

**/ Descriptions**

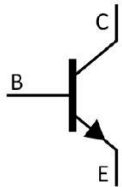
SOT-23          NPN          Silicon NPN transistor in a SOT-23 Plastic Package.

**/ Features**

Good linerarity of  $f_T$ .

**/ Applications**

High frequency, VHF band amplifier application.

**/ Equivalent Circuit****/ Pinning**

PIN 1   Base      PIN 2   Emitter      PIN 3   Collector

**/  $h_{FE}$  Classifications & Marking**

|                |        |
|----------------|--------|
| $h_{FE}$ Range | 20~200 |
| Marking        | HHH    |

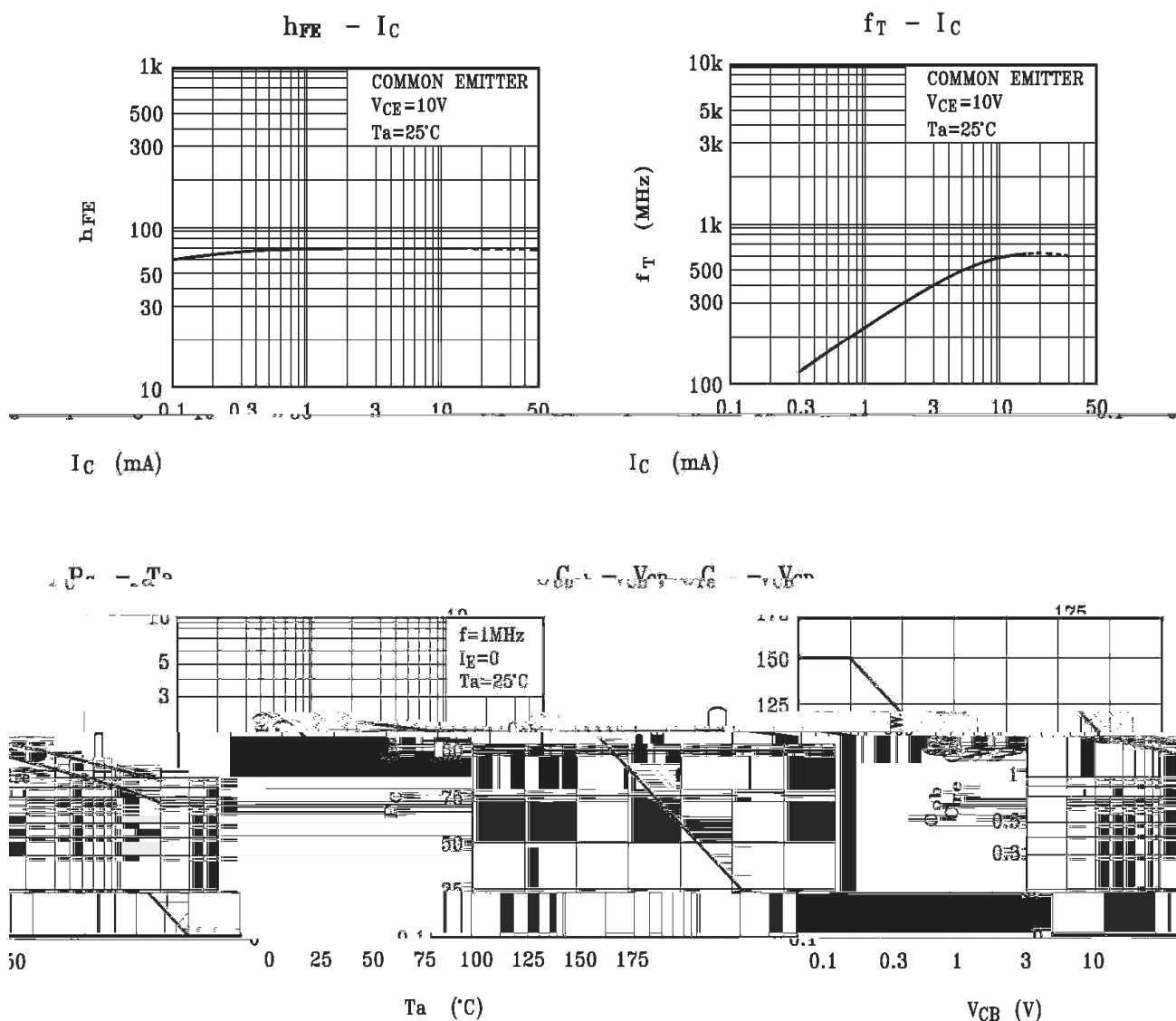
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 30      | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 25      | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 4.0     | V    |
| Collector Current            | $I_C$     | 50      | mA   |
| Base Current                 | $I_B$     | 25      | mA   |
| Collector Power Dissipation  | $P_C$     | 150     | mW   |
| Junction Temperature         | $T_j$     | 150     |      |
| Storage Temperature Range    | $T_{stg}$ | -55 150 |      |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                              | Symbol        | Test Conditions                    | Min | Typ | Max | Unit |
|----------------------------------------|---------------|------------------------------------|-----|-----|-----|------|
| Collector to Emitter Breakdown Voltage | $V_{CEO}$     | $I_C=10mA$                         | 25  |     |     | V    |
| Collector Cut-Off Current              | $I_{CBO}$     | $V_{CB}=30V$ $I_E=0$               |     |     | 0.1 | A    |
| Emitter Cut-Off Current                | $I_{EBO}$     | $V_{EB}=3.0V$ $I_C=0$              |     |     | 0.1 | A    |
| DC Current Gain                        | $h_{FE}$      | $V_{CE}=10V$ $I_C=10mA$            | 20  | 70  | 200 |      |
| Collector-Emitter Saturation Voltage   | $V_{CE(sat)}$ | $I_C=15mA$ $I_B=1.5mA$             |     |     | 0.2 | V    |
| Base-Emitter Saturation Voltage        | $V_{BE(sat)}$ | $I_C=15mA$ $I_B=1.5mA$             |     |     | 1.5 | V    |
| Transition Frequency                   | $f_T$         | $V_{CE}=10V$ $I_C=10mA$            | 250 | 600 |     | MHz  |
| Output Capacitance                     | $C_C$         | $V_{CB}=10V$ $f=1.0MHz$ $I_E=0$    |     | 1.1 | 1.6 | pF   |
| Collector- Base Time Constant          | $C_{c.rbb}$   | $V_{CB}=10V$ $f=30MHz$ $I_E=1.0mA$ |     |     | 25  | pS   |

