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## NTE2675 Silicon NPN Transistor High Voltage High Speed Switch TO3PN Type Package

**Features:**

- High Reliability
- High Voltage, High Speed Switching

**Applications:**

- Switching Regulators
- Ultrasonic Generators
- High Frequency Inverters
- General Purpose Power Amplifiers

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

Collector–Base Voltage (Open Emitter), $V_{CBO}$ .....	900V
Collector–Emitter Voltage (Open Base), $V_{CEO}$ .....	800V
Emitter–Base Voltage (Open Collector), $V_{EBO}$ .....	10V
Collector Current, $I_C$ .....	6A
Base Current, $I_B$ .....	3A
Collector Power Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_C$ .....	100W
Operating Junction Temperature, $T_J$ .....	$+150^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+150^\circ\text{C}$
Thermal Resistance, Junction–to–Case, $R_{thJC}$ .....	$1.25^\circ\text{C/W}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$ , $I_B = 0$	800	–	–	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}$ , $I_E = 0$	900	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}$ , $I_B = 0$	10	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2\text{A}$ , $I_B = 400\text{mA}$	–	–	1.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2\text{A}$ , $I_B = 400\text{mA}$	–	–	1.5	V

**Electrical Characteristics (Cont'd):** ( $T_J = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = 900\text{V}, I_E = 0$	-	-	1.0	mA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = 10\text{V}, I_C = 0$	-	-	1.0	mA
DC Current Gain	$h_{FE}$	$I_C = 2\text{A}, V_{CE} = 5\text{V}$	10	-	-	
Turn-On Time	$t_{on}$	$I_C = 3\text{A}, I_{B1} = 600\text{mA}, I_{B2} = 1.2\text{A}, R_L = 100\Omega, P_W = 20\mu\text{s}, \text{Duty} \leq 2\%$	-	-	1.0	$\mu\text{s}$
Storage Time	$t_{stg}$		-	-	4.0	$\mu\text{s}$
Fall Time	$t_f$		-	-	0.8	$\mu\text{s}$

