



ELECTRONICS, INC.

44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
<http://www.nteinc.com>

## NTE2640 Silicon NPN Transistor Color TV Horizontal Deflection Output

**Features:**

- High Speed
- High Collector–Emitter Breakdown Voltage
- High Reliability
- On–Chip Damper Diode

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

Collector–Base Voltage, $V_{CBO}$ .....	1500V
Collector–Emitter Voltage, $V_{CEO}$ .....	800V
Emitter–Base Voltage, $V_{EBO}$ .....	6V
Collector Current, $I_C$	
Continuous .....	6A
Pulse .....	15A
Collector Dissipation, $P_C$	
$T_A + 25^\circ\text{C}$ .....	2W
$T_C + 25^\circ\text{C}$ .....	30W
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	$I_{CBO}$	$V_{CE} = 800\text{V}, I_E = 0$	–	–	10	$\mu\text{A}$
	$I_{CES}$	$V_{CE} = 1500\text{V}, R_{BE} = 0$	–	–	1.0	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$	40	–	–	mA
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100\text{mA}, I_B = 0$	800	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3.15\text{A}, I_B = 630\text{mA}$	–	–	3.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3.15\text{A}, I_B = 630\text{mA}$	–	–	1.5	V
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	10	–	–	
		$V_{CE} = 5\text{V}, I_C = 3.5\text{A}$	5	–	8	
Diode Forward Voltage	$V_F$	$I_{EC} = 6\text{A}$	–	–	2	V
Fall Time	$t_f$	$V_{CC} = 200\text{V}, V_{BE} = -2\text{V}, I_C = 2\text{A},$ $I_{B1} = 400\text{mA}, I_{B2} = 800\text{mA},$ Pulse Width = $20\mu\text{s}$ , Duty Cycle $\leq 1\%$	–	–	0.3	$\mu\text{s}$

