

**Silicon Epitaxial Planar Transistor****2SC2712****FEATURES**

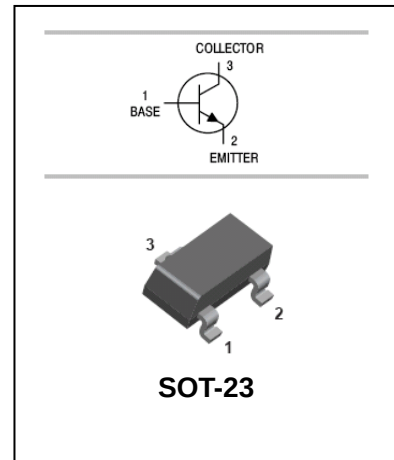
- Low noise: NF=1dB (Typ.), 10 dB(Max).
- Complementary to 2SA1162.
- High voltage and high current.
- High  $h_{FE}$  linearity.



Lead-free

**APPLICATIONS**

- Audio frequency general purpose amplifier applications.

**ORDERING INFORMATION**

| Type No. | Marking         | Package Code |
|----------|-----------------|--------------|
| 2SC2712  | LO•/LY•/LG•/LL• | SOT-23       |

**MAXIMUM RATING @ Ta=25℃ unless otherwise specified**

| Symbol         | Parameter                        | Value   | Units |
|----------------|----------------------------------|---------|-------|
| $V_{CBO}$      | Collector-Base Voltage           | 60      | V     |
| $V_{CEO}$      | Collector-Emitter Voltage        | 50      | V     |
| $V_{EBO}$      | Emitter-Base Voltage             | 5       | V     |
| $I_C$          | Collector Current -Continuous    | 150     | mA    |
| $P_C$          | Collector Dissipation            | 150     | mW    |
| $T_j, T_{stg}$ | Junction and Storage Temperature | -55~125 | ℃     |

**Silicon Epitaxial Planar Transistor****2SC2712****ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified**

| Parameter                            | Symbol        | Test conditions                | MIN | TYP | MAX  | UNIT    |
|--------------------------------------|---------------|--------------------------------|-----|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$          | 60  |     |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=0.1mA, I_B=0$             | 50  |     |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=100\mu A, I_C=0$          | 5   |     |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=60V, I_E=0$            |     |     | 0.1  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5V, I_C=0$             |     |     | 0.1  | $\mu A$ |
| DC current gain                      | $h_{FE}$      | $V_{CE}=6V, I_C=2mA$           | 70  |     | 700  |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100mA, I_B=10mA$          |     | 0.1 | 0.25 | V       |
| Transition frequency                 | $f_T$         | $V_{CE}=10V, I_C=1mA$          | 80  |     |      | MHz     |
| Output capacitance                   | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1kHz$    |     | 2.0 | 3.5  | pF      |
| Noise Figure                         | NF            | $V_{CE}=6V, I_C=0.1mA, f=1kHz$ |     | 1.0 | 10   | dB      |

