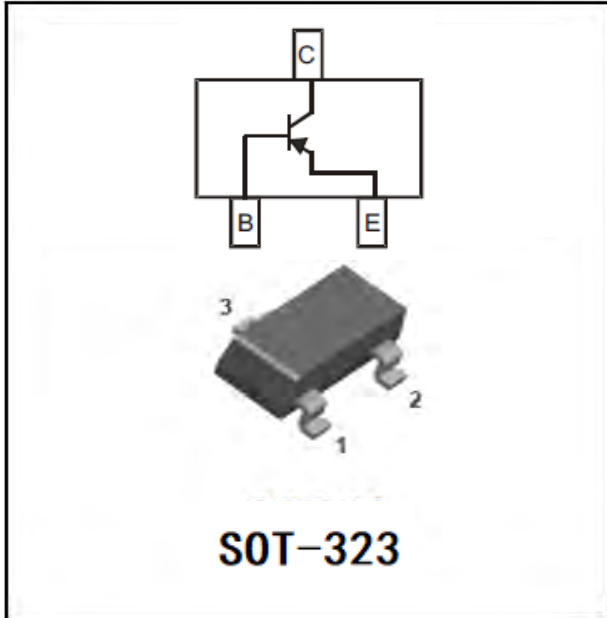


PNP Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion

Mechanical Data

- **Package:** SOT-323
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** K3F

■ **Maximum Ratings** (Ta=25°C unless otherwise noted)

| Item | Symbol | Unit | Value |
|--------------------------------|-----------|------|-------------|
| Collector-Base Voltage | V_{CBO} | V | -60 |
| Collector-Emitter Voltage | V_{CEO} | V | -60 |
| Emitter-Base Voltage | V_{EBO} | V | -5 |
| Collector Current | I_C | mA | -600 |
| Collector Power Dissipation | P_C | mW | 200 |
| Operation Junction Temperature | T_j | °C | 150 |
| Storage Temperature | T_{stg} | °C | -55 to +150 |



MMST2907A

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

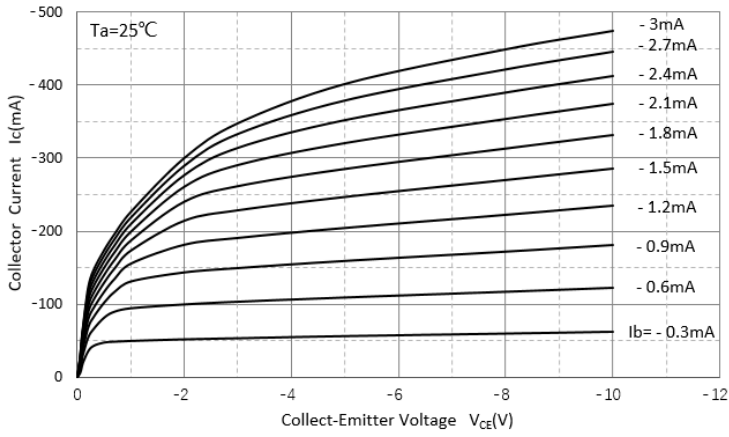
| Item | Symbol | Unit | Conditions | Min | Typ | Max |
|--------------------------------------|---------------|------|--|-----|-----|------|
| Collector-base breakdown voltage | V_{CBO} | V | $I_C=-10\mu A, I_E=0$ | -60 | | |
| Collector-emitter breakdown voltage | V_{CEO^*} | V | $I_C=-10mA, I_B=0$ | -60 | | |
| Emitter-base breakdown voltage | V_{EBO} | V | $I_E=-10\mu A, I_C=0$ | -5 | | |
| Collector-emitter cut-off current | I_{CEO} | nA | $V_{CE}=-35V, I_B=0$ | | | -50 |
| Collector-base cut-off current | I_{CBO} | nA | $V_{CB}=-50V, I_E=0$ | | | -10 |
| Emitter-base cut-off current | I_{EBO} | nA | $V_{EB}=-3V, I_C=0$ | | | -10 |
| DC current gain | h_{FE} | | $V_{CE}=-10V, I_C=-1mA$ | 100 | | |
| | h_{FE} | | $V_{CE}=-10V, I_C=-150mA$ | 100 | | 300 |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | V | $I_C=-500mA, I_B=-50mA$ | | | -1.6 |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | V | $I_C=-500mA, I_B=-50mA$ | | | -2.6 |
| Transition frequency | f_T | MHz | $V_{CE}=-20V, I_C=-50mA, f=100MHz$ | 200 | | |
| Delay time | t_d | ns | $V_{CC}=-30V, I_C=-150mA, I_{B1}=-15mA$ | | | 10 |
| Rise time | t_r | ns | | | | 40 |
| Storage time | t_s | ns | $V_{CC}=-30V, I_C=-150mA, I_{B1}=I_{B2}=-15mA$ | | | 80 |
| Fall time | t_f | ns | | | | 30 |

