



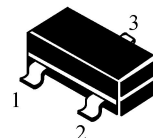
# 桂林斯壯微電子有限責任公司

## Guilin Strong Micro-Electronics Co.,Ltd.

GM8050

SOT-23

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



### FEATURES 特點

NPN Low Frequency Power Amplifier 低頻功率放大

Suitable for Driver Stage of Small Motor 小馬達驅動

Complementary to GM8550 与 GM8550 互补

### 最大額定值( $T_a=25^{\circ}\text{C}$ )

| CHARACTERISTIC<br>特性參數                      | Symbol<br>符號 | Rating<br>額定值                                                                      | Unit<br>單位                  |
|---------------------------------------------|--------------|------------------------------------------------------------------------------------|-----------------------------|
| Collector-Base Voltage<br>集電極-基極電壓          | $V_{CBO}$    | 40<br>25(GMC6802)                                                                  | V                           |
| Collect-Emitter Voltage<br>集電極-發射極電壓        | $V_{CEO}$    | 25<br>18(GMC6802)                                                                  | V                           |
| Emitter-Base Voltage<br>發射極-基極電壓            | $V_{EBO}$    | 5.0                                                                                | V                           |
| Collector Current<br>集電極電流                  | $I_c$        | 500(S8050A,S8050)<br>1000(M8050)<br>1200(MMT8050)<br>1500(SS8050)<br>1800(GMC6802) | mA                          |
| Collector Power Dissipation<br>集電極耗散功率      | $P_C$        | 225                                                                                | mW                          |
| Junction Temperature<br>結溫                  | $T_j$        | 150                                                                                | $^{\circ}\text{C}$          |
| Solder Temperature/Solder Time<br>焊接溫度/焊接時間 | $T/t$        | 260/10                                                                             | $^{\circ}\text{C}/\text{S}$ |
| Storage Temperature Range<br>儲存溫度           | $T_{stg}$    | -55~150                                                                            | $^{\circ}\text{C}$          |

### DEVICE MARKING 打標

S8050A=J3Y.    S8050=J3Y    M8050=Y1.  
MMT8050=Y1    SS8050=Y.1    GMC6802=6802



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### ■ELECTRICAL CHARACTERISTICS 電特性

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如無特殊說明，溫度為  $25^{\circ}\text{C}$ )

| Characteristic<br>特性參數                              | Symbol<br>符號  | Test Condition<br>測試條件                                                                                                                                                                                                                                                               | Min.<br>最小值          | Typ.<br>典型值 | Max.<br>最大值                     | Unit<br>單位    |
|-----------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|---------------------------------|---------------|
| Collector Cutoff Current<br>集電極截止電流                 | $I_{CBO}$     | $V_{CB}=30\text{V}, I_E=0$                                                                                                                                                                                                                                                           | —                    | —           | 0.1                             | $\mu\text{A}$ |
| Emitter Cutoff Current<br>發射極截止電流                   | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$                                                                                                                                                                                                                                                            | —                    | —           | 0.1                             | $\mu\text{A}$ |
| Collector-Base Breakdown Voltage<br>集電極-基極擊穿電壓      | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}$<br>(GMC6802)                                                                                                                                                                                                                                                    | 40<br>(25)           | —           | —                               | V             |
| Collector-Emitter Breakdown Voltage<br>集電極-發射極擊穿電壓  | $V_{(BR)CEO}$ | $I_C=10\text{mA}$<br>(GMC6802)                                                                                                                                                                                                                                                       | 25<br>(18)           | —           | —                               | V             |
| Emitter-Base Breakdown Voltage<br>發射極-基極擊穿電壓        | $V_{(BR)EBO}$ | $I_E=100\mu\text{A}$                                                                                                                                                                                                                                                                 | 5                    | —           | —                               | V             |
| DC Current Gain<br>直流電流增益                           | $H_{FE(1)}$   | $V_{CE}=1\text{V}, I_C=50(\text{S8050/A})\text{mA}$<br>$V_{CE}=1\text{V}, I_C=100\text{mA}$                                                                                                                                                                                          | 85                   | —           | 400                             | —             |
|                                                     | $H_{FE(2)}$   | $V_{CE}=1\text{V},$<br>$I_C=1800\text{mA}(\text{GMC6802})$<br>$I_C=800\text{mA}$<br>(M8050, MMT8050, SS8050)<br>$I_C=500\text{mA}(\text{S8050})$<br>$I_C=500\text{mA}(\text{S8050A})$                                                                                                | 50<br>40<br>40<br>30 | —           | —                               |               |
| Collector-Emitter Saturation Voltage<br>集電極-發射極飽和壓降 | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}(\text{S8050/A})$<br>$I_C=1000\text{mA}, I_B=100\text{mA}(\text{M8050})$<br>$I_C=1200\text{mA}, I_B=120\text{mA}(\text{MMT8050})$<br>$I_C=1500\text{mA}, I_B=150\text{mA}(\text{SS8050})$<br>$I_C=1000\text{mA}, I_B=100\text{mA}(\text{GMC6802})$ | —                    | —           | 0.6<br>0.6<br>0.6<br>0.6<br>0.3 | V             |
| Base-Emitter Saturation Voltage<br>基極-發射極飽和壓降       | $V_{BE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}(\text{S8050/A})$<br>$I_C=1000\text{mA}, I_B=100\text{mA}(\text{M8050})$<br>$I_C=1200\text{mA}, I_B=120\text{mA}(\text{MMT8050})$<br>$I_C=1500\text{mA}, I_B=150\text{mA}(\text{SS8050})$<br>$I_C=1800\text{mA}, I_B=180\text{mA}(\text{GMC6802})$ | —                    | 1           | 1.2                             | V             |
| Base-Emitter Voltage<br>基極-發射極電壓                    | $V_{BE}$      | $V_{CE}=1\text{V}, I_C=10\text{mA}$                                                                                                                                                                                                                                                  | —                    | 0.8         | 1.0                             | V             |
| Transition Frequency<br>特徵頻率                        | $f_T$         | $V_{CE}=5\text{V}, I_C=10\text{mA}$                                                                                                                                                                                                                                                  | 100                  | 120         | —                               | MHz           |
| Collector Output Capacitance<br>輸出電容                | $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$                                                                                                                                                                                                                                            | —                    | 13          | 30                              | pF            |