



SOT-89-3L Plastic-Encapsulate Transistors

2SA1013 TRANSISTOR (PNP)

FEATURE

- High voltage
- Large continuous collector current capability

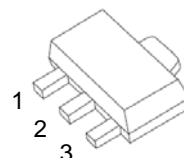
MARKING: 1013

SOT-89-3L

1. BASE

2. COLLECTOR

3. EMITTER



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|------------------|---|----------|------|
| V _{CB0} | Collector-Base Voltage | -160 | V |
| V _{CEO} | Collector-Emitter Voltage | -160 | V |
| V _{EBO} | Emitter-Base Voltage | -6 | V |
| I _C | Collector Current -Continuous | -1 | A |
| P _C | Collector Power Dissipation | 0.5 | W |
| T _j | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55~+150 | °C |
| R _{θJA} | Thermal Resistance from Junction to Ambient | 250 | °C/W |

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--------------------------------------|----------------------|---|------|-------|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C =- 100μA , I _E =0 | -160 | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = -1mA , I _B =0 | -160 | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E = -10μA , I _C =0 | -6 | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =-150 V , I _E =0 | | -1 | μA |
| Emitter cut-off current | I _{EBO} | V _{EB} =-6V , I _C =0 | | -1 | μA |
| DC current gain | h _{FE} | V _{CE} =-5 V , I _C =- 200mA | 60 | 320 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = -500m A , I _B = -50mA | | -1.5 | V |
| Base-emitter voltage | V _{BE} | I _C = -5 mA , V _{CE} =- 5V | | -0.75 | V |
| Transition frequency | f _T | V _{CE} = -5 V , I _C = -200mA | 15 | | MHz |

CLASSIFICATION OF h_{FE}

| Rank | R | O | Y |
|-------|--------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 |