ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

# NTE302
# Silicon NPN Transistor
# AM, CB Transmitter Driver, Switch

**Description:**

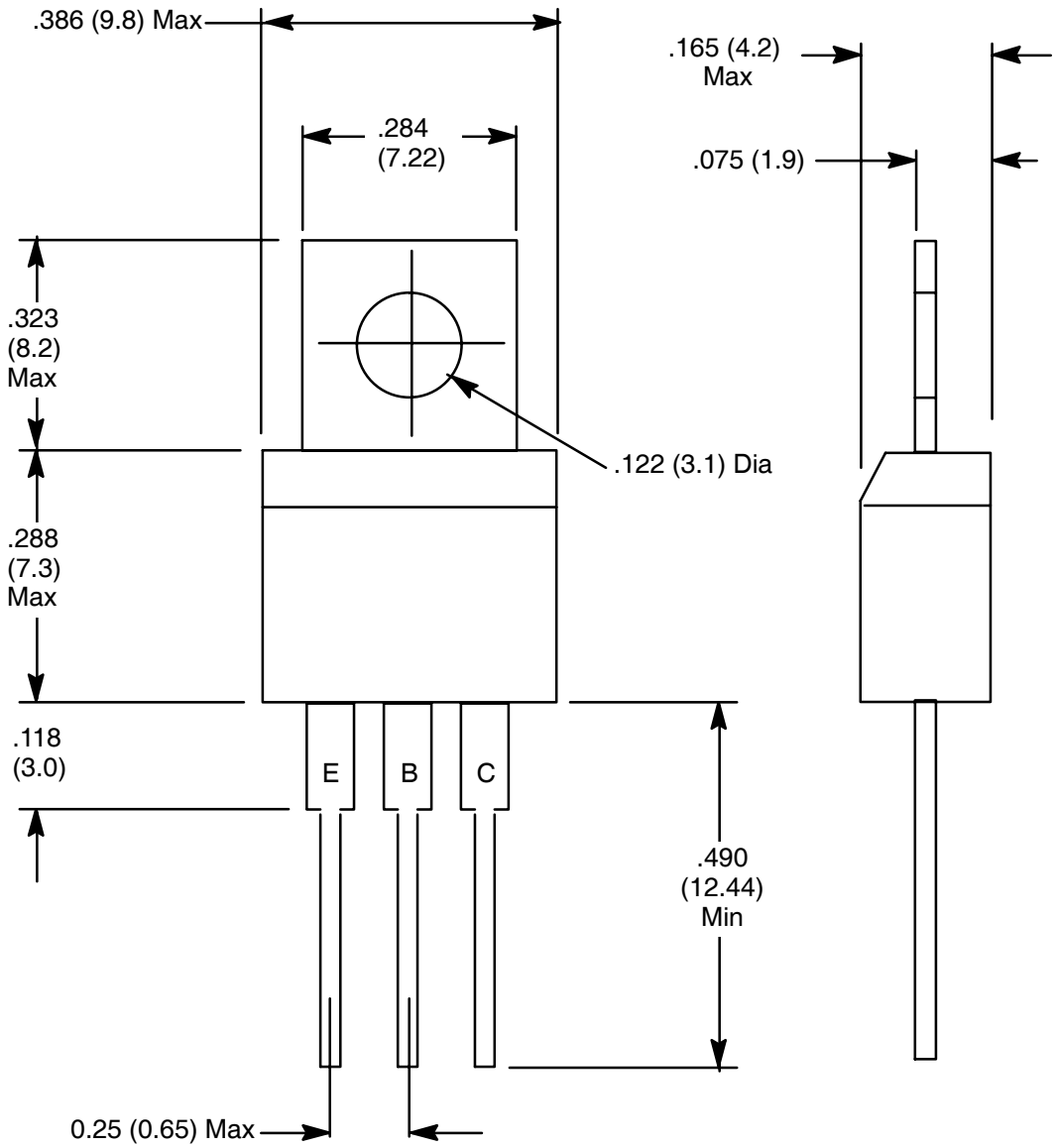
- 27–MHz AM CB Transmitter Driver Stage Switch

**Absolute Maximum Ratings:**

Collector–to–Base Voltage, $V_{CBO}$ . . . . . 100V
Collector–to–Emitter Voltage, $V_{CEO}$ . . . . . 50V
Emitter–to–Base Voltage, $V_{EBO}$ . . . . . 6V
Peak Collector Current, $I_{CM}$ . . . . . 1.5A
Base Current, $I_B$ . . . . . 0.5A
Collector Power Dissipation, $P_C$
$T_A$ = +25°C . . . . . 950mW
$T_C$ = +25°C . . . . . 7.9W
Operating Junction Temperature, $T_j$ . . . . . +150°C
Storage Temperature Range, $T_{stg}$ . . . . . –50° to +150°C
Thermal Resistance, Junction–to–Case, $R_{thJC}$ . . . . . 12°C/W

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$ = 25V, $I_E$ = 0 | – | – | 0.2 | μA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$ = 6V, $I_C$ = 0 | – | – | 0.2 | μA |
| Base–Emitter Voltage | $V_{BE}$ | $V_{CE}$ = 6V, $I_C$ = 5mA | – | – | 0.7 | V |
| Collector–Emitter Sustaining Voltage | $V_{CEO(sus)}$ | $I_C$ = 2mA | 50 | – | – | V |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$ = 1A, $I_B$ = 50mA | – | – | 0.3 | V |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | | – | – | 1.0 | V |
| DC Current Gain | $h_{FE1}$ | $V_{CE}$ = 2V, $I_C$ = 100mA | 98 | – | 649 | – |
| | | $V_{CE}$ = 1V, $I_C$ = 1A | 70 | – | – | – |
| Small Signal Current Gain | $\|h_{fe}\|$ | $V_{CB}$ = 2V, $I_E$ = –10mA, f = 10MHz | – | 18 | – | dB |
| Collector Output Capacitance | $C_C$ | $V_{CB}$ = 10V, $I_E$ = 0, f = 1MHz | – | 16 | 40 | pF |


.386 (9.8) Max
.284
(7.22)
.323
(8.2)
Max
.288
(7.3)
Max
.118
(3.0)
.122 (3.1) Dia
E
B
C
0.25 (0.65) Max
.165 (4.2)
Max
.075 (1.9)
.490
(12.44)
Min