

isc Silicon PNP Darlington Power Transistor
MJD127
DESCRIPTION

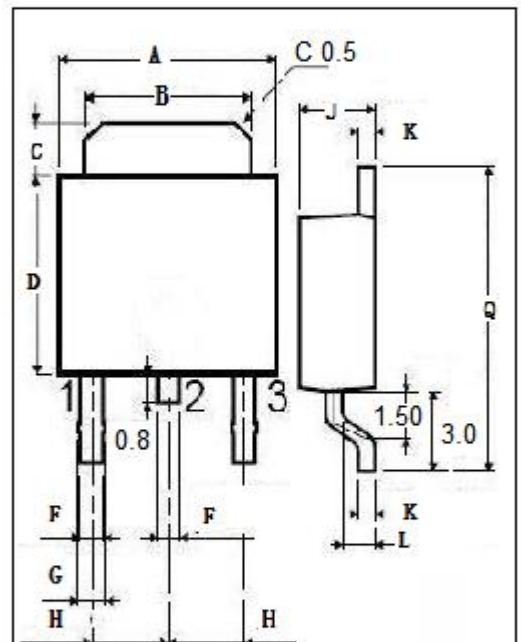
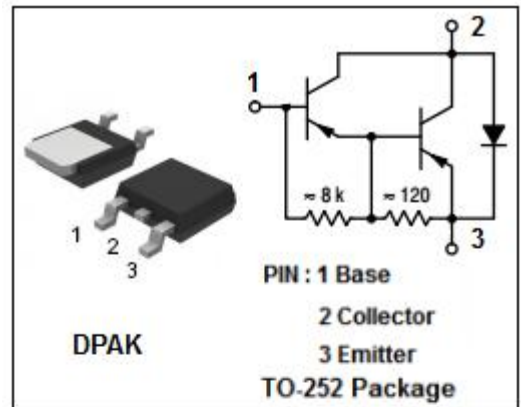
- Low Collector-Emitter saturation voltage
- Lead formed for surface mount applications
- High DC current gain
- 100% tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for general purpose amplifier and low speed switching 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 | -8 | A |
| P _C | Total Power Dissipation @ T _a =25°C | 1.75 | W |
| P _C | Collector Power Dissipation T _C =25°C | 20 | W |
| R _{th j-a} | Thermal Resistance, Junction to Ambient | 71.4 | °C/W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature Range | -55~150 | °C |



| DIM | mm | |
|-----|------|------|
| | MIN | MAX |
| A | 6.40 | 6.60 |
| B | 5.20 | 5.40 |
| C | 1.15 | 1.35 |
| D | 5.70 | 6.10 |
| F | 0.65 | |
| G | 0.75 | |
| H | 2.10 | 2.50 |
| J | 2.10 | 2.40 |
| K | 0.40 | 0.60 |
| L | 0.90 | 1.10 |
| Q | 9.90 | 10.1 |

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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 = -30mA; I _B = 0 | -100 | | | V |
| V _{CE(sat)-1} | Collector-Emitter Saturation Voltage | I _C =-4A; I _B = -16mA | | | -2.0 | V |
| V _{CE(sat)-2} | Collector-Emitter Saturation Voltage | I _C =-8A; I _B = -80mA | | | -4.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage  | I _C =-8A; I _B = -80mA | | | -4.5 | V |
| V _{BE(ON)} | Base-Emitter voltage | I _C = -4A; V _{CE} = -4V | | | -2.8 | V |
| I _{CEO} | Collector Cutoff Current | V _{CE} =-50V; I _E = 0 | | | -10 | uA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} =-5V; I _C = 0 | | | -2 | mA |
| h _{FE1} | DC Current Gain | I _C = -4A; V _{CE} =- 4V | 1000 | | 12000 | |
| h _{FE2} | DC Current Gain | I _C =-8A; V _{CE} = -4V | 100 | | | |
| f _T | Current-Gain—Bandwidth Product | I _C =-3A; V _{CE} =- 4V | 4 | | | MHz |
| C _{OB} | Output Capacitance | I _E =0; V _{CB} = -10V; f= 1.0MHz | | 300 | | pF |

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