

RoHS Compliant Product

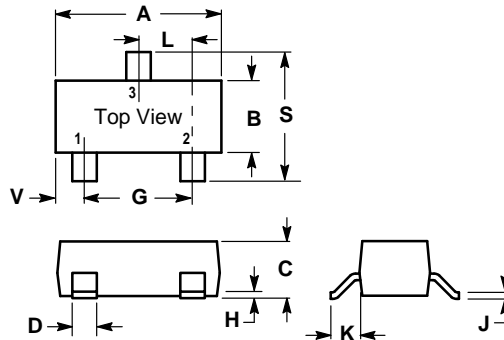
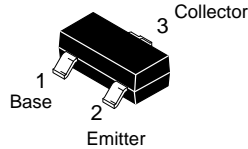
A suffix of "-C" specifies halogen & lead-free

FEATURES

Complimentary to S8550

Collector Current: $I_C=0.5A$

MARKING: J3Y



| SOT-23 | | |
|---------------------|-------|-------|
| Dim | Min | Max |
| A | 2.800 | 3.040 |
| B | 1.200 | 1.400 |
| C | 0.890 | 1.110 |
| D | 0.370 | 0.500 |
| G | 1.780 | 2.040 |
| H | 0.013 | 0.100 |
| J | 0.085 | 0.177 |
| K | 0.450 | 0.600 |
| L | 0.890 | 1.020 |
| S | 2.100 | 2.500 |
| V | 0.450 | 0.600 |
| All Dimension in mm | | |

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

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|------------|
| V_{CB0} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 25 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 0.5 | A |
| P_C | Collector Dissipation | 0.3 | W |
| T_j | Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55-150 | $^\circ C$ |

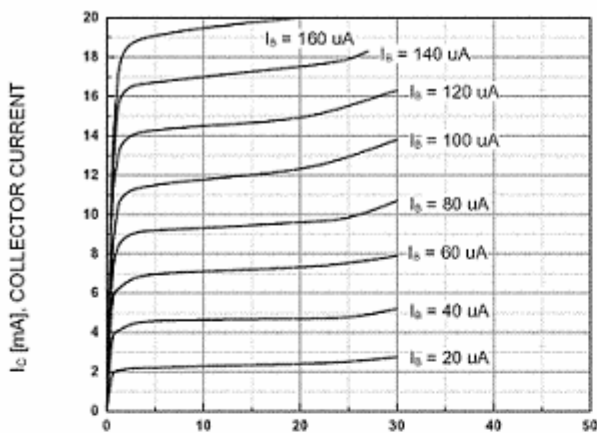
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|------------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CB0}$ | $I_C=100 \mu A, I_E=0$ | 40 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 25 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100 \mu A, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=40V, I_E=0$ | | | 0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CB}=20V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 0.1 | μA |
| DC current gain | $H_{FE(1)}$ | $V_{CE}=1V, I_C=50mA$ | 120 | | 350 | |
| | $H_{FE(2)}$ | $V_{CE}=1V, I_C=500mA$ | 50 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 0.6 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 1.2 | V |
| Transition frequency | f_T | $V_{CE}=6V, I_C=20mA$ $f=30MHz$ | 150 | | | MHz |

CLASSIFICATION OF $h_{FE(1)}$

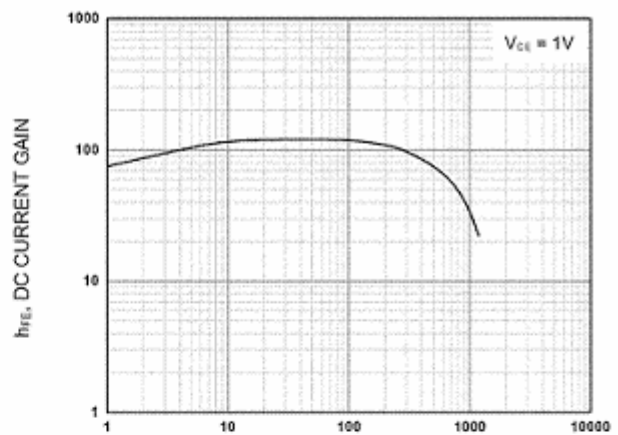
| | | |
|-------|---------|---------|
| Rank | L | H |
| Range | 120-200 | 200-350 |

Typical Characteristics



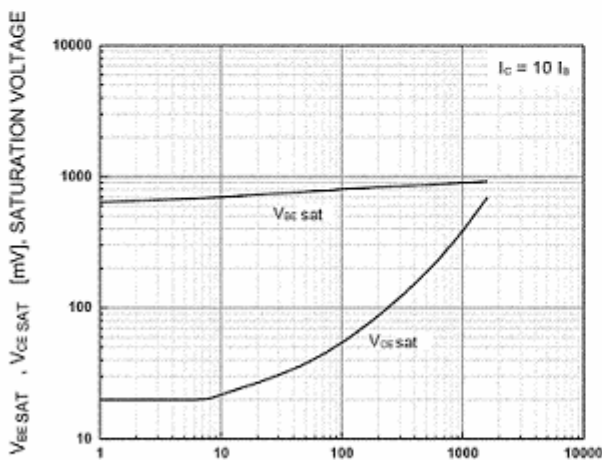
V_{CE} [V], COLLECTOR-EMITTER VOLTAGE

Static Characteristic



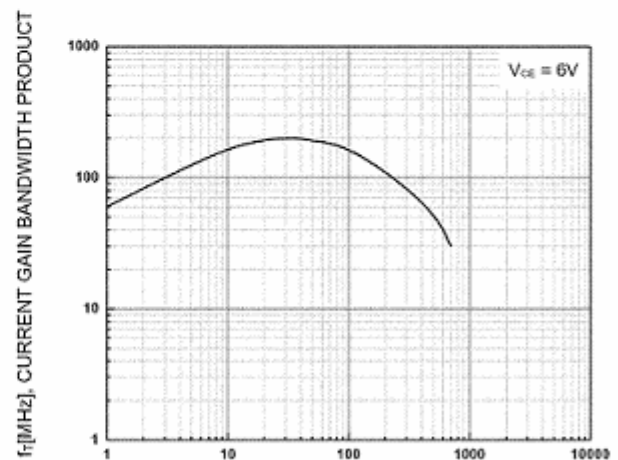
I_C [mA], COLLECTOR CURRENT

DC current Gain



I_C [mA], COLLECTOR CURRENT

**Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**



I_C [mA], COLLECTOR CURRENT

Current Gain Bandwidth Product