

NTE255 Silicon NPN Transistor Horizontal Driver, Amp

Absolute Maximum Ratings:

Collector–Base Voltage, V_{CBO}	325V
Collector–Emitter Voltage, V_{CEO}	300V
Emitter–Base Voltage, V_{EBO}	6V
Collector Current, I_C	500mA
Power Dissipation ($T_A = +25^\circ\text{C}$), P_{Dmax}	850mW
Power Dissipation ($T_{COLLECTOR LEAD} = +25^\circ\text{C}$), P_{Dmax}	2W
Maximum Operating Junction Temperature, T_{Jmax}	+150°C
Thermal Resistance, Junction–to–Case ($T_{COLLECTOR LEAD} = +25^\circ\text{C}$), R_{thJC}	62.5°C/W
Thermal Resistance, Junction–to–Ambient ($T_A = +25^\circ\text{C}$), R_{thJA}	147°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 300V$	–	–	1.0	μA
DC Current Gain	h_{FE}	$I_C = 50\text{mA}$, $V_{CE} = 10V$, Note 1	25	–	–	
		$I_C = 100\text{mA}$, $V_{CE} = 10V$, Note 1	30	–	–	
		$I_C = 250\text{mA}$, $V_{CE} = 10V$, Note 1	15	–	–	
		$I_C = 500\text{mA}$, $V_{CE} = 10V$, Note 1	10	–	50	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}$, $I_B = 10\text{mA}$, Note 1	–	0.2	0.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 100\text{mA}$, Note 1	–	0.9	1.2	V
Transition Frequency	f_T	$I_C = 50\text{mA}$	30	–	300	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10V$, $f = 1\text{MHz}$	–	–	15	pF
Input Capacitance	C_{ib}	$V_{BE} = 0.5V$, $f = 1\text{MHz}$	–	–	125	pF

Note 1. Pulse Test: Pulse Width = 300 μs .

