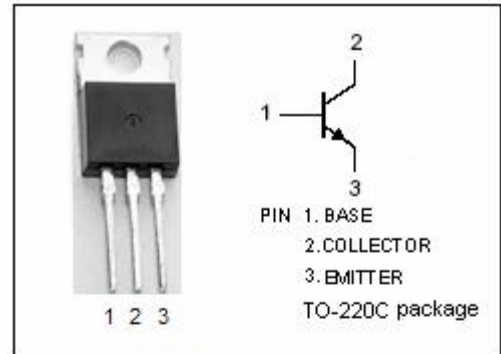


isc Silicon NPN Power Transistor
BUX77A
DESCRIPTION

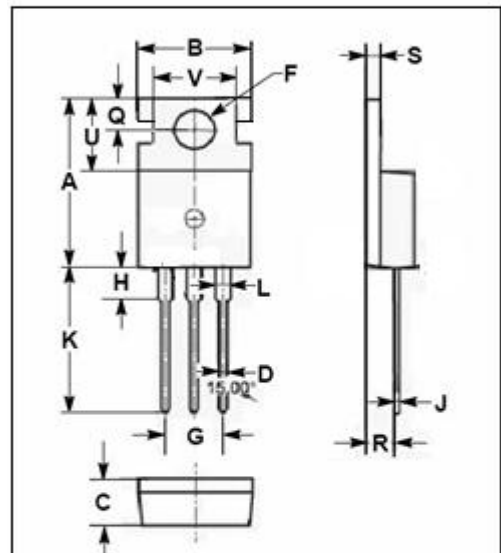
- Continuous Collector Current $I_C = 8A$
- Collector Power Dissipation-
: $P_C = 50W @ T_C = 25^\circ C$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 80V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in switching regulators and general purpose power amplifiers.


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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------|
| V_{CBO} | Collector-Base Voltage | 100 | V |
| V_{CEO} | Collector-Emitter Voltage | 80 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current-Continuous | 8 | A |
| I_B | Base Current-Continuous | 2 | A |
| P_C | Collector Power Dissipation@ $T_C = 25^\circ C$ | 50 | W |
| T_J | Junction Temperature | 200 | $^\circ C$ |
| T_{stg} | Storage Temperature | -65~175 | $^\circ C$ |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|--------------------------------------|-----|--------------|
| $R_{th(j-c)}$ | Thermal Resistance, Junction to Case | 2.5 | $^\circ C/W$ |

isc Silicon NPN Power Transistor**BUX77A****ELECTRICAL CHARACTERISTICS**T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|-----------------------|--------------------------------------|---|-----|------------|------|
| V _{CEO(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 50mA; I _B = 0 | 80 | | V |
| V _{CES} | Collector-Emitter Voltage | I _C = 2mA; V _{BE} = 0 | 100 | | V |
| V _{(BR)EBO} | Emitter-Base Breakdown Voltage | I _E = 1mA; I _C = 0 | 6 | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 5A; I _B = 0.5A | | 1.0 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 5A; I _B = 0.5A | | 1.3 | V |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 60V; I _B = 0 | | 10 | μA |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 80V; I _E = 0 V _{CB} = 80V; I _E = 0, T _C =150°C | | 0.5 150 | μA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 4V; I _C = 0 | | 0.5 | μA |
| h _{FE-1} | DC Current Gain | I _C = 0.5A; V _{CE} = 5V | 70 | | |
| h _{FE-2} | DC Current Gain | I _C = 2A; V _{CE} = 5V | 50 | | 120 |
| h _{FE-3} | DC Current Gain | I _C = 5A; V _{CE} = 5V | 30 | | |
| h _{FE-4} | DC Current Gain | I _C = 1A; V _{CE} = 5V; T _C = -40°C | 25 | | |

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