

NTE3301 Insulated Gate Bipolar Transistor N-Channel Enhancement Mode, High Speed Switch

Features:

- High Input Impedance
- Low Saturation Voltage
- Enhancement Mode
- 20V Gate Drive

Applications:

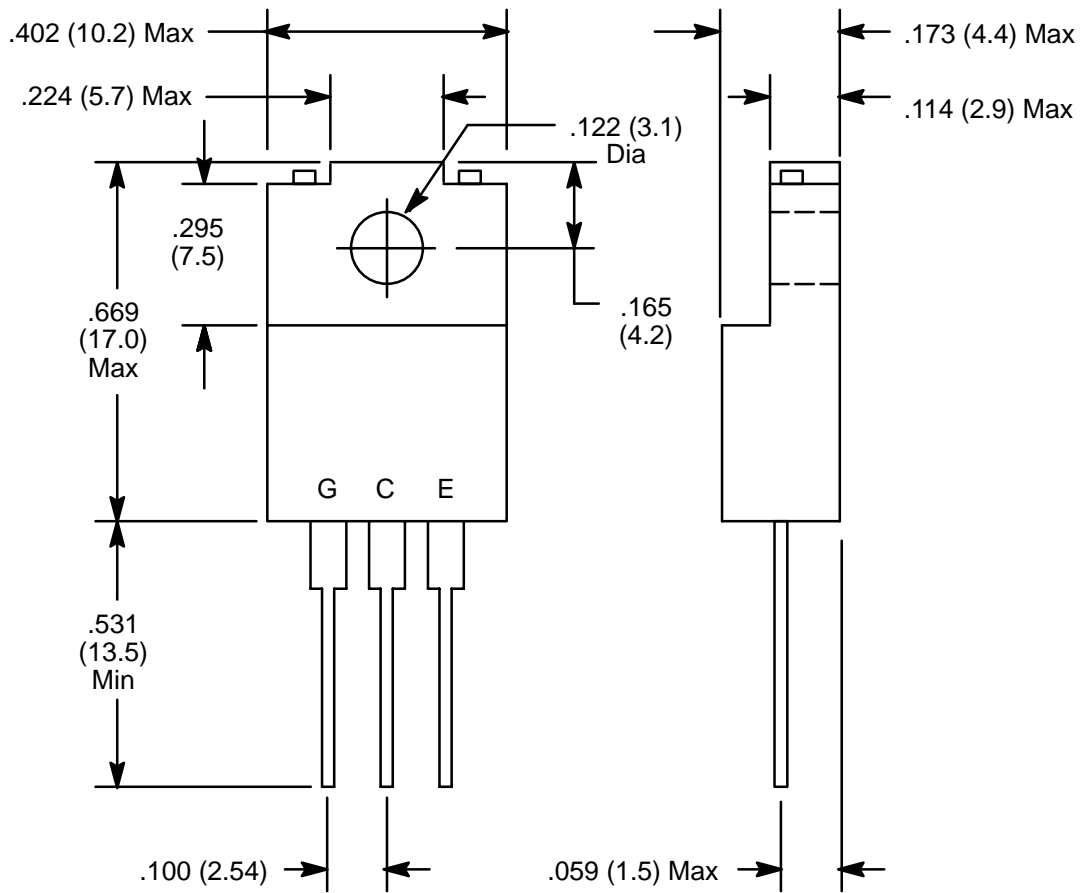
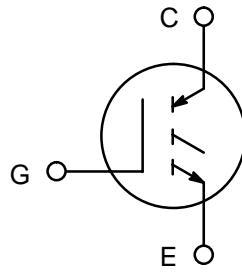
- High Power Switching
- Motor Control

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

Collector-Emitter Voltage, V_{CES}	400V
Gate-Emitter Voltage, V_{GES}	$\pm 25\text{V}$
Collector Current, I_C	
DC	15A
Pulse (1ms)	170A
Collector Power Dissipation, P_C	
$T_A = +25^\circ\text{C}$	2W
$T_C = +25^\circ\text{C}$	40W
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_{thJC}	3.12°C/W
Screw Torque	$0.6\text{N}\cdot\text{m}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate Leakage Current	I_{GES}	$V_{GE} = \pm 25\text{V}, V_{CE} = 0$	–	–	± 100	nA
Collector Cutoff Current	I_{CES}	$V_{CE} = 400\text{V}, V_{GE} = 0$	–	–	1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = 2\text{mA}, V_{GE} = 0$	400	–	–	V
Gate-Emitter Cutoff Voltage	$V_{GE(off)}$	$I_C = 1\text{mA}, V_{CE} = 5\text{V}$	4.0	5.0	7.0	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 170\text{A}, V_{GE} = 20\text{V}$ (Pulsed)	–	5.0	8.0	V
Input Capacitance	C_{ies}	$V_{CE} = 10\text{V}, V_{GE} = 0, f = 1\text{MHz}$	–	2000	–	pF
Rise Time	t_r	$V_{CC} = 300\text{V}$	–	0.1	0.5	μs
Turn-On Time	t_{on}		–	0.15	0.50	μs
Fall Time	t_f		–	4.0	6.0	μs
Turn-Off Time	t_{off}		–	4.5	7.0	μs



NOTE: Tab is isolated