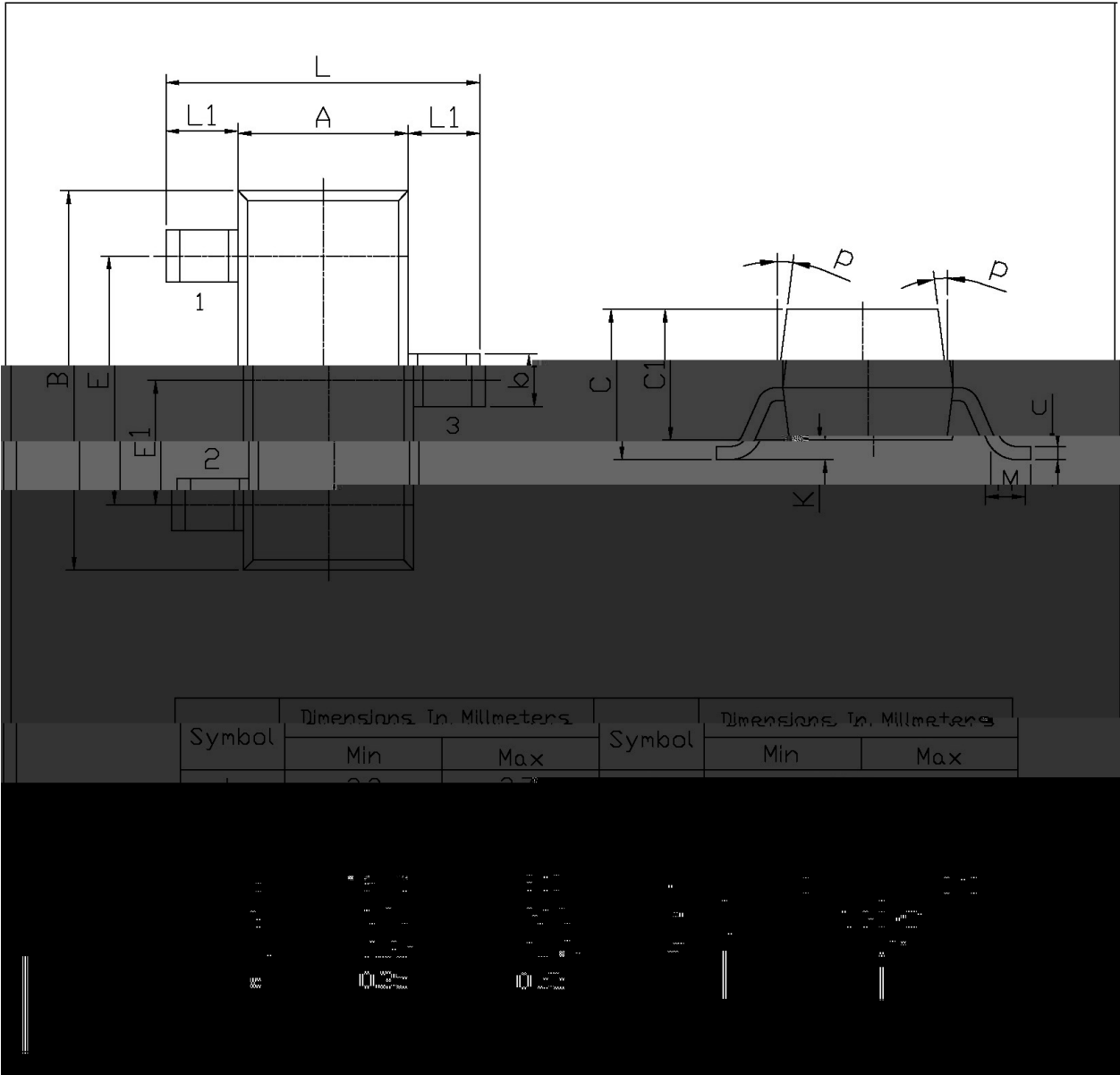
/ Electrical Characteristic Curve



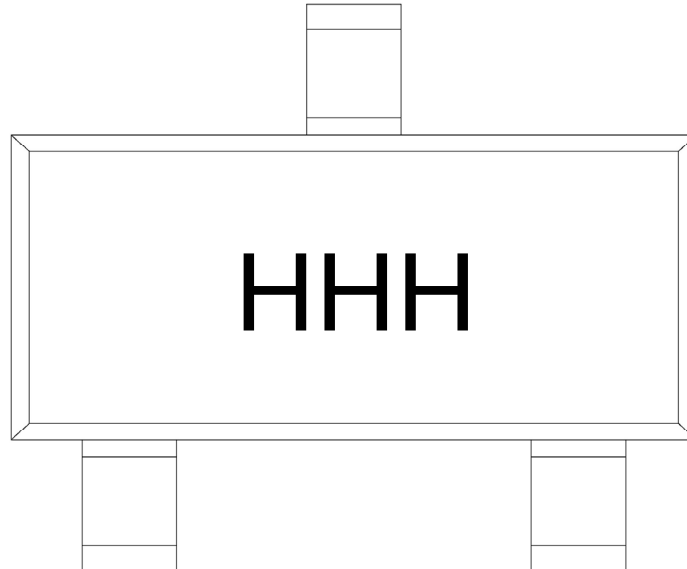
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

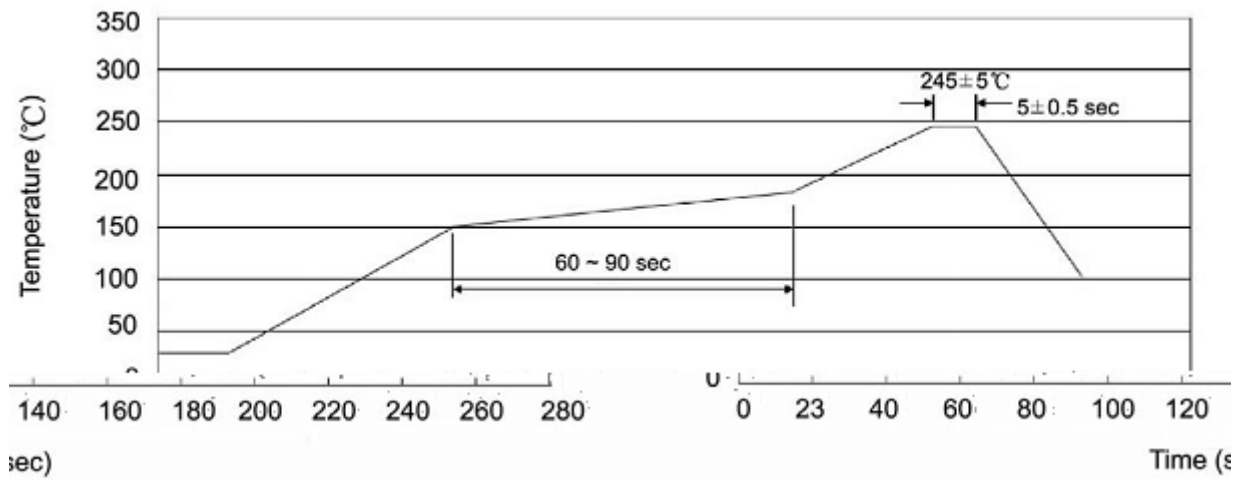
HH

Note:

H            Company Code

HH          Product Type

(     ) /



Note:

- |   |       |     |    |           |                                         |
|---|-------|-----|----|-----------|-----------------------------------------|
| 1 | 25    | 150 | 60 | 90sec;    | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245±5 |     |    | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 |       | 2   | 10 | /sec.     | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

|       |           |             |               |
|-------|-----------|-------------|---------------|
| 260±5 | 10±1 sec. | Temp.:260±5 | Time:10±1 sec |
|-------|-----------|-------------|---------------|

/ Packaging SPEC.

/ REEL

| Package Type | Units |
|--------------|-------|
| 封装形式         |       |