

isc Silicon NPN Darlington Power Transistor

2SD1933

DESCRIPTION

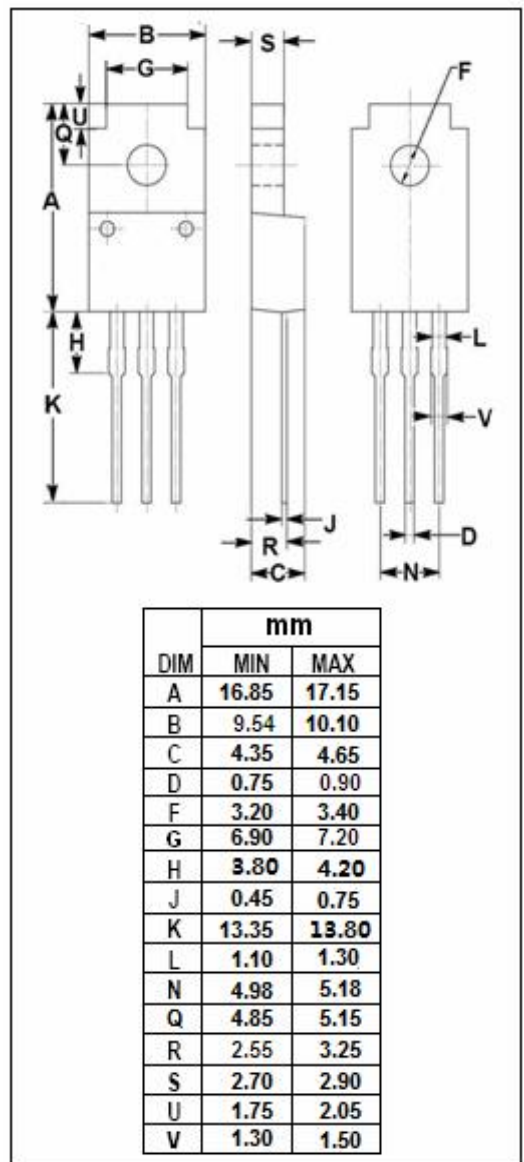
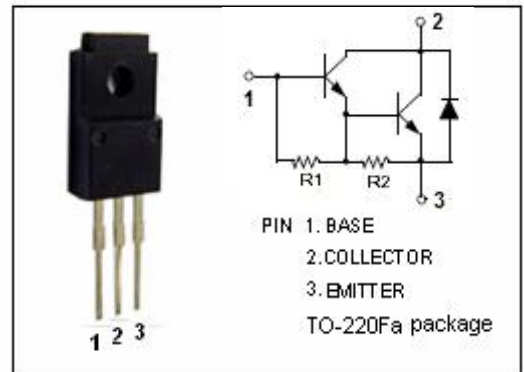
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min})@ (V_{CE} = 3V, I_C = 2A)$
- Complement to Type 2SB1342
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 80 | V |
| V_{CEO} | Collector-Emitter Voltage | 80 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 4 | A |
| I_{CM} | Collector Current-Peak | 6 | A |
| P_C | Collector Power Dissipation @ $T_a = 25^\circ\text{C}$ | 2 | W |
| | Collector Power Dissipation @ $T_c = 25^\circ\text{C}$ | 30 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ\text{C}$ |



isc Silicon NPN Darlington Power Transistor**2SD1933****ELECTRICAL CHARACTERISTICS****T_j=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 | 80 | | | V |
| V _{(BR)CBO} | Collector-Base Breakdown Voltage | I _C = 50 μ A; I _E = 0 | 80 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 2A; I _B = 4mA | | | 1.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 80V; I _E = 0 | | | 100 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 3 | mA |
| h _{FE} | DC Current Gain | I _C = 2A; V _{CE} = 3V | 1000 | | 10000 | |
| C _{OB} | Output Capacitance | I _E = 0; V _{CB} = 10V; f _{test} = 1MHz | | 35 | | pF |
| f _T | Current-Gain—Bandwidth Product | I _E = 0.2A; V _{CE} = 5V; f _{test} = 10MHz | | 40 | | MHz |

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