2C-3015
CM200DU-12NFH	600	200	VLA504-01		

1200V Duals	V _{CES} (V)	I _C (A)	Recommended Gate Driver	Recommended DC-to-DC Converter	Interface Circuit Ref. Design
CM100DU-24NFH	1200	100	VLA513-01	VLA106-15242	
CM150DU-24NFH	1200	150	VLA513-01	or VLA106-24242	BG2C-3015