

**NTE2302**  
**Silicon NPN Transistor**  
**Color TV Horizontal Deflection Output w/Damper Diode**

**Features:**

- High Breakdown Voltage and High Reliability
- High Switching Speed
- Capable of Being Mounted in a Variety of Methods

**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, $V_{EBO}$ .....	7V
Collector Current, $I_C$	
Continuous .....	5A
Peak .....	16A
Collector Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_C$ .....	120W
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 Cutoff Current	$I_{CBO}$	$V_{CB} = 800V, I_E = 0$	–	–	10	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$	40	–	130	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 1A$	8	–	–	
Current Gain–Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 1A$	–	3	–	MHz
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A, I_B = 0.8A$	–	–	5.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4A, I_B = 0.8A$	–	–	1.5	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5mA, I_E = 0$	1500	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100mA, R_{BE} = \infty$	800	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 200mA, I_C = 0$	7	–	–	V
Diode Forward Voltage	$V_F$	$I_{EC} = 5A$	–	–	2	V
Fall Time	$t_f$	$V_{CC} = 200V, I_C = 4A, I_{B1} = 0.8A, I_{B2} = -1.6A, R_L = 50\Omega$	–	–	0.7	$\mu\text{s}$

