

isc Silicon NPN Power Transistor
KTC4419
DESCRIPTION

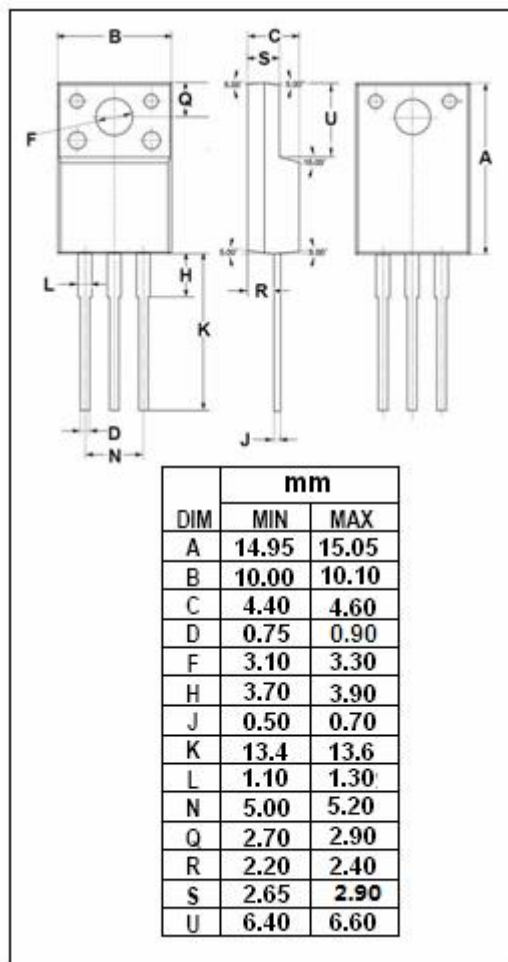
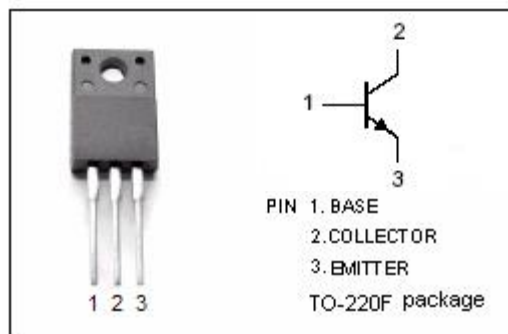
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 400V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching regulator applications
- High voltage switching applications
- High speed DC-DC converter applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 500 | V |
| V_{CEO} | Collector-Emitter Voltage | 400 | V |
| V_{EBO} | Emitter-Base voltage | 7 | V |
| I_C | Collector Current-Continuous | 5 | A |
| I_{CM} | Collector Current-Peak | 10 | A |
| I_B | Base Current-Continuous | 2 | A |
| P_C | Collector Power Dissipation @ $T_c=25^\circ\text{C}$ | 30 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V _{(BR)CEO} | Collector-Emitter Breakdown Voltage | I _C = 10mA; I _B = 0 | 400 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1.5A; I _B = 0.3A | | | 0.5 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 1.5A; I _B = 0.3A | | | 1.0 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 500V; I _E = 0 | | | 0.1 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 7V; I _C = 0 | | | 0.1 | mA |
| h _{FE-1} | DC Current Gain | I _C = 0.1A; V _{CE} = 4V | 20 | | | |
| h _{FE-2} | DC Current Gain | I _C = 1.5A; V _{CE} = 4V | 10 | | 40 | |
| f _T | Current-Gain—Bandwidth Product | I _E = 0.3A; V _{CE} = 12V | | 20 | | MHz |

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