



ELECTRONICS, INC.

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## 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	$\mu A$
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
<b>Switching Time</b>						
Storage Time	$t_{stg}$	$I_{CP} = 9\text{A}, I_{B1}(\text{end}) = 1.3\text{A},$ $f_H = 64\text{kHz}$	–	2.7	3.0	$\mu\text{s}$
Fall Time	$t_f$		–	0.2	0.3	$\mu\text{s}$
Storage Time	$t_{stg}$	$I_{CP} = 7.5\text{A}, I_{B1}(\text{end}) = 1.1\text{A},$ $f_H = 100\text{kHz}$	–	1.8	2.0	$\mu\text{s}$
Fall Time	$t_f$		–	0.10	0.15	$\mu\text{s}$

