

isc Silicon NPN Power Transistor

BU407H

DESCRIPTION

- High Voltage: $V_{CEV} = 330V(\text{Min})$
- Fast Switching Speed-
: $t_f = 750ns(\text{Max})$
- Low Saturation Voltage-
: $V_{CE(\text{sat})} = 1.0V(\text{Max}) @ I_C = 5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

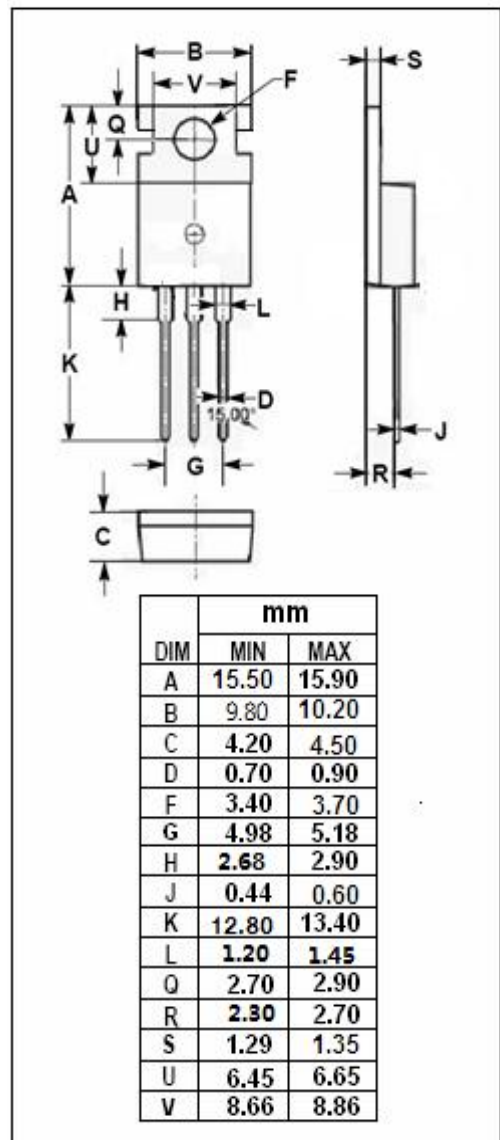
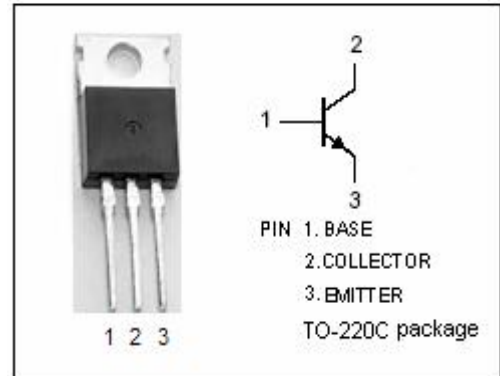
- Designed for use in horizontal deflection output stages of TV's and CRT's

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 330 | V |
| V_{CEV} | Collector-Emitter Voltage | 330 | V |
| V_{CEO} | Collector-Emitter Voltage | 150 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current-Continuous | 7 | A |
| I_{CP} | Collector Current-Peak Repetitive | 10 | A |
| I_{CP} | Collector Current- Peak (10ms) | 15 | A |
| I_B | Base Current | 4 | A |
| P_C | Collector Power Dissipation @ $T_C = 25^\circ\text{C}$ | 60 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|---|------|--------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 2.08 | $^\circ\text{C/W}$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 70 | $^\circ\text{C/W}$ |



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|------|------------|------|
| V _{CEO(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 50mA ; I _B = 0 | 150 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 5A; I _B = 0.8A | | | 1.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 5A; I _B = 0.8A | | | 1.2 | V |
| I _{CES} | Collector Cutoff Current | V _{CE} = 330V; V _{BE} = 0 V _{CE} = 200V; V _{BE} = 0 | | | 5.0 0.1 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 6V; I _C =0 | | | 1.0 | mA |
| h _{FE} | DC Current Gain | I _C = 2A ; V _{CE} = 5V | | 35 | | |
| f _T | Current-Gain—Bandwidth Product | I _C = 0.5A ; V _{CE} = 10V | 10 | | | MHz |
| C _{OB} | Output Capacitance | I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz | | 80 | | pF |
| t _f | Fall Time | I _C = 5A; I _{Bend} = 0.8A, V _{CC} = 40V | | | 0.75 | μs |

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