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NTE3320

Insulated Gate Bipolar Transistor N-Channel Enhancement Mode, High Speed Switch

Features:

- Fourth Generation IGBT
- Enhancement Mode Type
- High Speed
- Low Switching Loss
- Low Saturation Voltage

Applications:

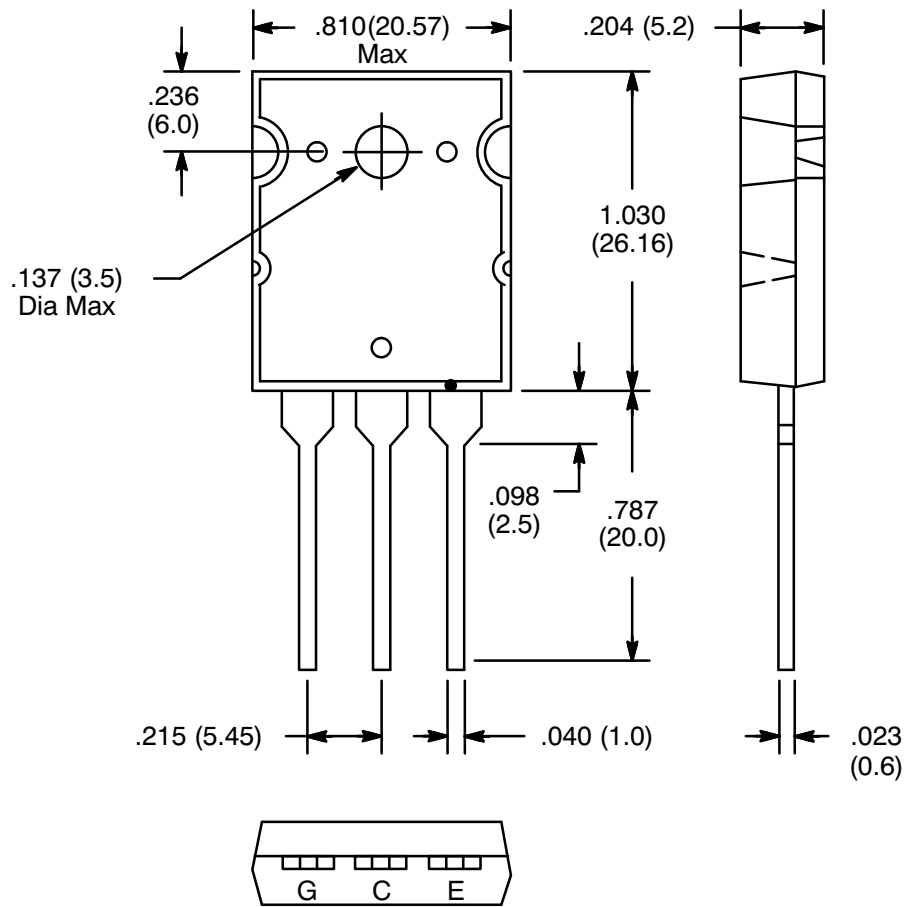
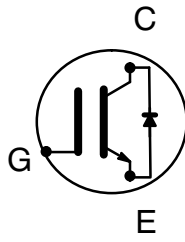
- High Power Switching

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector-Emitter Voltage, V_{CES}	600V
Gate-Emitter Voltage, V_{GES}	$\pm 20\text{V}$
Collector Current, I_C	
DC	50A
Pulse (1ms)	100A
Collector Power Dissipation ($T_C = +25^\circ\text{C}$), P_C	240W
Operating Junction Temperature, T_J	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$
Thermal Resistance, Junction-to-Case, $R_{th(j-c)}$	0.521°C/W
Screw Torque	0.8Nm

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate Leakage Current	I_{GES}	$V_{GE} = \pm 20\text{V}, V_{CE} = 0$	-	-	± 500	nA
Collector Cutoff Current	I_{CES}	$V_{CE} = 600\text{V}, V_{GE} = 0$	-	-	1.0	mA
Gate-Emitter Cutoff Voltage	$V_{GE(off)}$	$I_C = 5\text{ mA}, V_{CE} = 5\text{V}$	3.5	-	6.5	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{A}, V_{GE} = 15\text{V}$	-	2.0	2.45	V
Input Capacitance	C_{ies}	$V_{CE} = 10\text{V}, V_{GE} = 0, f = 1\text{MHz}$	-	7900	-	pF
Turn-On Delay Time	$t_{d(on)}$	Inductive Load $V_{CC} = 300\text{V}, I_C = 50\text{ A},$ $V_{GG} = 15\text{V}, R_G = 13\ \Omega$	-	0.09	-	μs
Rise Time	t_r		-	0.07	-	μs
Turn-On Time	t_{on}		-	0.24	-	μs
Turn-Off Delay Time	$t_{d(off)}$		-	0.30	-	μs
Fall Time	t_f		-	0.05	-	μs
Turn-Off Time	t_{off}		-	0.43	-	μs
Turn-On Switching Loss	E_{on}		-	1.30	-	mJ
Turn-Off Switching Loss	E_{off}		-	1.34	-	mJ



Note: Collector connected to heat sink.