

isc Silicon PNP Power Transistor

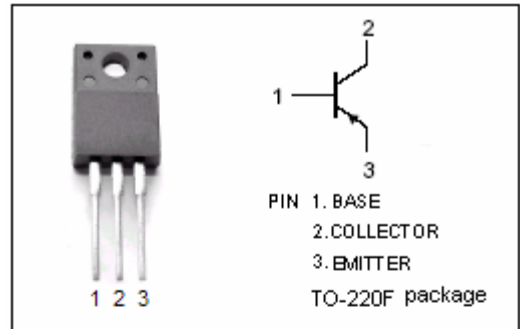
2SA1567

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -50V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 50(\text{Min}) @ (V_{CE} = -1V, I_C = -6A)$
- Low Saturation Voltage-
: $V_{CE(sat)} = -0.35V(\text{Max}) @ (I_C = -6A, I_B = -0.6A)$

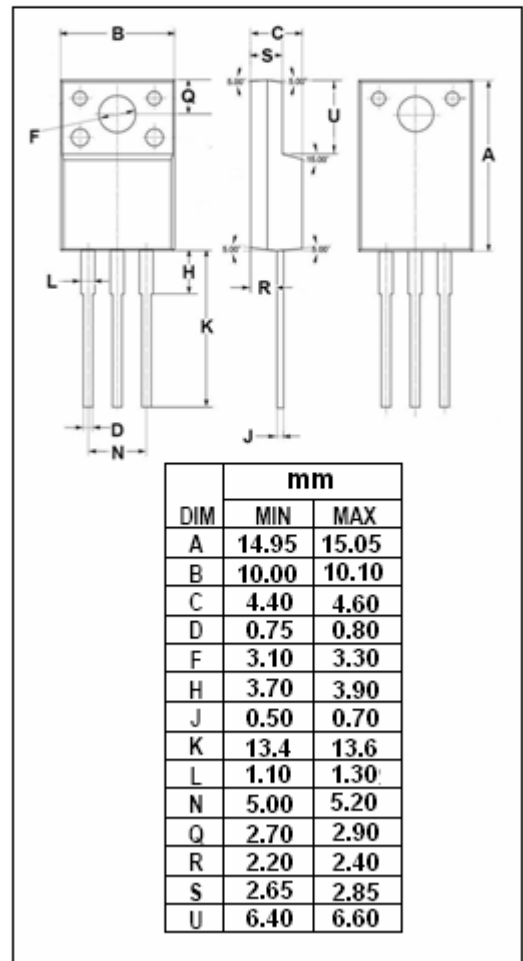
APPLICATIONS

- Designed for DC motor driver, chopper regulator and general purpose applications.



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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -50 | V |
| V_{CEO} | Collector-Emitter Voltage | -50 | V |
| V_{EBO} | Emitter-Base Voltage | -6 | V |
| I_C | Collector Current-Continuous | -12 | A |
| I_B | Base Current-Continuous | -3 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 35 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ\text{C}$ |



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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-------|------|
| V _{(BR)CEO} | Collector-Emitter Breakdown Voltage | I _C = -25mA ; I _B = 0 | -50 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = -6A; I _B = -0.3A | | | -0.35 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = -50V ; I _E = 0 | | | -100 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = -6V; I _C = 0 | | | -100 | μ A |
| h _{FE} | DC Current Gain | I _C = -6A ; V _{CE} = -1V | 50 | | | |
| C _{OB} | Output Capacitance | I _E =0 ; V _{CB} = -10V; f _{test} = 1.0MHz | | 330 | | pF |
| f _T | Current-Gain—Bandwidth Product | I _E = 0.5A ; V _{CE} = -12V | | 40 | | MHz |

Switching Times

| | | | | | | |
|------------------|--------------|--|--|-----|--|-----|
| t _{on} | Turn-on Time | I _C = -6A, R _L = 4 Ω, I _{B1} = -I _{B2} = -0.12A, V _{CC} = -24V | | 0.4 | | μ s |
| t _{stg} | Storage Time | | | 0.4 | | μ s |
| t _f | Fall Time | | | 0.2 | | μ s |