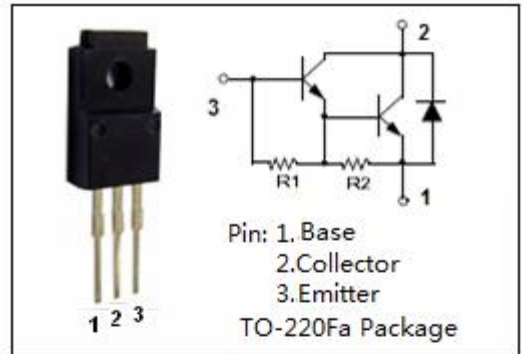


isc Silicon NPN Darlington Power Transistor
BDT61BF
DESCRIPTION

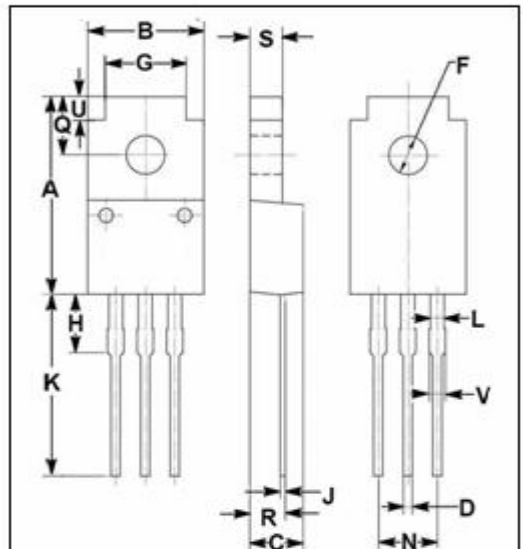
- High DC Current Gain
- Low Saturation Voltage
- Complement to Type BDT60BF
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use as complementary AF push-pull output stage applications


ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--|---------|------|
| V _{CBO} | Collector-Base Voltage | 100 | V |
| V _{CEO} | Collector-Emitter Voltage | 100 | V |
| V _{EBO} | Emitter-Base Voltage | 5 | V |
| I _C | Collector Current-Continuous | 4 | A |
| I _{CP} | Collector Current-Peak | 6 | A |
| I _B | Base Current-Continuous | 0.1 | A |
| P _C | Collector Power Dissipation @ T _a =25°C | 17 | W |
| | Collector Power Dissipation @ T _C =25°C | 25 | |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature Range | -65~150 | °C |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 16.85 | 17.15 |
| B | 9.54 | 10.10 |
| C | 4.35 | 4.65 |
| D | 0.75 | 0.90 |
| F | 3.20 | 3.40 |
| G | 6.90 | 7.20 |
| H | 5.15 | 5.45 |
| J | 0.45 | 0.75 |
| K | 13.35 | 13.65 |
| L | 1.10 | 1.30 |
| N | 4.98 | 5.18 |
| Q | 4.85 | 5.15 |
| R | 2.55 | 3.25 |
| S | 2.70 | 2.90 |
| U | 1.75 | 2.05 |
| V | 1.30 | 1.50 |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|---|------|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 5 | °C/W |
| R _{th j-a} | Thermal Resistance, Junction to Ambient | 7.35 | °C/W |

isc Silicon NPN Darlington Power Transistor

BDT61BF

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{CE0(SUS)} | Collector-Emitter Breakdown Voltage | I _C = 30mA; I _B = 0 | 100 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1.5A; I _B = 6mA | | | 2.5 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 4A ; V _{CE} = 3V | | | 2.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 30V; I _E = 0 | | | 0.2 | mA |
| | | V _{CB} = 50V; I _E = 0; T _C = 150°C | | | 1.0 | |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 50V; I _B = 0 | | | 0.2 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 5 | mA |
| h _{FE-1} | DC Current Gain | I _C = 0.5A ; V _{CE} = 3V | | 2000 | | |
| h _{FE-2} | DC Current Gain | I _C = 1.5A ; V _{CE} = 3V | 750 | | | |
| h _{FE-3} | DC Current Gain | I _C = 4A ; V _{CE} = 3V | | 1000 | | |

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