



**ELECTRONICS, INC.**  
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## NTE2330

### Silicon NPN Transistor

### High Gain Amp <sup>w</sup>/Internal Zener Diode

**Features:**

- Excellent Wide Safe Operating Area
- Included Avalanche Diode
- High DC Current Gain
- High Collector Power Dissipation Capability

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

Collector–Base Voltage, $V_{CBO}$ .....	55 (+15, –10) V
Collector–Emitter Voltage, $V_{CEO}$ .....	55 (+15, –10) V
Emitter–Base Voltage, $V_{EBO}$ .....	5V
Collector Current, $I_C$	
Continuous .....	4A
Peak .....	20A
Collector Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_C$ .....	80W
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–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\text{mA}, I_E = 0$	45	55	70	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100\text{mA}, I_B = 0$	45	55	70	V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	–	–	10	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	500	1000	2500	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 2\text{mA}$	–	–	2.0	V
		$I_C = 1\text{A}, I_B = 20\text{mA}$	–	–	3.0	V
Base–Emitter Voltage	$V_{BE}$	$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	0.50	0.65	0.80	V
Allowable Energy	$E_T$		80	–	–	W.sec

