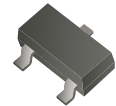


ASS8550-L-HF Thru. ASS8550-H-HF (PNP)

RoHS Device

Halogen Free

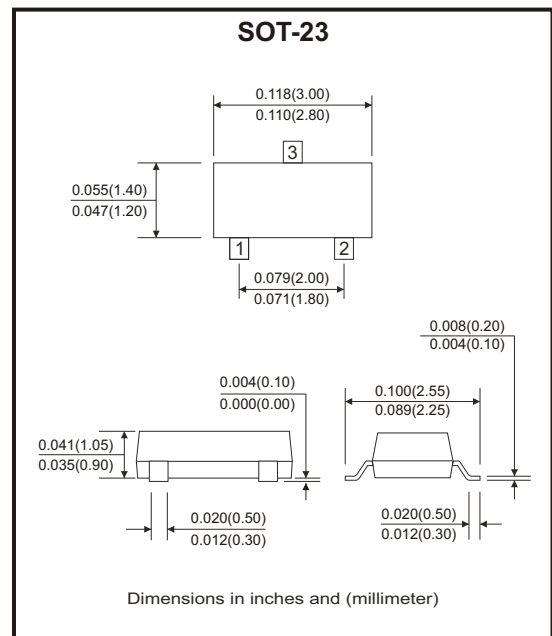


Features

- Epoxy meets UL-94 V-0 flammability rating.
- Moisture sensitivity Level 1.
- AEC-Q101 Qualified.

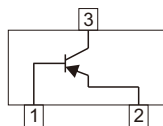
Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.



Circuit Diagram

1. Base
2. Emitter
3. Collector



Maximum Ratings (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|------------------------------|-----------|-------------|--------------------|
| Collector-base voltage | V_{CBO} | -40 | V |
| Collector-emitter voltage | V_{CEO} | -25 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Collector current-continuous | I_C | -1.5 | A |
| Total device dissipation | P_D | 300 | mW |
| Junction temperature | T_J | 150 | $^{\circ}\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | $^{\circ}\text{C}$ |

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Conditions | Min | Max | Unit |
|--------------------------------------|---------------|--|-----|------|------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -100\mu\text{A}, I_E = 0$ | -40 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -100\mu\text{A}, I_B = 0$ | -25 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -100\mu\text{A}, I_C = 0$ | -5 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -40\text{V}, I_E = 0$ | | -100 | nA |
| Collector cut-off current | I_{CEO} | $V_{CE} = -20\text{V}, I_B = 0$ | | -100 | nA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5\text{V}, I_C = 0$ | | -100 | nA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -1\text{V}, I_C = -100\text{mA}$ | 120 | 350 | |
| | $h_{FE(2)}$ | $V_{CE} = -1\text{V}, I_C = -800\text{mA}$ | 40 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -800\text{mA}, I_B = -80\text{mA}$ | | -0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -800\text{mA}, I_B = -80\text{mA}$ | | -1.2 | V |
| Small-signal characteristics | | | | | |
| Transition frequency | f_T | $V_{CE} = -10\text{Vdc}, I_C = -50\text{mA}, f = 30\text{MHz}$ | 100 | | MHz |

Classification of h_{FE} (1)

| Rank | ASS8550-L-HF | ASS8550-H-HF |
|-------|--------------|--------------|
| Range | 120-200 | 200-350 |

Rating and Characteristic Curves (ASS8550-L-HF Thru. ASS8550-H-HF)

