



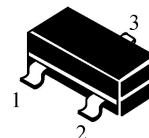
SOT-23 Bipolar Transistor 双极型三极管

■ Features 特点

NPN Low equivalent on-resistance 低等效电阻

SOT-23

- 1. BASE
- 2. EMITTER
- 3. COLLECTOR



■ Absolute Maximum Ratings 最大额定值

| Characteristic 特性参数                         | Symbol 符号              | Rat 额定值              | Unit 单位       |
|---------------------------------------------|------------------------|----------------------|---------------|
| Collector-Base Voltage 集电极基极电压              | $V_{CBO}$              | 50                   | V             |
| Collector-Emitter Voltage 集电极发射极电压          | $V_{CEO}$              | 50                   | V             |
| Emitter-Base Voltage 发射极基极电压                | $V_{EBO}$              | 5                    | V             |
| Collector Current 集电极电流                     | $I_C$                  | 2000                 | mA            |
| Power dissipation 耗散功率                      | $P_C(T_a=25^{\circ}C)$ | 250                  | mW            |
| Thermal Resistance Junction-Ambient 热阻      | $R_{\theta JA}$        | 500                  | $^{\circ}C/W$ |
| Junction and Storage Temperature<br>结温和储藏温度 | $T_J, T_{stg}$         | $-55to+150^{\circ}C$ |               |

