

isc Silicon NPN Power Transistors
TIP55A
DESCRIPTION

- 50W at 100°C case temperature
- 10A peak collector current
- High-voltage, high forward and reverse energy
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

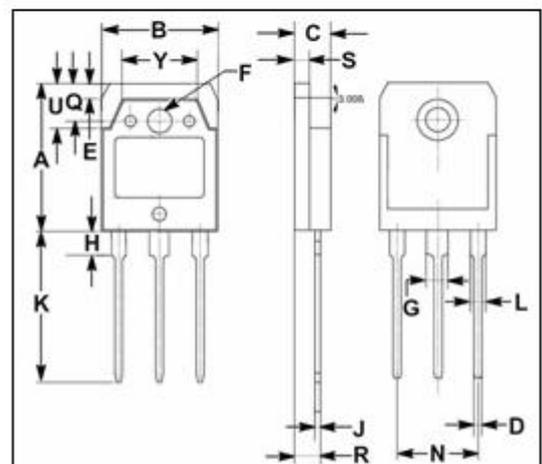
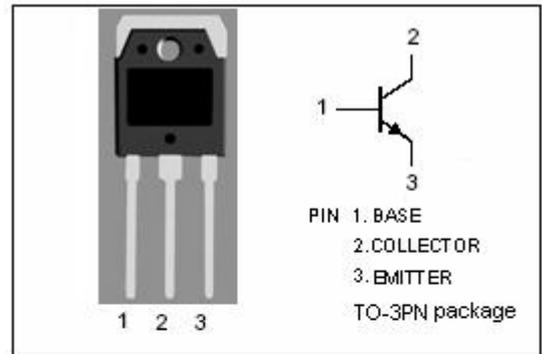
- Designed for automotive ignition and switching regulator applications
- Characterized for operation in ignition and switching regulator Applications

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--|---------|------|
| V _{CBO} | Collector-Base Voltage | 350 | V |
| V _{CEO} | Collector-Emitter Voltage | 250 | V |
| V _{EBO} | Emitter-Base Voltage | 8 | V |
| I _C | Collector Current -Continuous | 7.5 | A |
| I _{CM} | Collector Current-peak | 10 | A |
| I _B | Base Current | 4 | A |
| P _C | Collector Power Dissipation@ T _C =100°C | 50 | W |
| T _j | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -65~150 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--------------------------------------|-----|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 1 | °C/W |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 19.60 | 20.10 |
| B | 15.50 | 15.70 |
| C | 4.70 | 4.90 |
| D | 0.90 | 1.10 |
| E | 1.90 | 2.10 |
| F | 3.40 | 3.60 |
| G | 2.90 | 3.20 |
| H | 3.20 | 3.40 |
| J | 0.595 | 0.605 |
| K | 20.00 | 20.70 |
| L | 1.90 | 2.20 |
| N | 10.89 | 10.91 |
| Q | 4.90 | 5.10 |
| R | 3.35 | 3.45 |
| S | 1.995 | 2.100 |
| U | 5.90 | 6.10 |
| Y | 9.90 | 10.10 |

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|--------------------------|--------------------------------------|---|-----|-----|------|
| V _{CE0(sus)} * | Collector-Emitter Sustaining Voltage | I _C = 20mA; I _B = 0 | 250 | | V |
| V _{CE(sat)-1} * | Collector-Emitter Saturation Voltage | I _C = 5A; I _B = 1A | | 1.2 | V |
| V _{CE(sat)-2} * | Collector-Emitter Saturation Voltage | I _C = 10A; I _B = 4A | | 2.5 | V |
| V _{BE(sat)} * | Base-Emitter Saturation Voltage | I _C = 5A; I _B = 1A | | 1.5 | V |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | 0.1 | mA |
| h _{FE-1} * | DC Current Gain | I _C = 1A; V _{CE} = 2V | 20 | 100 | |
| h _{FE-2} * | DC Current Gain | I _C = 5A; V _{CE} =2V | 6 | | |

*:Pulse test PW≤300us,duty cycle≤1.5%

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