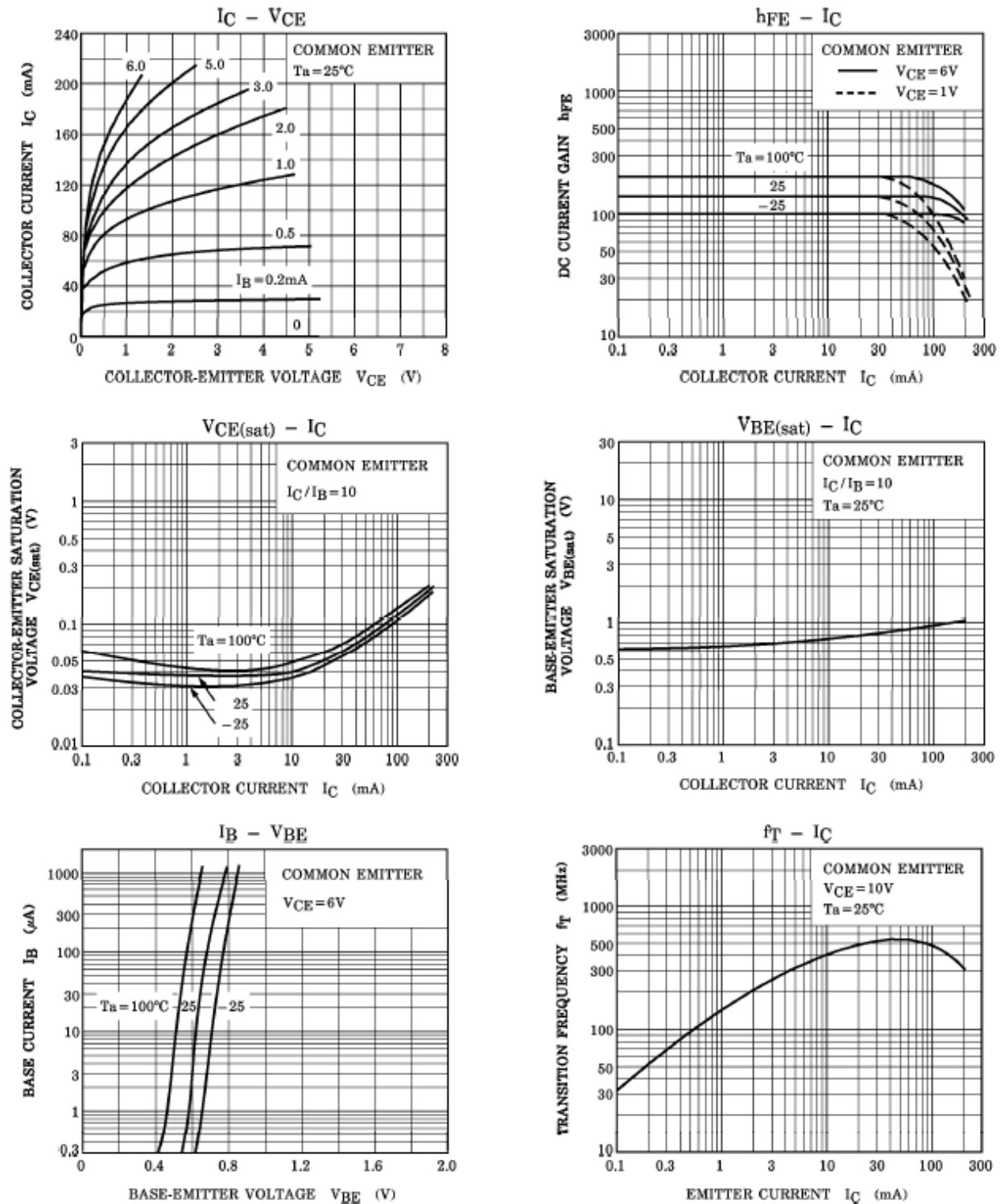
**CLASSIFICATION OF  $h_{FE(1)}$** 

| Rank    | O      | Y       | GR      | BL      |
|---------|--------|---------|---------|---------|
| Range   | 70-140 | 120-240 | 200-400 | 350-700 |
| Marking | LO •   | LY •    | LG •    | LL •    |

## Silicon Epitaxial Planar Transistor

**2SC2712**

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



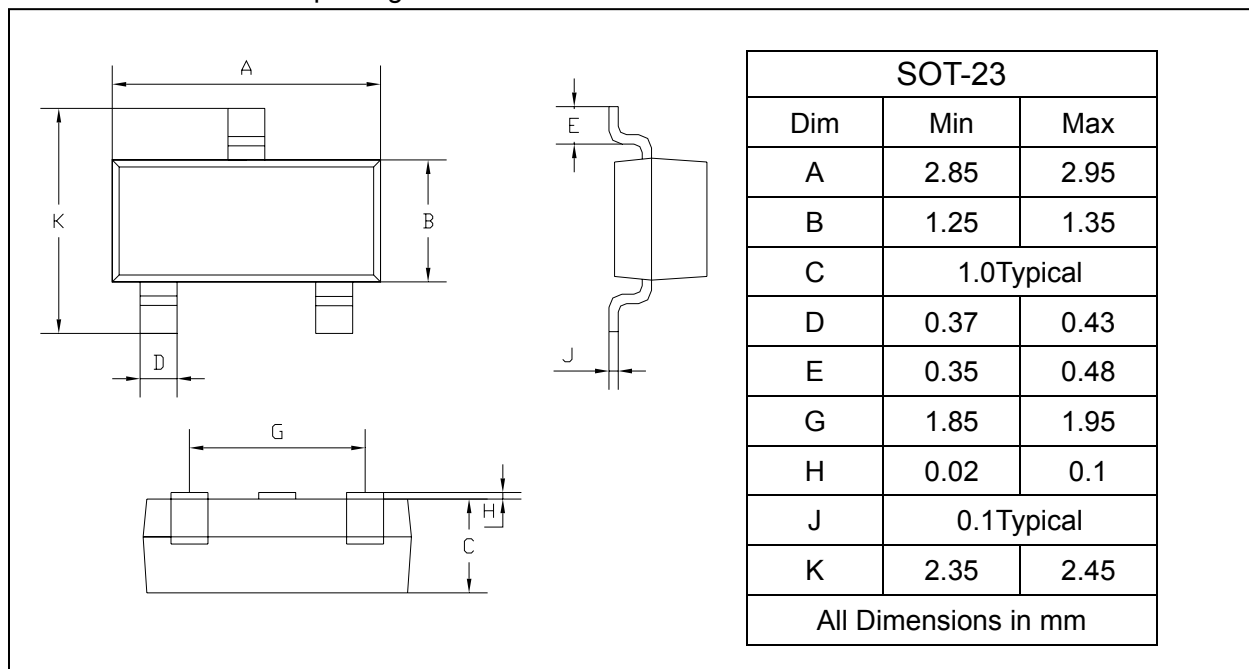
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## 2SC2712

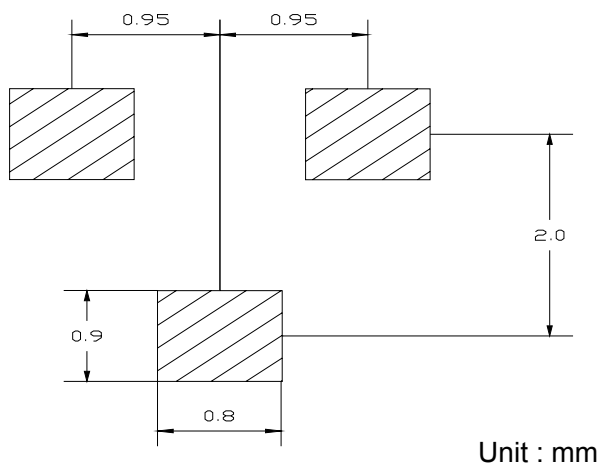
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

| Device  | Package | Shipping       |
|---------|---------|----------------|
| 2SC2712 | SOT-23  | 3000/Tape&Reel |