■ Device Marking 产品打标

FMMT619=619



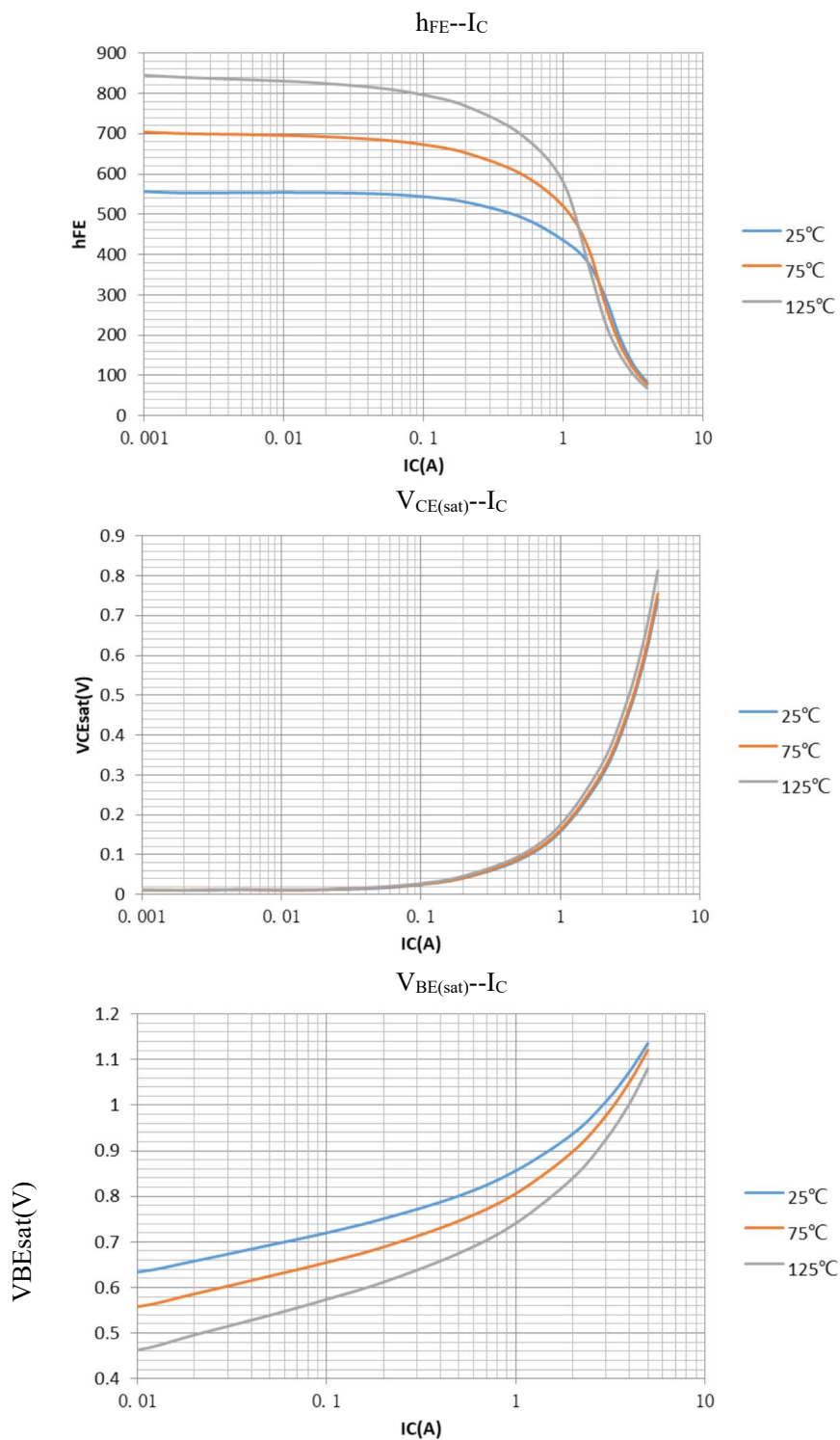
■ **Electrical Characteristics** 电特性

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

| Characteristic<br>特性参数                                                                                                                            | Symbol<br>符号  | Min<br>最小值 | Type<br>典型值 | Max<br>最大值   | Unit<br>单位    |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------|-------------|--------------|---------------|
| Collector-Base Breakdown Voltage<br>集电极基极击穿电压( $I_C=100\mu\text{A}$ , $I_E=0$ )                                                                   | $BV_{CBO}$    | 50         | —           | —            | V             |
| Collector-Emitter Breakdown Voltage<br>集电极发射极击穿电压( $I_C=10\text{mA}$ , $I_B=0$ )                                                                  | $BV_{CEO}$    | 50         | —           | —            | V             |
| Emitter-Base Breakdown Voltage<br>发射极基极击穿电压( $I_E=100\mu\text{A}$ , $I_C=0$ )                                                                     | $BV_{EBO}$    | 5          | —           | —            | V             |
| Collector-Base Leakage Current<br>集电极基极漏电流( $V_{CB}=30\text{V}$ , $I_E=0$ )                                                                       | $I_{CBO}$     | —          | —           | 1            | $\mu\text{A}$ |
| Collector-Emitter Leakage Current<br>集电极发射极漏电流( $V_{CE}=30\text{V}$ , $V_{BE}=-0.5\text{V}$ )                                                     | $I_{CEX}$     | —          | —           | 1            | $\mu\text{A}$ |
| Emitter-Base Leakage Current<br>发射极基极漏电流( $V_{EB}=5\text{V}$ , $I_C=0$ )                                                                          | $I_{EBO}$     | —          | —           | 1            | $\mu\text{A}$ |
| DC Current Gain( $V_{CE}=2\text{V}$ , $I_C=200\text{mA}$ )<br>直流电流增益( $V_{CE}=2\text{V}$ , $I_C=2000\text{mA}$ )                                  | $H_{FE}$      | 300<br>150 | —           | 450          |               |
| Collector-Emitter Saturation Voltage<br>集电极发射极饱和压降<br>( $I_C=1500\text{mA}$ , $I_B=50\text{mA}$ )<br>( $I_C=2500\text{mA}$ , $I_B=150\text{mA}$ ) | $V_{CE(sat)}$ | —          | —           | 0.25<br>0.35 | V             |
| Base-Emitter Saturation Voltage<br>基极发射极饱和压降<br>( $I_C=2000\text{mA}$ , $I_B=100\text{mA}$ )                                                      | $V_{BE(sat)}$ | —          | —           | 1.1          | V             |
| Transition Frequency<br>特征频率( $V_{CE}=10\text{V}$ , $I_C=50\text{mA}$ )                                                                           | $f_T$         | 150        | —           | —            | MHz           |