Fig.1 - Static Characteristic

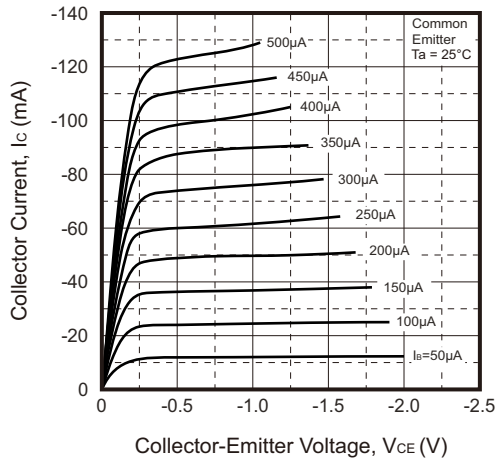


Fig.2 - DC Current Gain

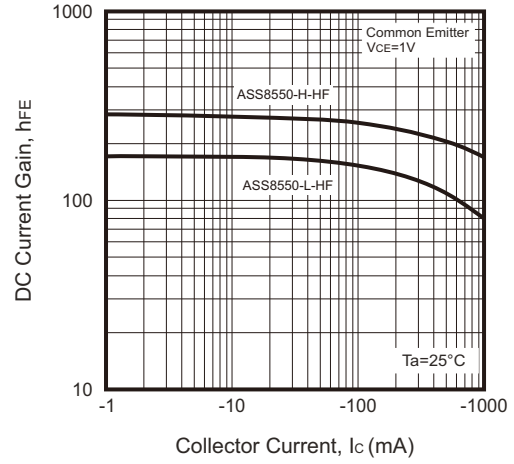


Fig.3 - Base-Emitter Saturation Voltage vs. Collector Current

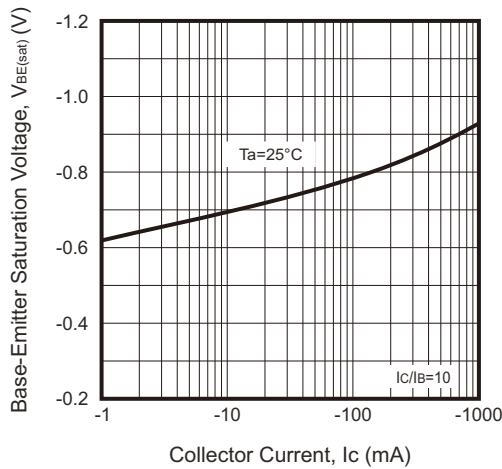
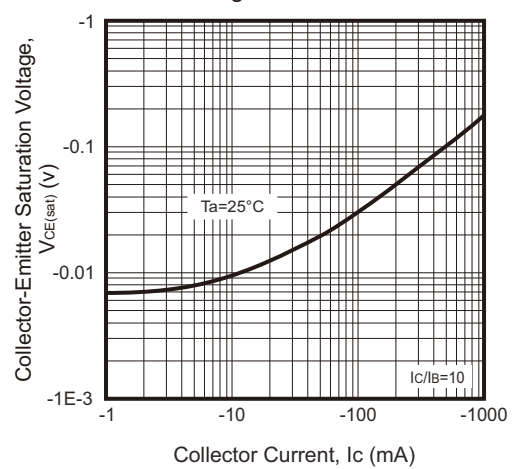
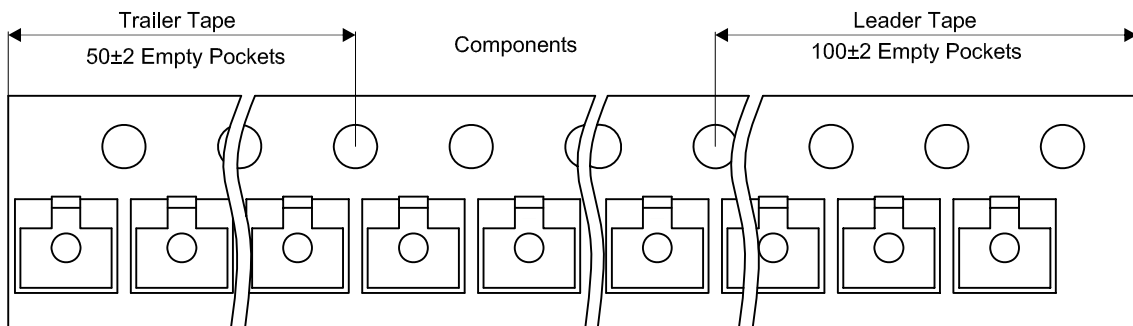
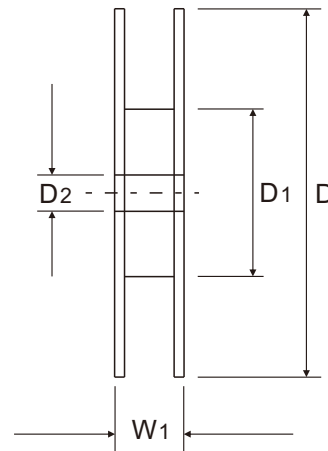
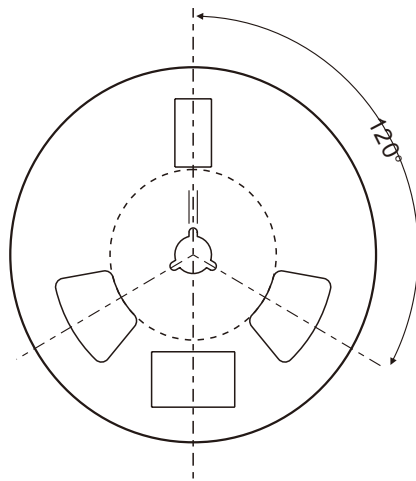
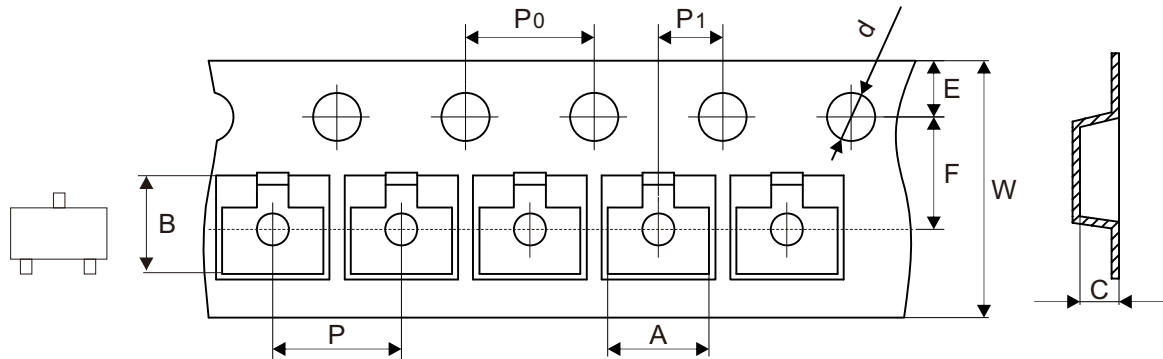