■ Ordering Information (Example)

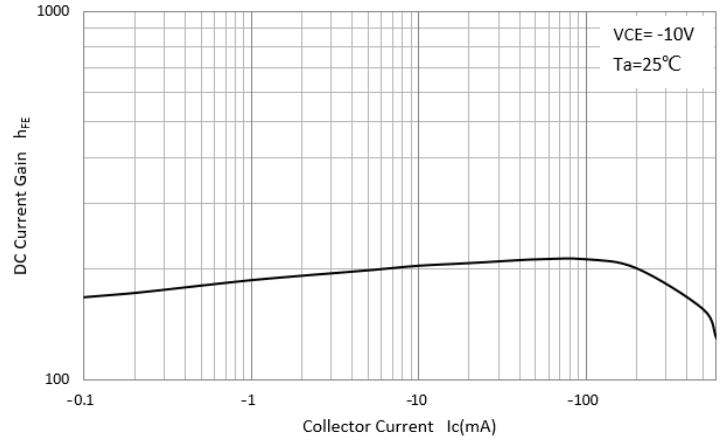
| Preferred P/N | Packing Code | Unit Weight(G) | Minimum Package(Pcs) | Inner Box Quantity(Pcs) | Outer Carton Quantity(Pcs) | Delivery Mode |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| MMST2907A | F2 | Approximate 0.005 | 3000 | 30000 | 120000 | 7" reel |

■ Characteristics (Typical)

