# 2SA562M

Rev.F Apr.-2017

DATA SHEET

## / Descriptions

VRW056 ṂṂ Ł SQS Æ Ṁ ч s ‖ ㄱ Silicon PNP transistor in a SOT-23 Plastic Package.

## / Features

‖ Ḅ k IH ≠ ớ /ль 5VF4<8< P Ӣ ´

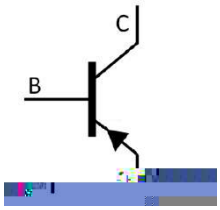
Excellent $h_{FE}$ linearity, complementary pair with 2SC1959M.

## / Applications

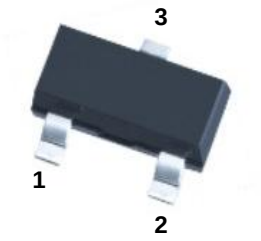
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Audio frequency low power amplifier, driver stage amplifier, switching applications.

## / Equivalent Circuit




## / Pinning




PIN1 χ Base PIN 2 χ Emitter PIN 3 χ Collector

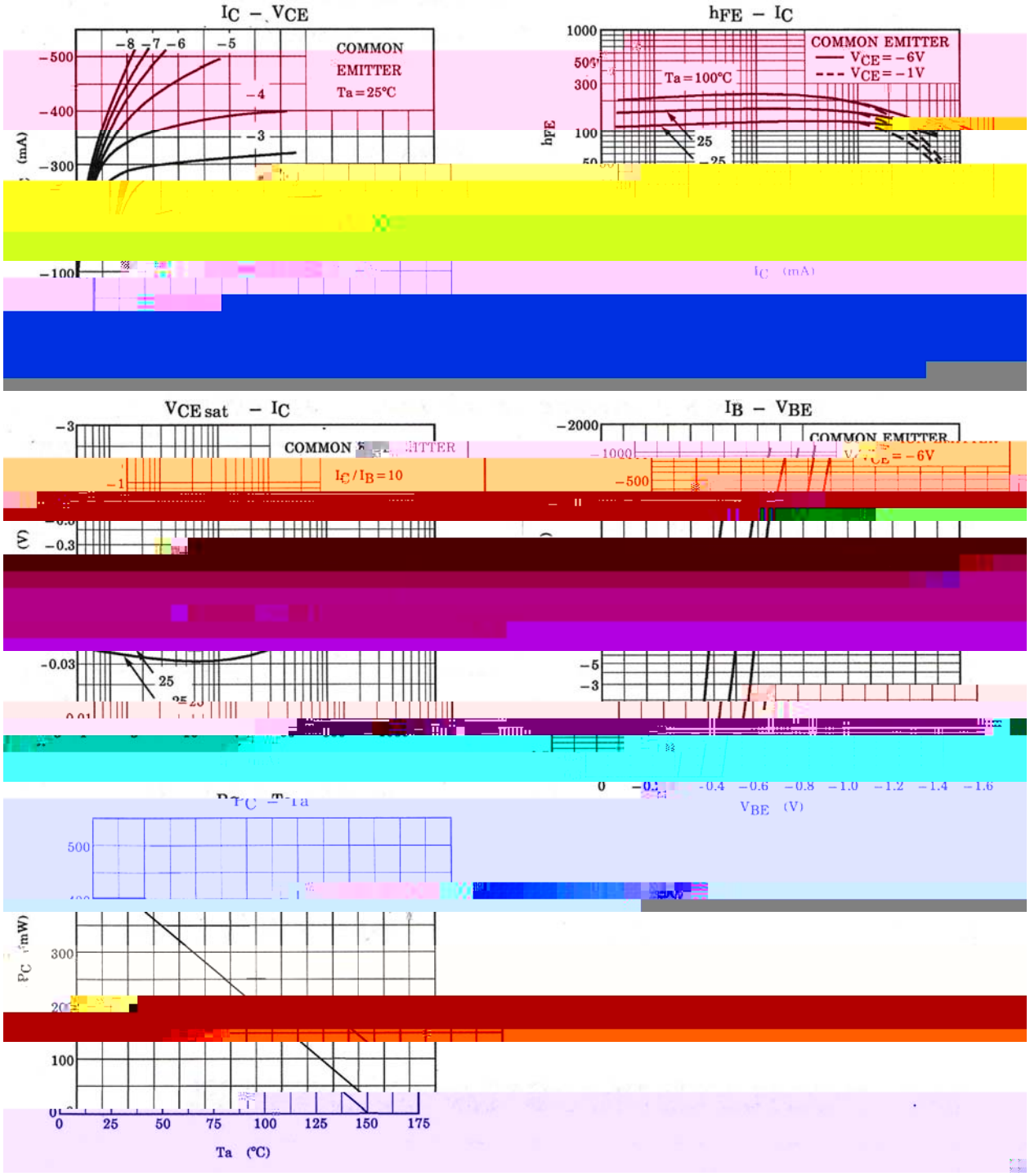
## / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications Symbol | O | Y |
|---|---|---|
| $h_{FE}$ Range | 70 140 | 120 240 |
| Marking | HVAO | HVAY |

| v ̈Ω<br>Parameter | ٩ N<br>Symbol | ̈Ω Ö<br>Rating | D Ч<br>Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | -35 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | -30 | V |
| Emitter to Base Voltage | $V_{EBO}$ | -5.0 | V |
| Collector Current | $I_C$ | -500 | mA |
| Collector Base | $I_B$ | -100 | mA |
| Collector Power Dissipation | $P_C$ | 400 | mW |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{stg}$ | -55 150 | |