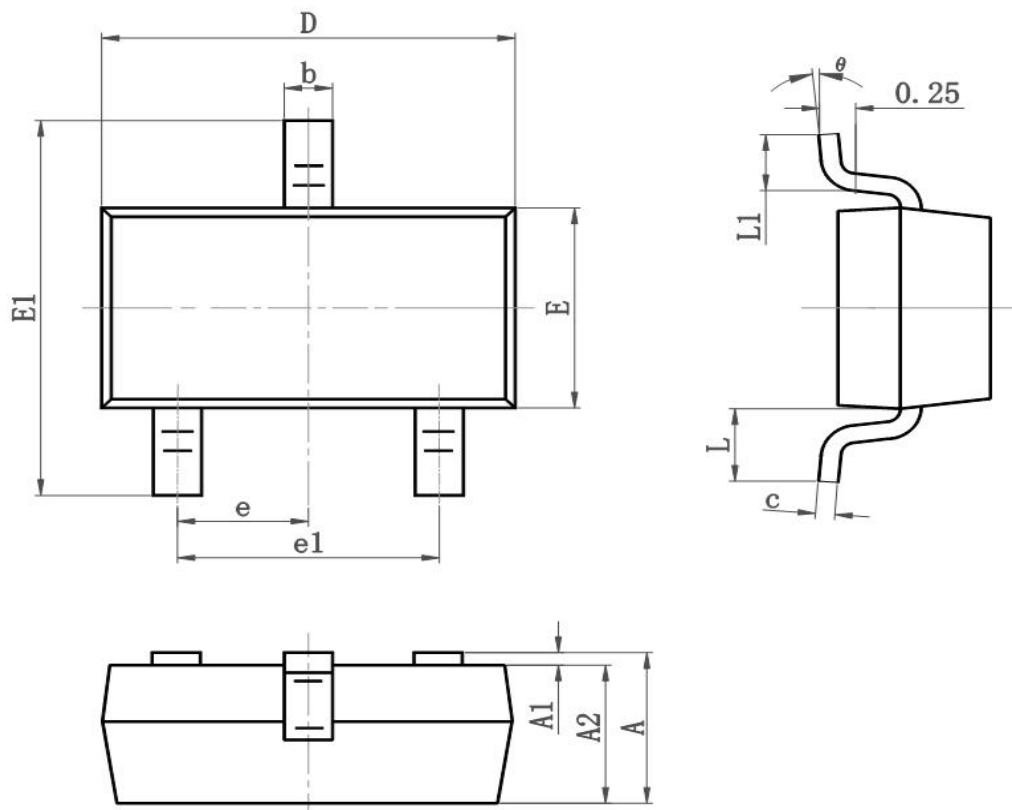


■ Typical Characteristic Curve 典型特性曲线





■Dimension 外形封装尺寸



| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.900                     | 1.050 | 0.035                | 0.041 |
| b        | 0.300                     | 0.500 | 0.012                | 0.020 |
| c        | 0.080                     | 0.150 | 0.003                | 0.006 |
| D        | 2.800                     | 3.000 | 0.110                | 0.118 |
| E        | 1.200                     | 1.400 | 0.050                | 0.055 |
| E1       | 2.250                     | 2.550 | 0.089                | 0.100 |
| e        | 0.900                     | 1.00  | 0.035                | 0.039 |
| e1       | 1.800                     | 2.000 | 0.071                | 0.079 |
| L        | 0.500                     | 0.600 | 0.020                | 0.024 |
| L1       | 0.300                     | 0.500 | 0.012                | 0.020 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |