

NTE2641 Silicon NPN Transistor Horizontal Deflection Output for High Resolution Displays & Color TVs

Features:

- High Voltage: $V_{CBO} = 1500V$
- Low Saturation Voltage: $V_{CE(sat)} = 3V$ Max
- High Speed: $t_f = 0.1\mu s$ Typ

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

Collector–Base Voltage, V_{CBO}	1500V
Collector–Emitter Voltage, V_{CEO}	750V
Emitter–Base Voltage, V_{EBO}	5V
Collector Current, I_C	
Continuous DC	17A
Pulse	34A
Base Current, I_B	8.5A
Collector Power Dissipation ($T_C = +25^\circ C$), P_C	75W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	–55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 1500V, I_E = 0$	–	–	1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	–	–	100	μA
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	750	–	–	V
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 2A$	22	–	48	
		$V_{CE} = 5V, I_C = 7A$	9	–	18	
		$V_{CE} = 5V, I_C = 14A$	5	–	8	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 14A, I_B = 3.5A$	–	–	3	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 14A, I_B = 3.5A$	–	1.0	1.5	V
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 0.1A$	–	2	–	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	–	240	–	pF

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Switching Time						
Storage Time	t_{stg}	$I_{\text{CP}} = 9\text{A}$, $I_{\text{B1}}(\text{end}) = 1.3\text{A}$, $f_{\text{H}} = 64\text{kHz}$	–	2.7	3.0	μs
Fall Time	t_{f}		–	0.2	0.3	μs
Storage Time	t_{stg}	$I_{\text{CP}} = 7.5\text{A}$, $I_{\text{B1}}(\text{end}) = 1.1\text{A}$, $f_{\text{H}} = 100\text{kHz}$	–	1.8	2.0	μs
Fall Time	t_{f}		–	0.10	0.15	μs

