

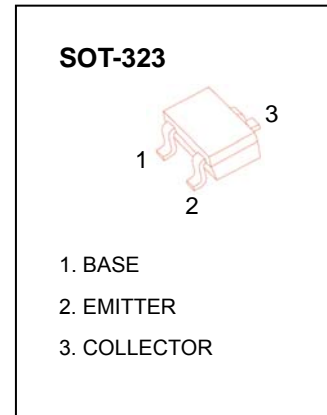
TRANSISTOR (NPN)

FEATURES

- High I_{CMax} . $I_{CMax}=0.5A$
- Low $V_{CE(sat)}$. Optimal for low voltage operation.
- Complements the 2SA1577

MAXIMUM RATINGS ($T_A=25^{\circ}C$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|-------------|
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 32 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 500 | mA |
| P_C | Collector Power Dissipation | 200 | mW |
| T_J | Junction Temperature | 150 | $^{\circ}C$ |
| T_{stg} | Storage Temperature | -55-150 | $^{\circ}C$ |



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$ | 40 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 32 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100\mu A, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=20V, I_E=0$ | | | 1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=4V, I_C=0$ | | | 1 | μA |
| DC current gain | h_{FE} | $V_{CE}=3V, I_C=10mA$ | 82 | | 390 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 0.4 | V |
| Transition frequency | f_T | $V_{CE}=5V, I_C=20mA, f=100MHz$ | | 250 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | | 6 | | pF |

CLASSIFICATION OF h_{FE}

| Rank | P | Q | R |
|---------|--------|---------|---------|
| Range | 82-180 | 120-270 | 180-390 |
| MARKING | CP | CQ | CR |