

SS8050

NPN TRANSISTOR

Features

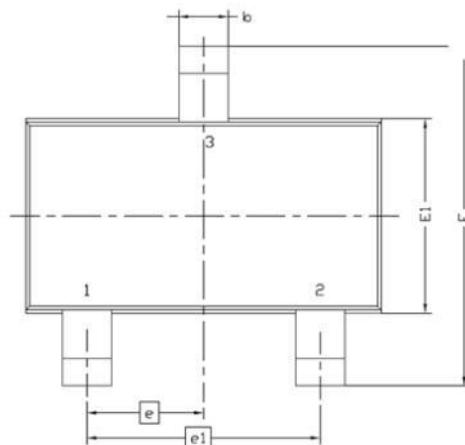
- RoHS compliant package
- Case : SOT-23

Packing & Order Information

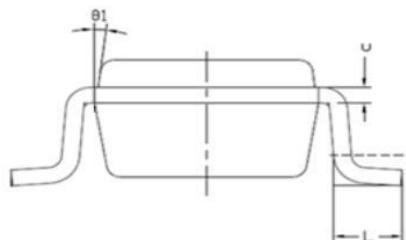
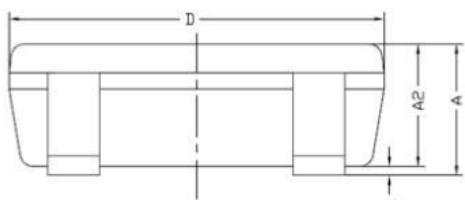
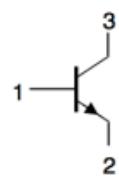
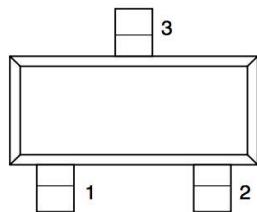
3,000/Reel



**RoHS
COMPLIANT**



Graphic symbol



| Symbol | MILLIMETERS | |
|------------|-------------|-----|
| | MIN | MAX |
| A | 0.8 | 1.2 |
| A1 | 0 | 0.1 |
| A2 | 0.7 | 1.1 |
| b | 0.3 | 0.5 |
| c | 0.1 | 0.2 |
| D | 2.7 | 3.1 |
| E | 2.6 | 3 |
| E1 | 1.4 | 1.8 |
| e | 0.95 BSC | |
| e1 | 1.9 BSC | |
| L | 0.3 | 0.6 |
| θ_1 | 7° NOM | |

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Unit |
|-----------|---------------------------|-------------|------------------|
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 25 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_c | Collector Current | 1.5 | A |
| P_c | Collector Dissipation | 0.3 | W |
| T_j | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Symbol | Parameter | Test Conditions | MIN | TYP | MAX | UNIT |
|---------------|--------------------------------------|---|-----|-----|-----|---------------|
| $V_{(BR)CBO}$ | Collector-base breakdown voltage | $I_c = 100\mu\text{A}, I_E = 0$ | 40 | | | V |
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | $I_c = 0.1\text{mA}, I_B = 0$ | 25 | | | V |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage | $I_E = 100\mu\text{A}, I_c = 0$ | 5 | | | V |
| I_{CBO} | Collector cut-off current | $V_{CB} = 40\text{ V}, I_E = 0$ | | | 0.1 | μA |
| I_{CEO} | Collector cut-off current | $V_{CB} = 20\text{ V}, I_E = 0$ | | | 0.1 | μA |
| I_{EBO} | Emitter cut-off current | $V_{EB} = 5\text{ V}, I_c = 0$ | | | 0.1 | μA |
| $h_{FE(1)}$ | DC current gain | $V_{CE} = 1\text{ V}, I_c = 100\text{ mA}$ | 120 | | 400 | |
| $h_{FE(2)}$ | | $V_{CE} = 1\text{ V}, I_c = 800\text{ mA}$ | 40 | | | |
| $V_{CE(sat)}$ | Collector-emitter saturation voltage | $I_c = 800\text{mA}, I_B = 80\text{mA}$ | | | 0.5 | V |
| $V_{BE(sat)}$ | Base-emitter saturation voltage | $I_c = 800\text{mA}, I_B = 80\text{mA}$ | | | 1.2 | V |
| f_T | Transition frequency | $V_{CE}=10\text{V}, I_C= 50\text{mA}, f=30\text{MHz}$ | 100 | | | MHz |

