

## **Insulated gate bipolar transistors intended for appliance and light industrial motor drive applications**



International Rectifier announced the expansion of its family of Insulated Gate Bipolar Transistors (IGBTs) with the introduction of the [IRGR4045DPbF](#) [1] and [IRGS4045DPbF](#) [2]. The new 600V Trench ultrafast IGBTs offer improved performance and higher efficiency for appliance and light industrial motor drive applications including [washers](#) [3] and [refrigerators](#) [4].

The IRGR4045DPbF and IRGS4045DPbF utilize IR's thin wafer Field-Stop Trench technology that significantly reduces switching and conduction losses to deliver higher power density and greater efficiency at higher frequencies. Co-packaged with a diode and available in DPAK and D2Pak packages, the new IGBTs feature a nominal current of 6A and a minimum short circuit rating of  $\geq 5\mu\text{s}$ .

The new devices also offer low  $V_{CE(on)}$  to reduce power dissipation and achieve higher power density, and positive  $V_{CE(on)}$  temperature coefficient for easy paralleling. The IRGR4045DPbF and IRGS4045DPbF are suitable for a wide range of switching frequencies, optimized up to 20kHz.

"The IRGR4045DPbF and IRGS4045DPbF expand IR's extensive portfolio of IGBTs and offer a highly efficient and reliable solution for high performance appliance and light industrial applications," said Llewellyn Vaughan-Edmunds, IGBT Product Marketing Manager, IR's Energy Saving Products Business Unit.

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Offered as both die and packaged devices other key features of the IRGR4045DPbF and IRGS4045DPbF include optimized square reverse bias safe operating area (RBSOA), maximum junction temperature of 175 °C and low EMI for improved reliability.

## Specifications

Part Number	Package	BV	Ic(100C)	Vceon	Rth(j-c)	Type
IRGR4045DPBF	DPAK	600	6	1.7	1.9 °C/W	Ultra
IRGS4045DPBF	D2PAK	600	6	1.7	1.9 °C/W	Ultra

Datasheets and an IGBT online selection tool are available on the International Rectifier website at [www.irf.com](http://www.irf.com) [5]. The selection tool can be accessed directly at [mypower.irf.com/IGBT](http://mypower.irf.com/IGBT). For information about die products, please contact [diesales@irf.com](mailto:diesales@irf.com) [6].

## Availability and pricing

Pricing for the devices begins at US \$1.31 for the IRGR4045DPBF and US \$1.10 for the IRGS4045DPBF each in 10,000-unit quantities. Production orders are available immediately. The devices are RoHS compliant and prices are subject to change.

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## Links:

- [1] <http://www.irf.com/product-info/datasheets/data/irgr4045dpbf.pdf>
- [2] <http://www.irf.com/product-info/datasheets/data/irgs4045dpbf.pdf>
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- [5] <http://www.irf.com/>
- [6] <mailto:diesales@irf.com>