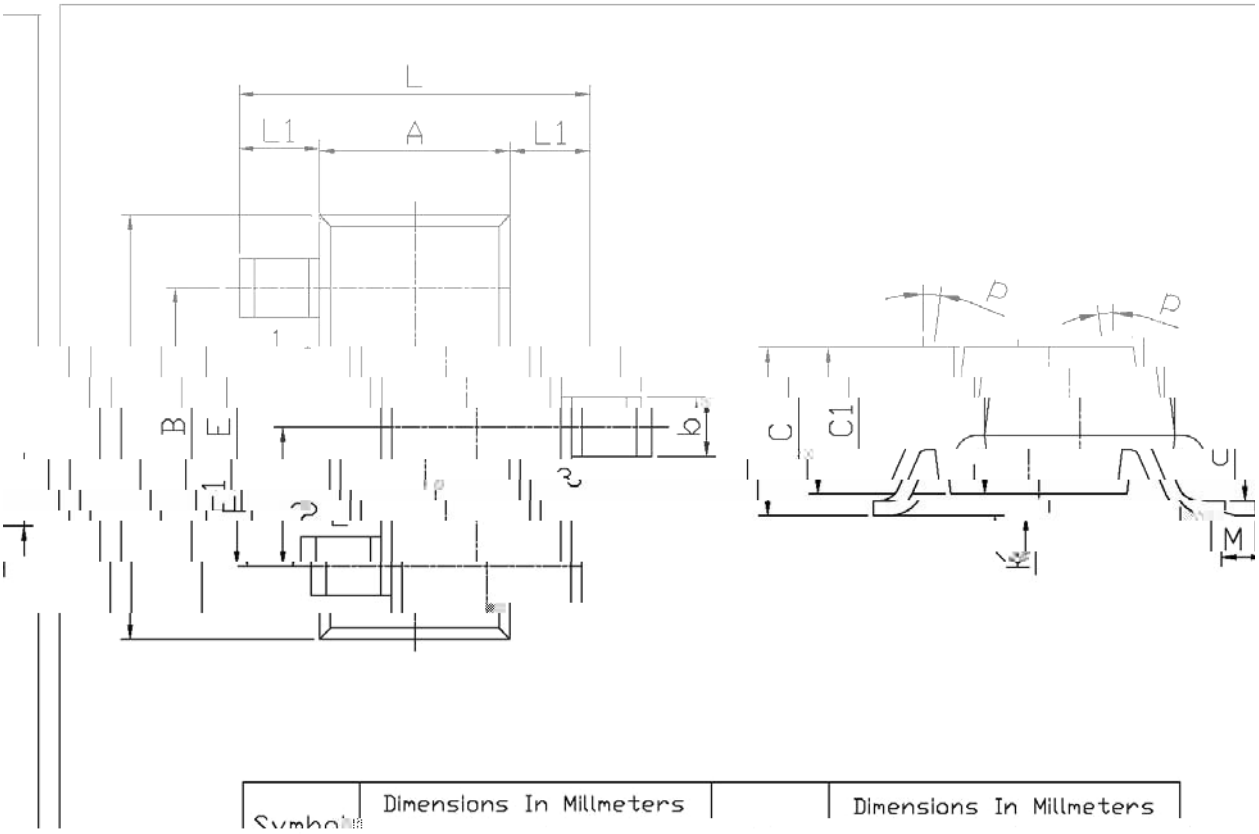
| v ̈Ω<br>Parameter | ٩ N<br>Symbol | ‗ :ˆ Ţ<br>Test Conditions | ώ ņ Ö<br>Min | Ε ʒ Ö<br>Typ | ώ ² Ö<br>Max | D Ч<br>Unit |
|---|---|---|---|---|---|---|
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=-35V $I_E$=0 | | | -0.1 | μA |
| Emitter Base Cut-Off Current | $I_{EBO}$ | $V_{EB}$=-5.0V $I_C$=0 | | | -0.1 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}$=-1.0V $I_C$=-100mA | 70 | | 240 | |
| | $h_{FE(2)}$ | $V_{CE}$=-6.0V $I_C$=-400mA | 25 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=-100mA $I_B$=-10mA | | -0.1 | -0.25 | V |
| Collector to Base Voltage | $V_{BE}$ | $V_{CE}$=-1.0V $I_C$=-100mA | | -0.8 | -1.0 | V |
| Transition Frequency | $f_T$ | $V_{CE}$=-6.0V $I_C$=-20mA | | 200 | | MHz |
| Collector Output Capacitance | $C_{ob}$ | $V_{CB}$=-6.0V $I_E$=0<br>f=1.0MHz | | 13 | | pF |

