



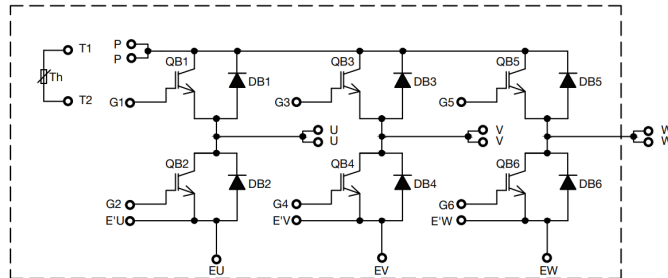
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Fast Facts

Product Group: Vishay Semiconductors, Power Modules / June 2025

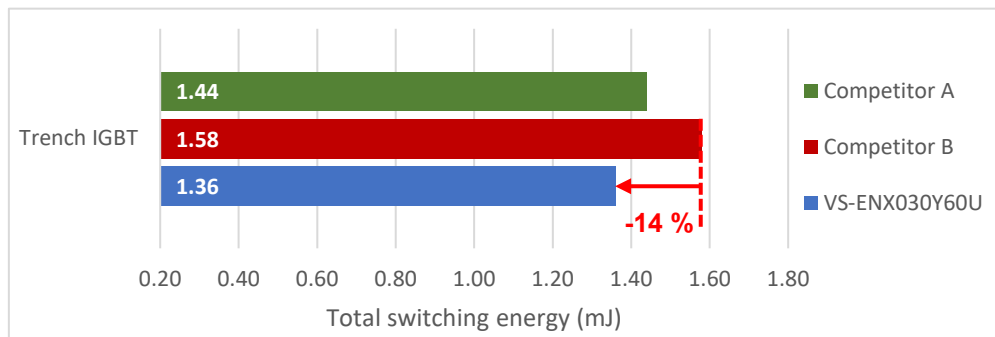


# New VS-ENX030Y60U 600 V IGBT Three-Phase Inverter Offers Low Dynamic Losses for High Switching Frequencies in Industrial Motor Drives



Following the market trends for industrial motor drives, Vishay's Power Modules subdivision has released the VS-ENX030Y60U, a six-pack IGBT module in the versatile EMIPAK 1B package. The device features trench field-stop IGBT technology optimized for high speed switching applications, paired with our FRED Pt® Gen 4 freewheeling diodes for ultrasoft behavior during reverse recovery.

The module presents low turn-on and turn-off energies that can improve the switching losses of motor inverters or active front-end circuits by up to 14 % when compared to competing devices sharing the same technology. This enables an increased switching frequency to achieve higher power density in a small footprint.



The EMIPAK 1B package features PressFit pins to allow easy mounting of the module and an exposed DBC substrate to lower the overall thermal resistance  $R_{th,JS}$ .



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## Device Specification Table


Vishay Part Number	Package	Type	$V_{ces}$	$I_c$	$V_{ce, sat}^{(1)}$	$E_{on}^{(2)}$	$E_{off}^{(2)}$
<a href="#">VS-ENX030Y60U</a>	EMIPAK 1B	Industrial	600 V	30 A	1.6 V	0.59 mJ	0.77 mJ

### Notes

(1) Typical value at  $I_c = 30\text{ A}$ ,  $T_J = 25\text{ °C}$

(2) Typical value at  $I_c = 30\text{ A}$ ,  $V_{cc} = 300\text{ V}$ ,  $R_g = 10\text{ }\Omega$ ,  $T_J = 125\text{ °C}$

## Features

- Trench field-stop IGBT technology
- Low switching energies for improved performance at high frequencies
- FRED Pt® Gen 4 technology for ultrasoft recovery during freewheeling operation
- Electrically isolated base plate
- Exposed  $\text{Al}_2\text{O}_3$  substrate with low thermal resistance
- UL-approved (file E78996) 

## Main Applications

- Motor drives
- HVAC / heat pumps
- UPS applications
- Industrial power converters
- Switching power supplies

## Useful Links

- [Datasheet](#)
- [Product page](#)
- [IGBT Modules](#)
- [Order samples](#)
- [EMIPAK 1B mounting instructions](#)

For further information, please contact your regional Vishay office.

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