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RoHS 2002/95/EC

NTE3322
Insulated Gate Bipolar Transistor
N–Channel Enhancement Mode,
High Speed Switch
TO3P Type Package

Features:
- Enhancement Mode Type
- FRD Included Between Emitter and Collector
- High Speed
- Low Saturation Voltage

Applications:
- High Power Switching

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

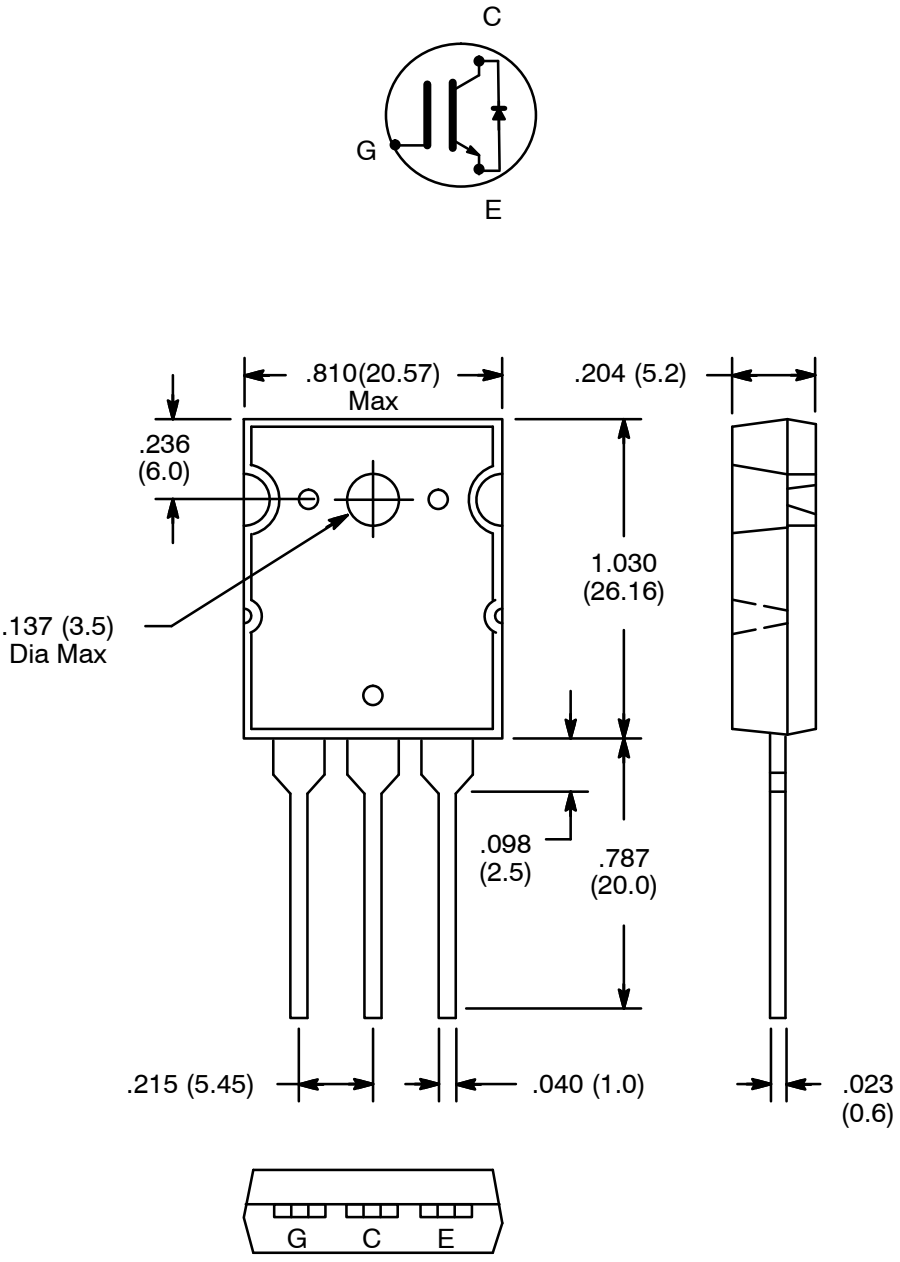
Collector–Emitter Voltage, V_{CES} 900V
Gate–Emitter Voltage, V_{GES} . . . . . ±25V
Collector Current, I_C
  DC 60A
  Pulse (1ms) 120A
Emitter–Collector Foward Current, I_{EC}
  DC 15A
  Pulse (1ms) 120A
Collector Power Dissipation (T_C = +25°C), P_C 170W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Thermal Resistance, Junction–to–Case, R_{thJC}
  IGBT . . . . . 0.74°C/W
  Diode . . . . . 4.0°C/W
Screw Torque . . . . . 0.8N•m

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate Leakage Current	I_{GES}	V_{GE} = ±25V, V_{CE} = 0	–	–	±500	nA
Collector Cutoff Current	I_{CES}	V_{CE} = 900V, V_{GE} = 0	–	–	1.0	mA
Gate–Emitter Cutoff Voltage	$V_{GE(off)}$	I_C = 60mA, V_{CE} = 5V	3.0	–	6.0	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10A, V_{GE} = 15V	–	1.6	2.2	V
		I_C = 60A, V_{GE} = 15V	–	2.1	2.7	V

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{ies}	V_{CE} = 10V, V_{GE} = 0, f = 1MHz	–	3800	–	pF
Rise Time	t_r	V_{CC} = 600V	–	0.35	0.60	μs
Turn−On Time	t_{on}		–	0.46	0.75	μs
Fall Time	t_f		–	0.25	0.40	μs
Turn−Off Time	t_{off}		–	0.60	0.70	μs
Emitter−Collector Forward Voltage	V_{ECF}	I_{EC} = 15A, V_{GE} = 0	–	1.5	2.0	V
Reverse Recovery Time	t_{rr}	I_F = 15A, V_{GE} = 0, di/dt = −20A/μs	–	0.7	2.5	μs



Note: Collector connected to heat sink.