

## NTE2590 Silicon NPN Transistor High Voltage Amp/Switch

### Features:

- High Breakdown Voltage, High Reliability
- Low Output Capacitance
- Wide ASO Range

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

Collector–Base Voltage, $V_{CBO}$	1700V
Collector–Emitter Voltage, $V_{CEO}$	900V
Emitter–Base Voltage, $V_{EBO}$	5V
Collector Current, $I_C$	
Continuous	50mA
Peak	150mA
Collector Power Dissipation, $P_C$	1.2W
Operating Junction Temperature, $T_J$	+150°C
Storage Temperature Range, $T_{stg}$	–55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 900\text{V}, I_E = 0$	–	–	1.0	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$	–	–	1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 2\text{mA}$	20	50	120	
Gain–Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 2\text{mA}$	–	6	–	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 100\text{V}, f = 1\text{MHz}$	–	2.0	–	pF
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{mA}, I_B = 1\text{mA}$	–	–	5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5\text{mA}, I_B = 1\text{mA}$	–	–	2	V
Collector Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	1700	–	–	V
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	900	–	–	V
Emitter Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	5	–	–	V