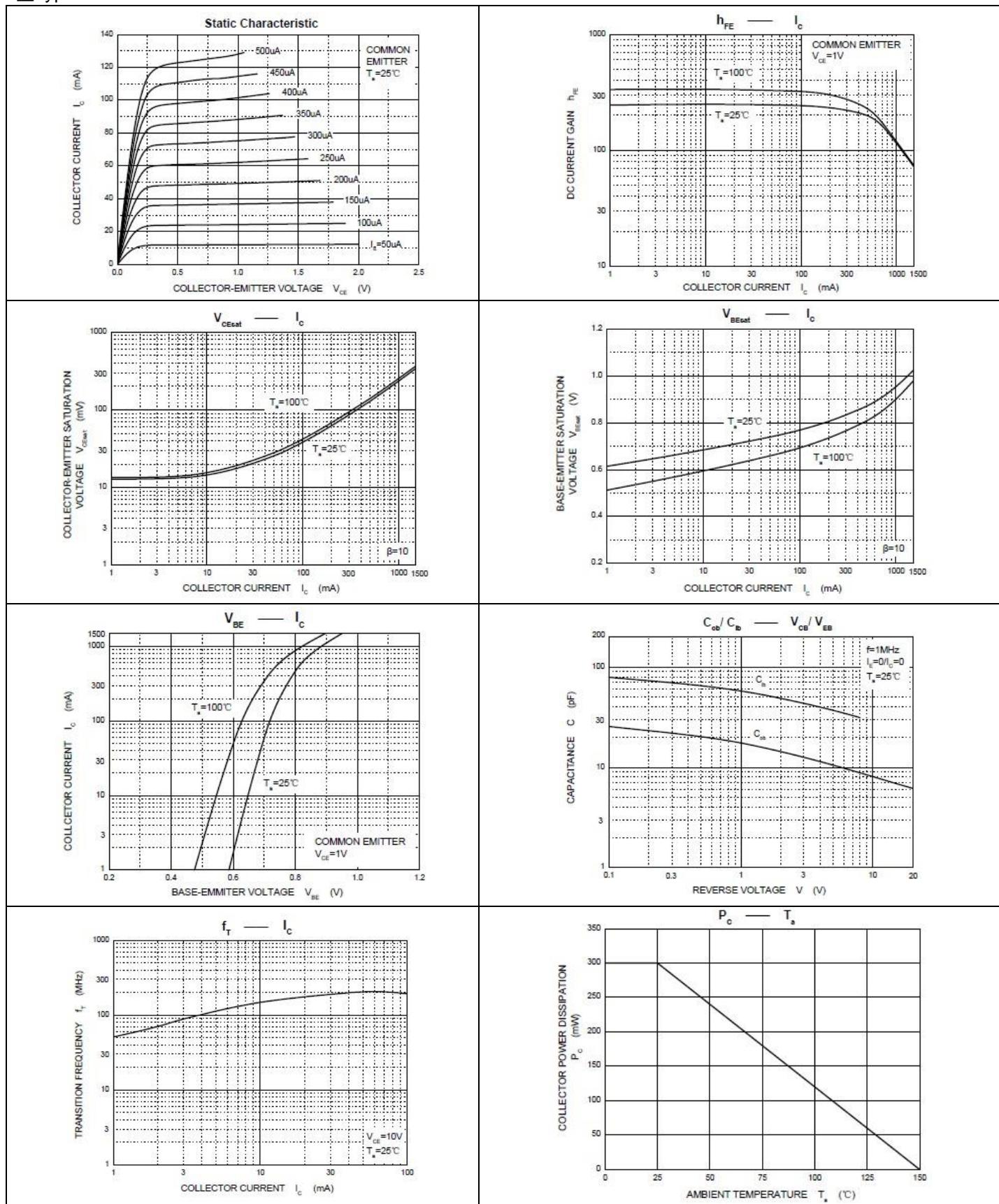
CLASSIFICATION OF $h_{FE(1)}$

| Rank | L | H | J |
|-------|---------|---------|---------|
| Range | 120-200 | 200-350 | 300-400 |

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■ Typical Characteristics



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