

## NTE2302

### Silicon NPN Transistor

### Color TV Horizontal Deflection Output <sup>w</sup>/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	$I_{CBO}$	$V_{CB} = 800\text{V}, I_E = 0$	–	–	10	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$	40	–	130	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	8	–	–	
Current Gain–Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 1\text{A}$	–	3	–	MHz
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$	–	–	5.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$	–	–	1.5	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5\text{mA}, I_E = 0$	1500	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100\text{mA}, R_{BE} = \infty$	800	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 200\text{mA}, I_C = 0$	7	–	–	V
Diode Forward Voltage	$V_F$	$I_{EC} = 5\text{A}$	–	–	2	V
Fall Time	$t_f$	$V_{CC} = 200\text{V}, I_C = 4\text{A}, I_{B1} = 0.8\text{A}, I_{B2} = -1.6\text{A}, R_L = 50\Omega$	–	–	0.7	$\mu\text{s}$

