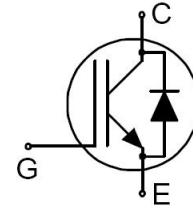


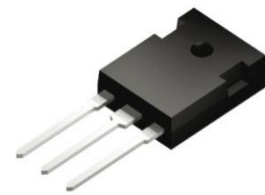
## 600V , 40A , Trench-FS IGBT

### Features

- ◆ Advanced Trench+FS (Field Stop) IGBT technology
- ◆ Low Collector-Emitter Saturation voltage, typical data is 1.75V @ 40A.
- ◆ Easy parallel switching capability due to positive Temperature coefficient in Vce.
- ◆ 10uS short-circuit
- ◆ Fast switching
- ◆ High input impedance
- ◆ Pb- Free product



Schematic Diagram



TO-247

### Applications

- ◆ Welding
- ◆ General general-purpose inverter
- ◆ Motor control
- ◆ Intelligent power module.

### Electrical characteristics(T<sub>J</sub> = 25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Units	Min.	Typ.	Max.
V <sub>(BR)CES</sub>	Collector - Emitter breakdown voltage	V <sub>GE</sub> = 0V, I <sub>D</sub> =250uA	V	600	—	—
V <sub>CE(sat)</sub>	Collector-Emitter Saturation voltage	V <sub>GE</sub> =15V, I <sub>C</sub> =40A,T <sub>C</sub> =25°C	V	—	1.75	2.3
		V <sub>GE</sub> =15V, I <sub>C</sub> =40A,T <sub>C</sub> =125°C	V	—	1.95	—
V <sub>GE(th)</sub>	Gate threshold voltage	V <sub>GE</sub> = V <sub>CE</sub> , I <sub>C</sub> = 0.25 mA	V	4.0	5.2	6.5
V <sub>f</sub>	Diode forward voltage	I <sub>F</sub> =40A	V	—	1.5	1.8
I <sub>GES</sub>	Gate to Emitter Forward Leakage	V <sub>ge</sub> =+30V	nA	—	—	200
I <sub>GESR</sub>	Gate to Emitter reverse Leakage	V <sub>ge</sub> =-30V		-200	—	—
I <sub>CES</sub>	Zero gate voltage collector current	V <sub>CE</sub> =600V	uA	—	—	25