

## NTE2572 Silicon NPN Transistor High Current Switch

**Features:**

- Low Collector Emitter Saturation Voltage
- High Current Capacity

**Applications:**

- Relay Drivers
- High Speed Inverters
- Converters

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

Collector Base Voltage, $V_{CBO}$ .....	90V
Collector Emitter Voltage, $V_{CEO}$ .....	80V
Emitter Base Voltage, $V_{EBO}$ .....	6V
Collector Current, $I_C$	
Continuous .....	7A
Peak .....	12A
Collector Power Dissipation, $P_C$	
$T_A = +25^\circ\text{C}$ .....	1.65W
$T_C = +25^\circ\text{C}$ .....	40W
Operating Junction Temperature, $T_J$ .....	$+150^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+150^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 80\text{V}, I_E = 0$	-	-	0.1	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$	-	-	0.1	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 2\text{V}, I_C = 1\text{A}$	100	-	280	
		$V_{CE} = 2\text{V}, I_C = 4\text{A}$	30	-	-	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 5\text{V}, I_C = 4\text{A}$	-	20	-	MHz
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 400\text{mA}$	-	-	0.4	V

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	90	–	–	V
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	80	–	–	V
Emitter Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	6	–	–	V
Turn-On Time	$t_{on}$	$V_{CC} = 30\text{V}, V_{BE} = -5\text{V},$ $10I_{B1} = -10I_{B2} = I_C = 2\text{A},$ Pulse Width = $20\mu\text{s},$ Duty Cycle $\leq 1\%$	–	0.1	–	$\mu\text{s}$
Storage Time	$t_{stg}$		–	1.6	–	$\mu\text{s}$
Fall Time	$t_f$		–	0.4	–	$\mu\text{s}$

