

isc Silicon NPN Darlington Power Transistor

2SD2257

DESCRIPTION

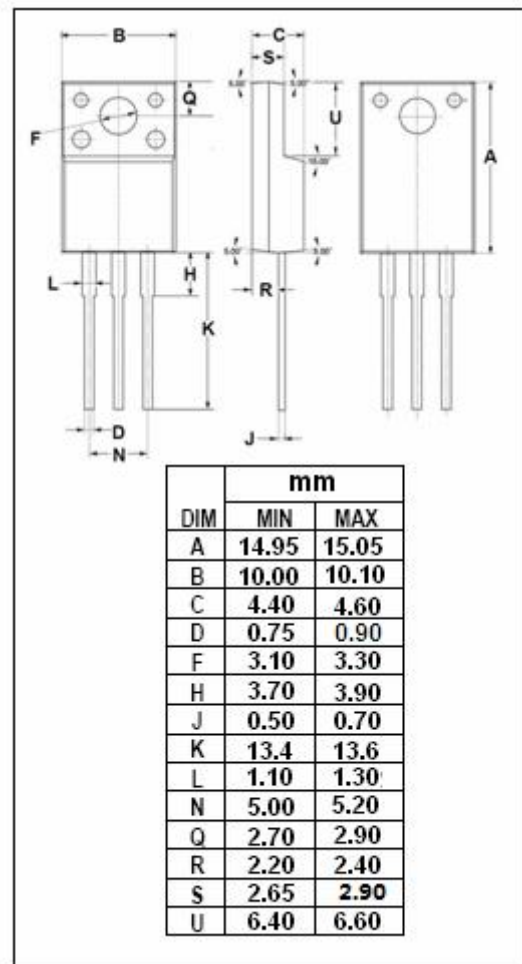
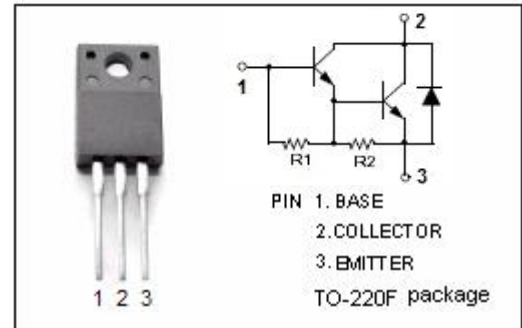
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 1.5A$
- High DC Current Gain
: $h_{FE} = 2000(\text{Min}) @ I_C = 2A, V_{CE} = 2V$
- Complement to Type 2SB1495
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High power switching applications
- Hammer drive, pulse motor drive applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 100 | V |
| V_{CEO} | Collector-Emitter Voltage | 100 | V |
| V_{EBO} | Emitter-Base Voltage | 8 | V |
| I_C | Collector Current-Continuous | 3 | A |
| I_{CM} | Collector Current-Peak | 5 | A |
| I_B | Base Current-Continuous | 0.3 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 20 | W |
| | Collector Power Dissipation @ $T_a=25^\circ\text{C}$ | 2.0 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



isc Silicon NPN Darlington Power Transistor**2SD2257****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 | 100 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1.5A; I _B = 1.5mA | | | 1.5 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 1.5A; I _B = 1.5mA | | | 2.0 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 100V; I _E = 0 | | | 10 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 8V; I _C = 0 | | | 4.0 | mA |
| V _{ECF} | C-E Diode Forward Voltage | I _F = 1A | | | 2.0 | V |
| h _{FE -1} | DC Current Gain | I _C = 1A; V _{CE} = 2V | 2000 | | | |
| h _{FE -2} | DC Current Gain | I _C = 2A; V _{CE} = 2V | 2000 | | | |

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