

isc Silicon PNP Power Transistor

2SB1642

DESCRIPTION

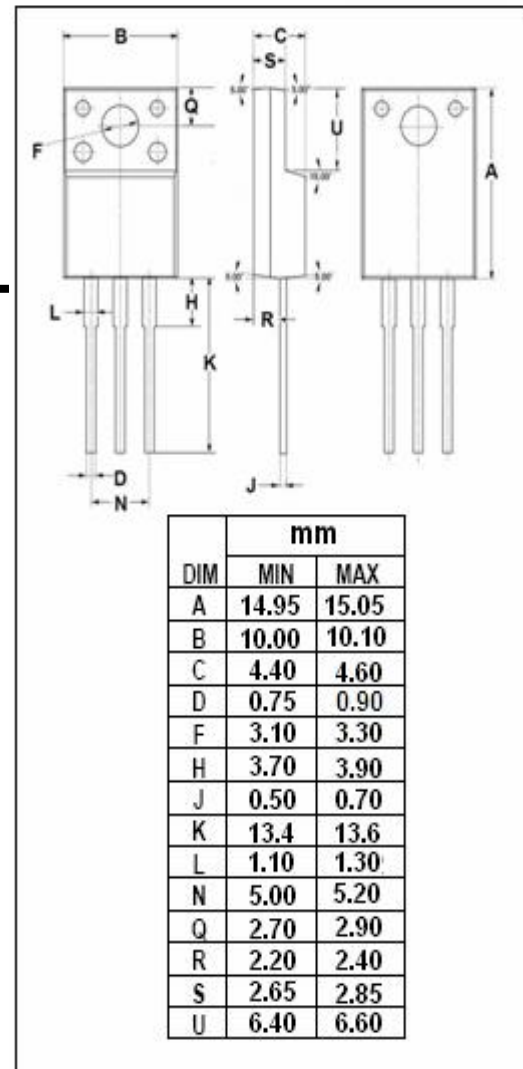
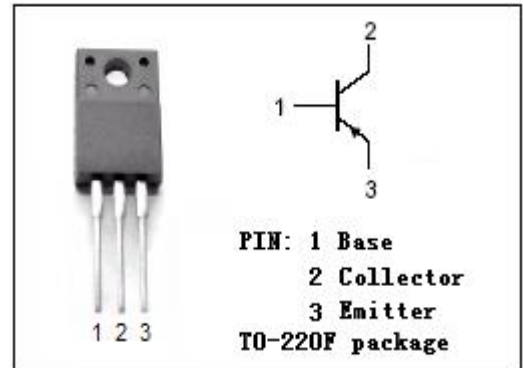
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -60V(\text{Min})$
- Collector Power Dissipation-
: $P_C = 25\text{ W@ } T_C = 25^\circ\text{C}$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -1.5V(\text{Max})@ (I_C = -2.5A, I_B = -0.25A)$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio frequency power amplifier applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|-----------------------------------------------------------|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -60 | V |
| V_{CEO} | Collector-Emitter Voltage | -60 | V |
| V_{EBO} | Emitter-Base Voltage | -7 | V |
| I_C | Collector Current-Continuous | -4 | A |
| I_B | Base Current-Continuous | -1 | A |
| P_C | Collector Power Dissipation @ $T_a = 25^\circ\text{C}$ | 2 | W |
| | Collector Power Dissipation @ $T_C = 25^\circ\text{C}$ | 25 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ\text{C}$ |



isc Silicon PNP Power Transistor**2SB1642****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 | -60 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = -2.5A; I _B = -0.25A | | | -1.5 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = -0.5A ; V _{CE} = -5V | | | -1.0 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = -60V ; I _E = 0 | | | -10 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = -7V; I _C = 0 | | | -10 | μ A |
| h _{FE-1} | DC Current Gain | I _C = -0.5A ; V _{CE} = -5V | 100 | | 320 | |
| h _{FE-2} | DC Current Gain | I _C = -3A ; V _{CE} = -5V | 20 | | | |
| C _{OB} | Output Capacitance | I _E = 0; V _{CB} = -10V; f _{test} = 1MHz | | 50 | | pF |
| f _T | Current-Gain—Bandwidth Product | I _C = -0.5A ; V _{CE} = -5V | | 9 | | MHz |

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