ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

# NTE2504
# Silicon NPN Transistor
# High Gain Audio Amplifier

**Features:**

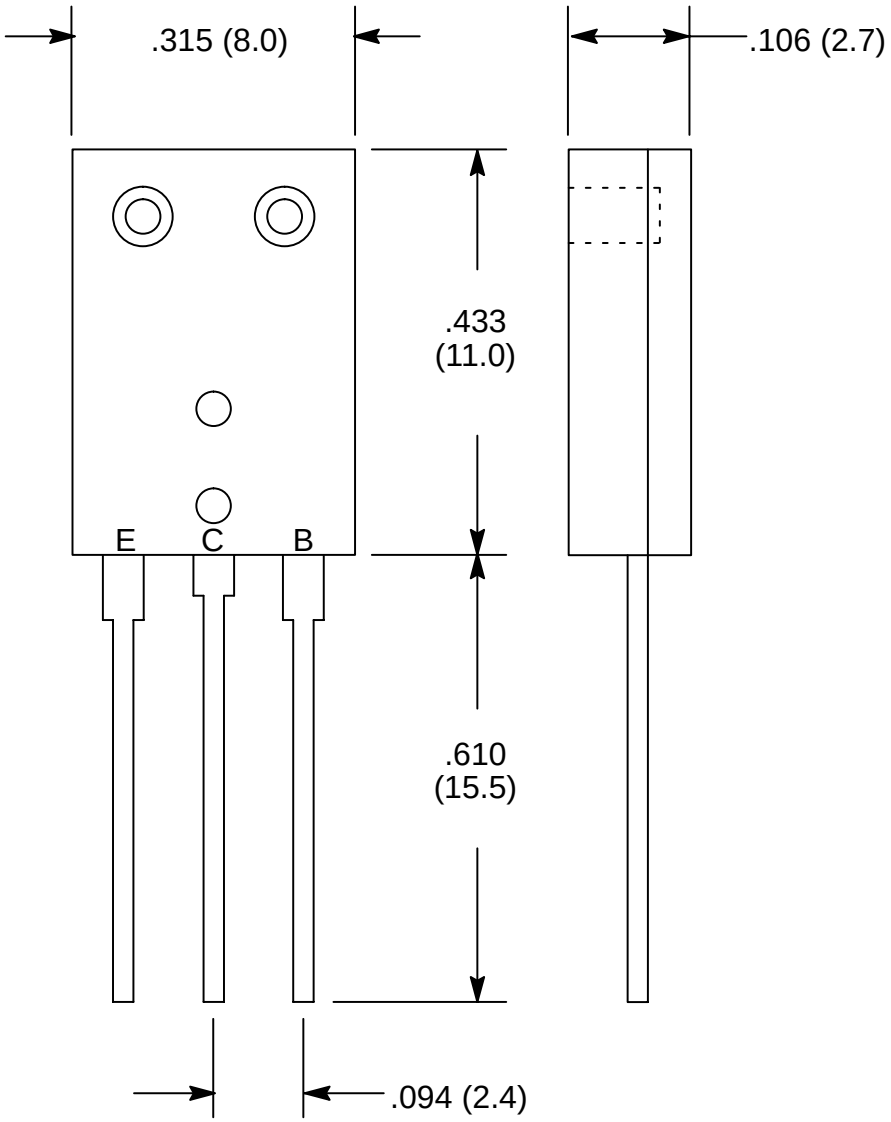
- Large Current Capacity ($I_C$ = 2A)
- Adoption of MBIT Process
- High DC Current Gain: $h_{FE}$ = 800 to 3200
- Low Collector–Emitter Saturation Voltage: $V_{CE(sat)} <$ 0.5V

**Absolute Maximum Ratings:** ($T_A$ = +25°C unless otherwise specified)

Collector–Base Voltage, $V_{CBO}$ . . . . . 30V
Collector–Emitter Voltage, $V_{CEO}$ . . . . . 25V
Emitter–Base Voltage, $V_{EBO}$ . . . . . 15V
Collector Current, $I_C$
  Continuous . . . . . 2A
  Peak . . . . . 4A
Collector Dissipation, $P_C$ . . . . . 1.2W
Junction Temperature, $T_J$ . . . . . +150°C
Storage Temperature Range, $T_{stg}$ . . . . . –55° to +150°C

**Electrical Characteristics:** ($T_A$ = +25°C unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$ = 20V, $I_E$ = 0 | – | – | 0.1 | μA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$ = 10V, $I_C$ = 0 | – | – | 0.1 | μA |
| DC Current Gain | $h_{FE}$ | $V_{CE}$ = 5V, $I_C$ = 500mA | 800 | 1500 | 3200 | |
| Current Gain–Bandwidth Product | $f_T$ | $V_{CE}$ = 10V, $I_C$ = 50mA | – | 260 | – | MHz |
| Output Capacitance | $C_{ob}$ | $V_{CE}$ = 10V, f = 1MHz | – | 27 | – | pF |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$ = 1A, $I_B$ = 20mA | – | 0.15 | 0.5 | V |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$ = 1A, $I_B$ = 20mA | – | 0.85 | 1.2 | V |
| Collector–Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C$ = 10A, $I_E$ = 0 | 30 | – | – | V |


.315 (8.0)
.106 (2.7)
.433
(11.0)
E
C
B
.610
(15.5)
.094 (2.4)