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

# NTE2431
# Silicon PNP Transistor
# High Voltage Amp/Switch
# (Compl to NTE2430)

**Description:**

The NTE2431 is a silicon PNP transistor in a SOT–89 type surface mount package designed for use in amplifier and switching switching applications.

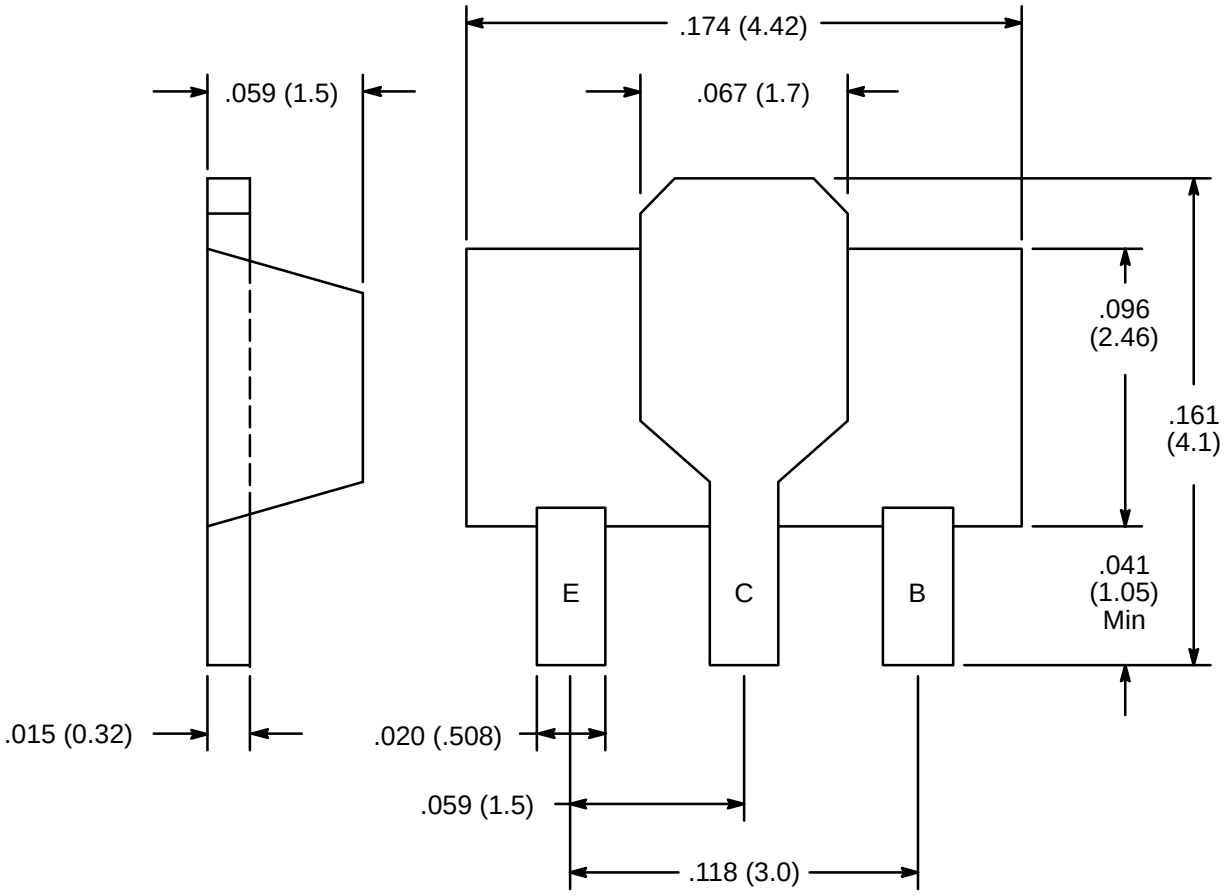
**Absolute Maximum Ratings:**

Collector–Base Voltage (Open Emitter), $V_{CBO}$ . . . . . 350V
Collector–Emitter Voltage (Open Base), $V_{CEO}$ . . . . . 300V
Emitter–Base Voltage (Open Collector), $V_{EBO}$ . . . . . 6V
DC Collector Current, $I_C$ . . . . . 1A
Base Current, $I_B$ . . . . . 500mA
Total Power Dissipation ($T_A \le +25°C$, Note 1), $P_{tot}$ . . . . . 1W
Operating Junction Temperature, $T_J$ . . . . . +150°C
Storage Temperature Range, $T_{stg}$ . . . . . –65° to +150°C
Thermal Resistance, Junction–to–Ambient (Note 1), $R_{thJA}$ . . . . . 125K/W
Thermal Resistance, Junction–to–Tab, $R_{thJTAB}$ . . . . . 10K/W

Note 1. Device mounted on a ceramic substrate; area = 2.5cm$^2$, thickness = 0.7mm.

**Electrical Characteristics:** ($T_J$ = +25°C unles otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$ = 280V, $I_E$ = 0 | – | – | 1 | µA |
| | $I_{CEO}$ | $V_{CE}$ = 250V, $I_B$ = 0 | – | – | 50 | µA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$ = 6V, $I_C$ = 0 | – | – | 20 | µA |
| Collector–Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C$ = 50mA, $I_B$ = 0, L = 25mH | 300 | – | – | V |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$ = 50mA, $I_B$ = 5mA | – | – | 2 | V |
| DC Current Gain | $h_{FE}$ | $V_{CE}$ = 10V, $I_C$ = 50mA | 30 | – | 120 | |
| Collector Capacitance | $C_c$ | $I_E = I_e$ = 0, $V_{CB}$ = 10, f = 1MHz | – | – | 15 | pF |
| Transitional Frequency | $f_T$ | $V_{CE}$ = 10V, $I_C$ = 10mA, f = 30MHz | 15 | – | – | MHz |


.174 (4.42)
.059 (1.5)
.067 (1.7)
.096
(2.46)
.161
(4.1)
E
C
B
.041
(1.05)
Min
.015 (0.32)
.020 (.508)
.059 (1.5)
.118 (3.0)

Bottom View