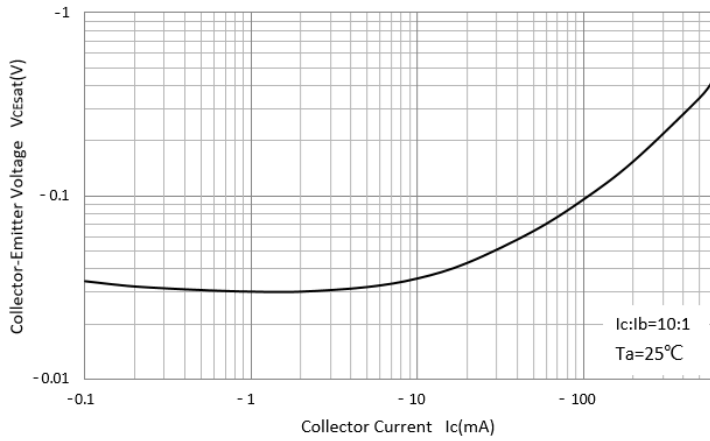
Static Characteristic



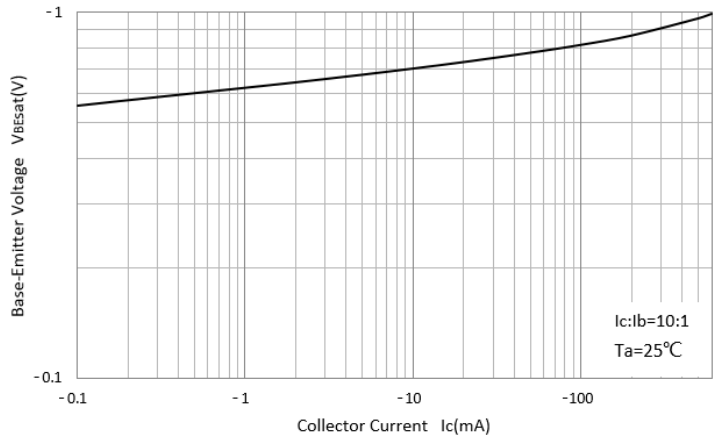
DC Current Gain



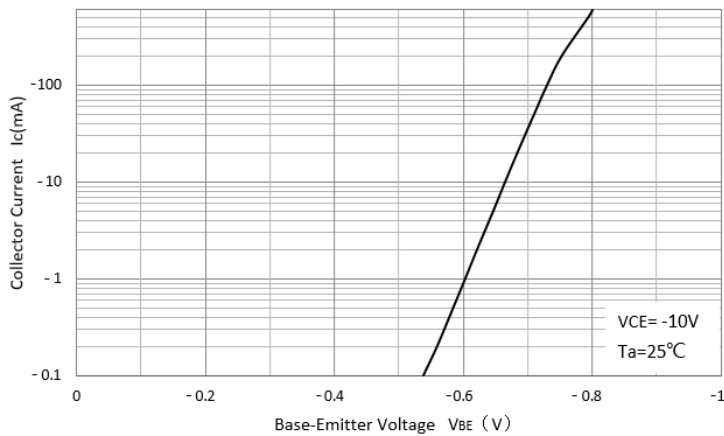
Collector-Emittor Saturation Voltage



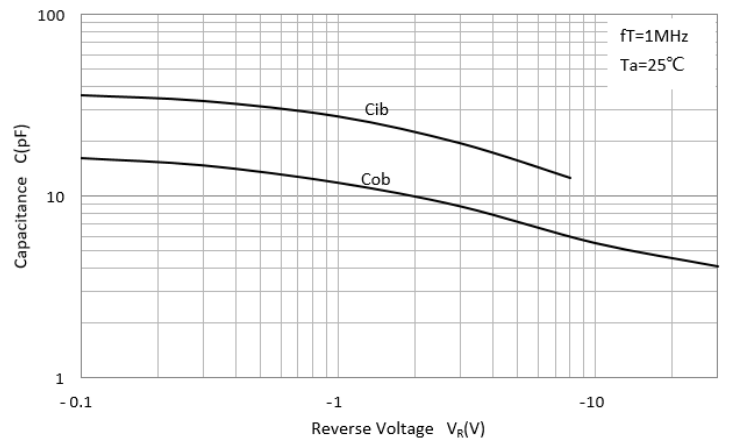
Base-Emittor Saturation Voltage



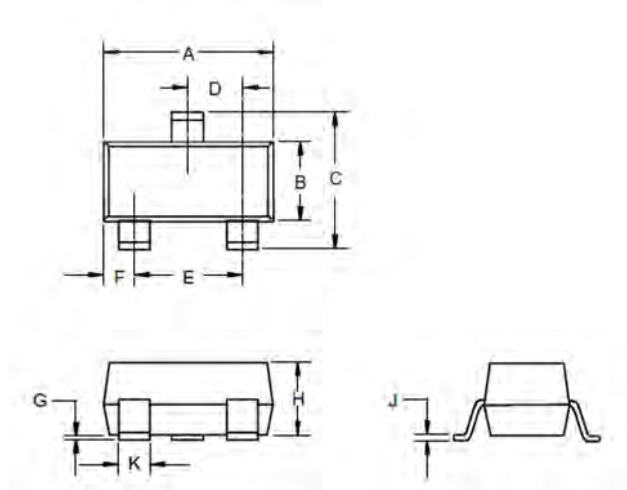
Base-Emittor On Voltage



$C_{ob}/C_{ib}-V_{CB}/V_{EB}$



■ SOT-323 Package Outline Dimensions



| DIM | DIMENSIONS | | | | NOTE |
|-----|--------------|------|-------------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .071 | .087 | 1.80 | 2.20 | |
| B | .045 | .053 | 1.15 | 1.35 | |
| C | .083 | .096 | 2.10 | 2.45 | |
| D | .026 Nominal | | 0.65Nominal | | |
| E | .047 | .055 | 1.20 | 1.40 | |
| F | .012 | .016 | .30 | .40 | |
| G | .000 | .004 | .000 | .100 | |
| H | .035 | .039 | .90 | 1.00 | |
| J | .004 | .010 | .100 | .250 | |
| K | .006 | .016 | .15 | .40 | |

■ SOT-323 Soldering Footprint

