

NTE3311

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

Features:

- High Input Impedance
- High Speed
- Low Saturation Voltage
- Enhancement Mode

Applications:

- High Power Switching
- Motor Control

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	25A
Pulse (1ms)	50A
Collector Power Dissipation ($T_C = +25^\circ\text{C}$), P_C	150W
Operating Junction Temperature, T_J	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

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
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = 2\text{mA}, V_{GE} = 0$	600	–	–	V
Gate-Emitter Cutoff Voltage	$V_{GE(off)}$	$I_C = 25\text{mA}, V_{CE} = 5\text{V}$	3.0	–	6.0	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 25\text{A}, V_{GE} = 15\text{V}$	–	3.0	4.0	V
Input Capacitance	C_{ies}	$V_{CE} = 10\text{V}, V_{GE} = 0, f = 1\text{MHz}$	–	1400	–	pF
Rise Time	t_r	$V_{CC} = 300\text{V}$	–	0.30	0.60	μs
Turn-On Time	t_{on}		–	0.40	0.80	μs
Fall Time	t_f		–	0.15	0.35	μs
Turn-Off Time	t_{off}		–	0.50	1.00	μs

