

isc Silicon NPN Transistor

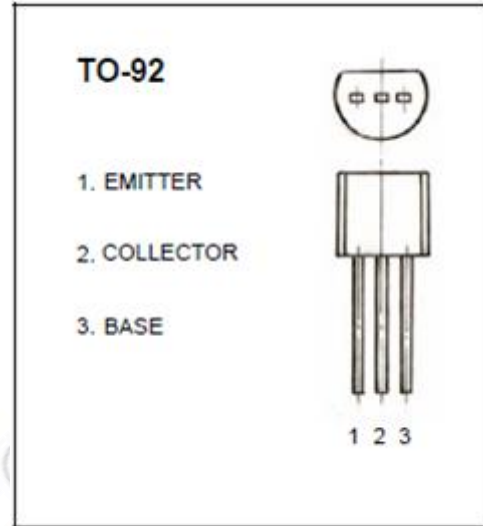
2SC1815

DESCRIPTION

- High Voltage and High Current
V_{ceo}=50V(Min.), I_c=150mA(Max)
- Excellent hFE Linearity
- Low Noise
- Complement to Type 2SA1015(O,Y,GR class)

APPLICATIONS

- Audio frequency general purpose amplifier Applications
- Driver stage amplifier applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--|---------|------|
| V _{CBO} | Collector-Base Voltage | 60 | V |
| V _{CEO} | Collector-Emitter Voltage | 50 | V |
| V _{EBO} | Emitter-Base Voltage | 5 | V |
| I _C | Collector Curren | 150 | mA |
| I _B | Base Curren | 50 | mA |
| P _C | Collector Power Dissipation @T _c =25°C | 400 | mW |
| T _J | Junction Temperature | 125 | °C |
| T _{stg} | Storage Temperature Range | -55~125 | °C |

isc Silicon NPN Transistor**2SC1815****ELECTRICAL CHARACTERISTICS**T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|------|------|
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 100mA ; I _B = 10mA | | | 0.25 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 100mA ; I _B = 10mA | | | 1.0 | V |
| I _{CB0} | Emitter Cutoff Current | V _{CB} = 60V; I _E = 0 | | | 0.1 | μ A |
| I _{EB0} | Collector Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 0.1 | μ A |
| h _{FE(1)} | DC Current Gain | I _C = 2mA ; V _{CE} = 6V | 70 | | 700 | |
| h _{FE(2)} | DC Current Gain | I _C = 150mA ; V _{CE} = 6V | 25 | | | |
| f _T | Current-Gain—Bandwidth Product | I _C = 1mA; V _{CE} = 10V; | 80 | | | MHz |
| C _{ob} | Collector Output Capacitance | V _{CB} =10V; I _E =0; f=1MHz | | | 3.5 | pF |
| R _{bb'} | Base Intrinsic Resistance | V _{CE} =10V, I _E =-1mA, f=30MHz | | 50 | | Ω |
| NF | Noise Figure | V _{CE} =6V, I _C =0.1mA, f=1KHz, R _G =10K Ω | | | 10 | dB |

◆ **h_{FE(1)} Classifications**

| O | Y | GR | BL |
|--------|---------|---------|---------|
| 70-140 | 120-400 | 200-400 | 350-700 |