600V Trench IGBTs in D2Pak- high power density in hybrid and electric vehicle applications

International Rectifier [1], IR, today announced the introduction of a family of automotive-qualified 600V IGBTs for electric and hybrid vehicle [2] applications including air conditioner inverters [3], pumps and Positive Temperature Coefficient (PTC) heaters.

Co-packaged with a diode and available in a D2Pak package for compact surface mount systems, the new 600V trench IGBTs feature a nominal current of 24A and a minimum short circuit rating of 5?s. The new devices also offer low VCE(on) to reduce power dissipation and achieve higher power density, and positive VCE(on) temperature coefficient making the devices well suited for paralleling. The family of IGBTs also features an optimized square reverse bias safe operating area (RBSOA), and up to 175°C maximum operating temperature.

The new IGBT is also available in TO-262 and TO-220 packages for standard through-hole assembly. IR's automotive IGBTs are subject to dynamic and static part average testing combined with 100 percent automated wafer level visual inspection as part of IR's automotive quality initiative targeting zero defects. The new devices are all environmentally friendly and assembled with IR's automotive grade bill of materials which are lead-free and RoHS compliant.

Specifications:

Part Number	Package	VCES	Ic max @ 100C	Vce(on) typ. @ 25?C	tSC	Integrated Diode
AUIRGS4062D1 [4]	D2Pak	600V	24A	1.60	? 5?s	YES
AUIRGSL4062D1 [4]	TO-262	600V	24A	1.60	? 5?s	YES
AUIRGB4062D1 [5]	TO-220	600V	24A	1.60	? 5?s	YES

www.irf.com [1]

Posted by Sara Cohen, Editorial Intern

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