

TPS40N60T

600V 40A Trench-FS IGBT

Features

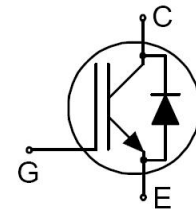
Advanced Trench+FS (Field Stop) IGBT technology
 Low Collector-Emitter Saturation voltage, typical data is 1.75V @ 40A.
 Easy parallel switching capability due to positive Temperature coefficient in V_{ce} .
 10uS short-circuit
 Fast switching
 High input impedance
 Pb- Free product



TO-247

Applications

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



Schematic Diagram

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	$V_{GE}=15V, I_C=40A, T_C=25^\circ\text{C}$	V	—	1.75	2.3
		$V_{GE}=15V, I_C=40A, T_C=125^\circ\text{C}$	V	—	1.95	—
$V_{GE(th)}$	Gate threshold voltage	$V_{GE} = V_{CE}, I_C = 0.25 \text{ mA}$	V	4.0	5.2	6.5
V_f	Diode forward voltage	$I_F=40A$	V	—	1.5	1.8
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	$V_{CE} = 600V$	μA	—	—	25