## / Electrical Characteristic Curve



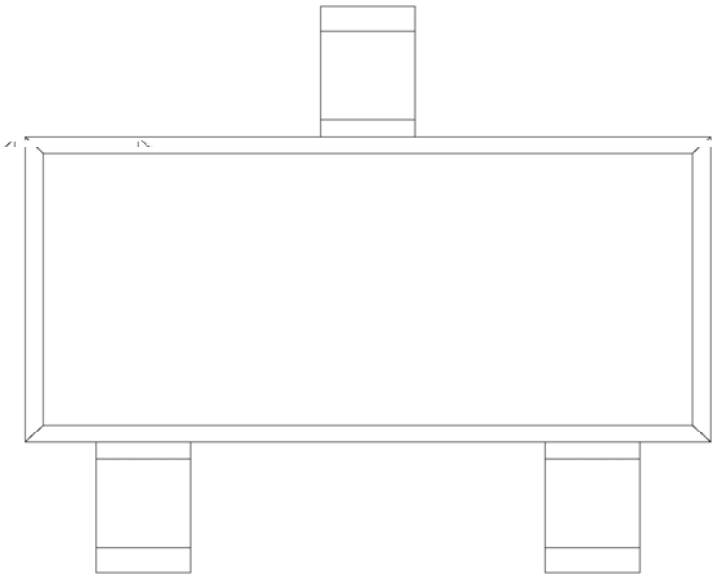
## / Package Dimensions

SOT-23 单位：mm




| Symbol | Dimensions In Millmeters | | Dimensions In Millmeters | |
|---|---|---|---|---|
| | 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 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 1.800 | 2.000 | 0.071 | 0.079 |
| e1 | 0.850 | 1.050 | 0.033 | 0.041 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

## / Marking Instructions



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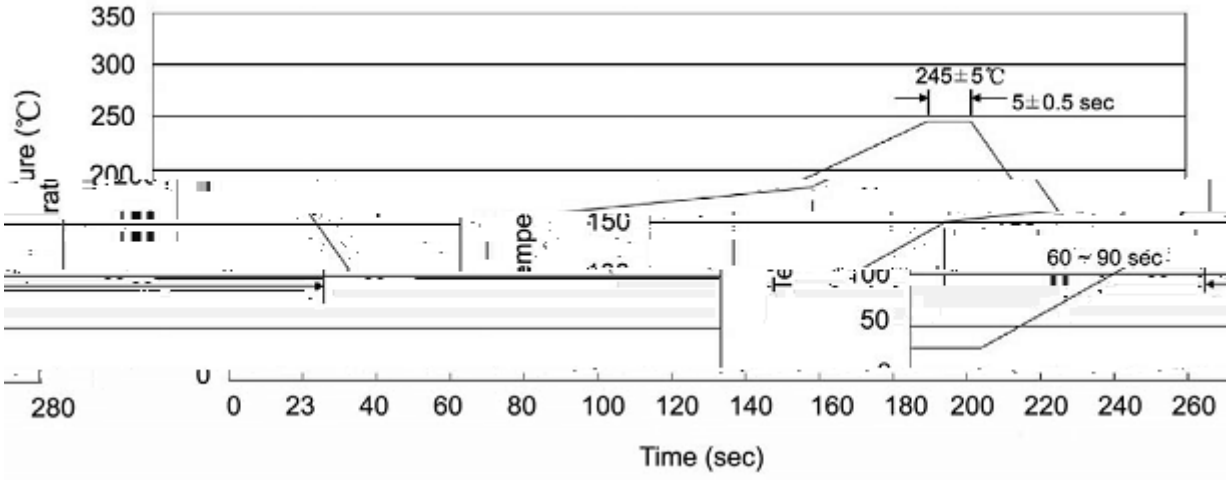
YD χ ѭ ʒ N Ґ

R χ ѭ $h_{FE}$ 6 Ѫ Ґ

Note:

H: Company Code.

## ( ) /




ب ˝ χ

1 Ĺ ♬ □ ỷ 25 Ḱ 150 ł ı ˋH ڑ 60 Ḱ 90sec;

2 Š Ë □ ỷ 245 ° 5 ł ı ˋH ڑ ˋY ﾊ ㎞ 5 ° 0.5sec;

3 ì ˙ ﾘ ˛ ɔ ๛ ỷ ㎞ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:25~150 ł , Time:60~90sec.

2.Peak Temp.:245 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

## / Resistance to Soldering Heat Test Conditions

□ ỷ χ 260 ° 5 ł ˋH ڑ χ 10 ° 1 sec. Temp.:260 ° 5 ł Time:10 ° 1 sec

## / Packaging SPEC.

ɔ ` ﾘ Ł / REEL

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: $mm^3$) | | |
|---|---|---|---|---|---|---|---|---|
| | Units/Reel 只/卷盘 | Reels/Inner Box 卷盘/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Reel | Inner Box 盒 | Outer Box 箱 |