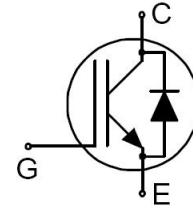


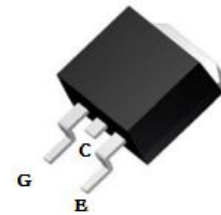
### 600V , 6A , Trench-FS IGBT

#### Features

- ◆ Advanced Trench+FS (Field Stop) IGBT technology
- ◆ Low Collector-Emitter Saturation voltage, typical data is 2.1V @ 6A.
- ◆ Easy parallel switching capability due to positive Temperature coefficient in  $V_{ce}$ .
- ◆ 10uS Short-Circuit
- ◆ Fast switching
- ◆ High input impedance
- ◆ Pb- Free product



Schematic Diagram



D2pak

#### Applications

- ◆ Home applications
- ◆ Intelligent power module.

#### Electrical characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

| Symbol        | Parameter                             | Test conditions                             | Units   | Min. | Typ. | Max. |
|---------------|---------------------------------------|---|---------|------|------|------|
| $V_{(BR)CES}$ | Collector - Emitter breakdown voltage | $V_{GE} = 0V, I_D = 250\mu A$               | V       | 600  | —    | —    |
| $V_{CE(sat)}$ | Collector-Emitter Saturation voltage  | $V_{GE}=15V, I_C=6A, T_C=25^\circ\text{C}$  | V       | —    | 2.1  | 2.4  |
|               |                                       | $V_{GE}=15V, I_C=6A, T_C=150^\circ\text{C}$ | V       | —    | 2.3  | —    |
| $V_{GE(th)}$  | Gate threshold voltage                | $V_{GE}=V_{CE}, I_c = 0.25mA$               | V       | 4.0  | 5.4  | 6.5  |
| $V_F$         | Diode forward voltage                 | $I_F=6A, T_C=25^\circ\text{C}$              | V       | —    | 1.7  | 2.1  |
|               |                                       | $I_F=6A, T_C=150^\circ\text{C}$             | V       | —    | 1.3  | —    |
| $I_{GES}$     | Gate to Emitter Forward Leakage       | $V_{ge}=+30V$                               | nA      | —    | —    | 200  |
| $I_{GESR}$    | Gate to Emitter reverse Leakage       | $V_{ge}=-30V$                               |         | -200 | —    | —    |
| $I_{CES}$     | Zero gate voltage collector current   | $V_{CE} = 600V$                             | $\mu A$ | —    | —    | 25   |