Fig.4 - Collector-Emitter Saturation Voltage vs. Collector Current



Reel Taping Specification

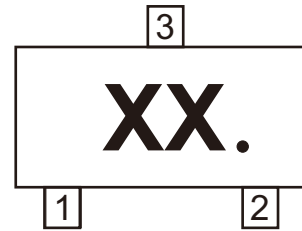


| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|-------------------|-------------------|-------------------|------------------------------|-------------------|-------------------|-------------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | $1.50 + 0.10$ $- 0.00$ | 178.00 ± 1.00 | 54.60 ± 1.00 | 13.30 ± 1.00 |
| | (inch) | 0.124 ± 0.004 | 0.109 ± 0.004 | 0.048 ± 0.004 | $0.059 + 0.004$ $- 0.000$ | 7.008 ± 0.039 | 2.150 ± 0.039 | 0.524 ± 0.039 |

| SOT-23 | SYMBOL | E | F | P | P ₀ | P ₁ | W | W ₁ |
|--------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------------------|-------------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | $8.00 + 0.30$ $- 0.10$ | 11.10 ± 0.20 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | $0.315 + 0.012$ $- 0.004$ | 0.437 ± 0.008 |

Marking Code

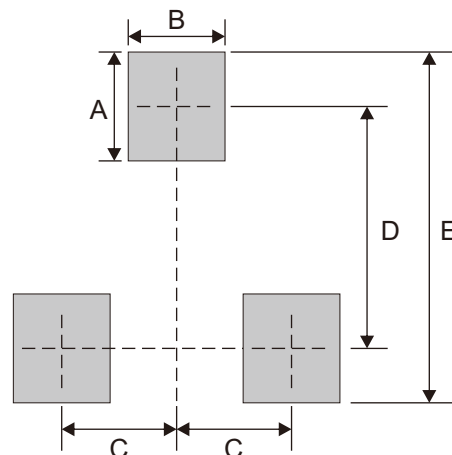
| Part Number | Marking Code |
|--------------|--------------|
| ASS8550-L-HF | Y2-L |
| ASS8550-H-HF | Y2 |



xx/xxxx = Product type marking code

Suggested PAD Layout

| SIZE | SOT-23 | |
|------|--------|--------|
| | (mm) | (inch) |
| A | 0.90 | 0.035 |
| B | 0.80 | 0.031 |
| C | 0.95 | 0.037 |
| D | 2.00 | 0.079 |
| E | 2.90 | 0.114 |



Note: 1. The pad layout is for reference purposes only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOT-23 | 3,000 | 7 |