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## NTE95 Silicon NPN Transistor High Voltage, High Power Switch

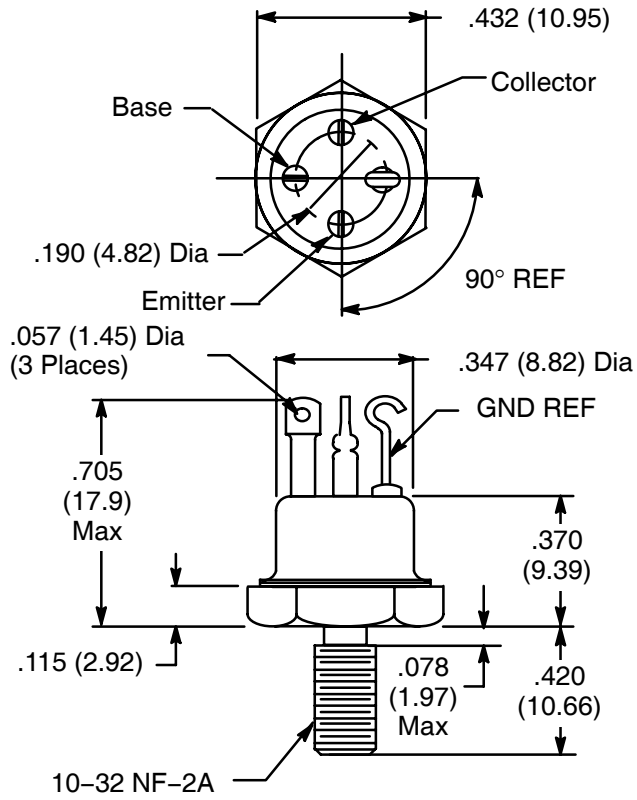
**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

|  |                |
|--|----------------|
| Collector-Base Voltage, $V_{CBO}$ .....                            | 250V           |
| Collector-Emitter Voltage, $V_{CEO}$ .....                         | 250V           |
| Emitter-Base Voltage, $V_{EBO}$ .....                              | 6V             |
| Collector Current, $I_C$   |                |
| Continuous .....   | 3A             |
| Peak .....   | 0.3A           |
| Total Power Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_D$ ..... | 70W            |
| Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....             | 2.5°C/W        |
| Operating Junction Temperature Range, $T_{j(oper)}$ .....          | -65° to +200°C |
| Storage Temperature Range, $T_{stg}$ .....                         | -65° to +200°C |

**Electrical Characteristics:** ( $T_C = +25^\circ\text{C}$  unless otherwise specified)

| Parameter                            | Symbol         | Test Conditions   | Min | Typ | Max  | Unit          |
|--------------------------------------|----------------|---|-----|-----|------|---------------|
| Collector-Emitter Sustainin Voltage  | $V_{CEO(sus)}$ | $I_C = 25\text{mA}$   | 250 | -   | -    | V             |
| Collector Cutoff Current             | $I_{CEO}$      | $V_{CE} = 150\text{V}$                                      | -   | -   | 10   | $\mu\text{A}$ |
|                                      |                | $V_{CE} = 200\text{V}$                                      | -   | -   | 0.25 | $\mu\text{A}$ |
| Emitter Cutoff Current               | $I_{EBO}$      | $V_{EB} = 5\text{V}$  | -   | -   | 10   | $\mu\text{A}$ |
|                                      |                | $V_{EB} = 6\text{V}$  | -   | -   | 1.0  | mA            |
| DC Current Gain                      | $h_{FE}$       | $V_{CE} = 5\text{V}, I_C = 3\text{A}$                       | 15  | -   | -    |               |
|                                      |                | $V_{CE} = 5\text{V}, I_C = 0.5\text{A}$                     | 90  | -   | 250  |               |
|                                      |                | $T_C = -55^\circ\text{C}$                                   | 35  | -   | -    |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$  | $I_C = 3\text{A}, I_B = 0.3\text{A}$                        | -   | -   | 2.0  | V             |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$  |   | -   | -   | 2.2  | V             |
| Base-Emitter ON Voltage              | $V_{BE(on)}$   | $V_{CE} = 5\text{V}, I_C = 3\text{A}$                       | -   | -   | 2.2  | V             |
| Small-Signal Current Gain            | $ h_{FE} $     | $V_{CE} = 10\text{V}, I_C = 100\text{mA}, f = 20\text{MHz}$ | 2.0 | -   | -    |               |
|                                      |                | $I_C = 250\text{mA}, f = 1\text{kHz}$                       | 30  | -   | -    |               |
| Output Capacitance                   | $C_{ob}$       | $V_{CB} = 10\text{V}, I_C = 0, f = 1\text{MHz}$             | -   | -   | 100  | pF            |

T111



T059 – Isolated Collector

