

**/ Descriptions**

JF K\$) \* GE G Silicon PNP transistor in a SOT-23 Plastic Package.

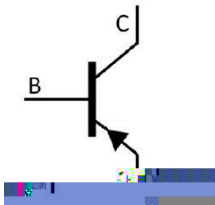
**/ Features**

—=< # )J: (O, OD  
Excellent  $h_{FE}$  linearity, complementary pair with 2SC1959M.

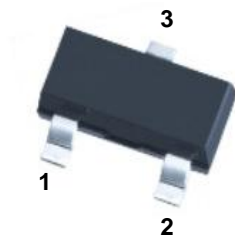
**/ Applications**

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

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base PIN 2 Emitter PIN 3 Collector

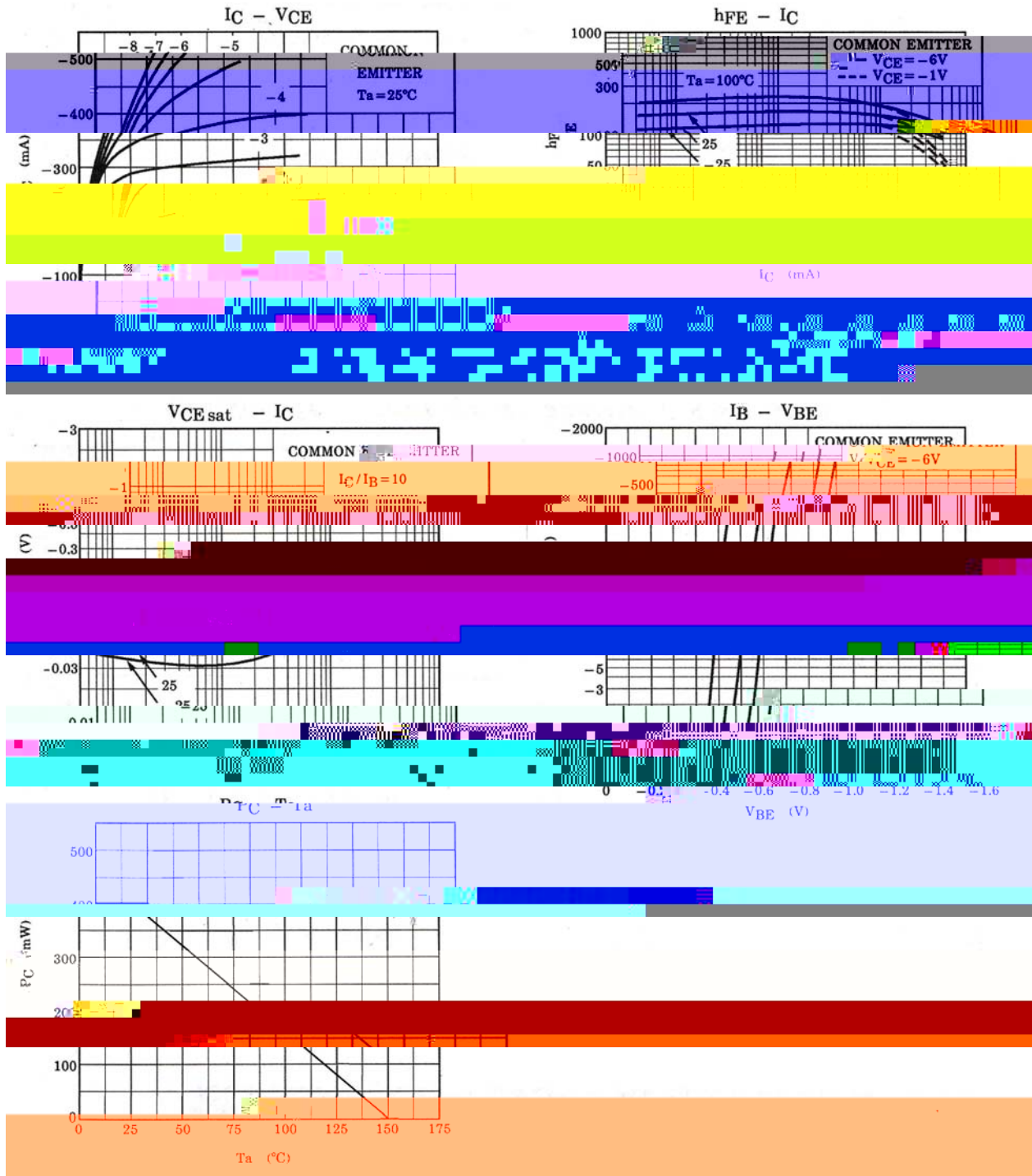
**/  $h_{FE}$  Classifications & Marking**

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

Parameter	Symbol	Rating	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	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-35V$ $I_E=0$			-0.1	$\mu A$
Emitter Base Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-0.1	$\mu A$
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	$C_{ob}$	$V_{CB}=-6.0V$ $I_E=0$ $f=1.0MHz$		13		pF

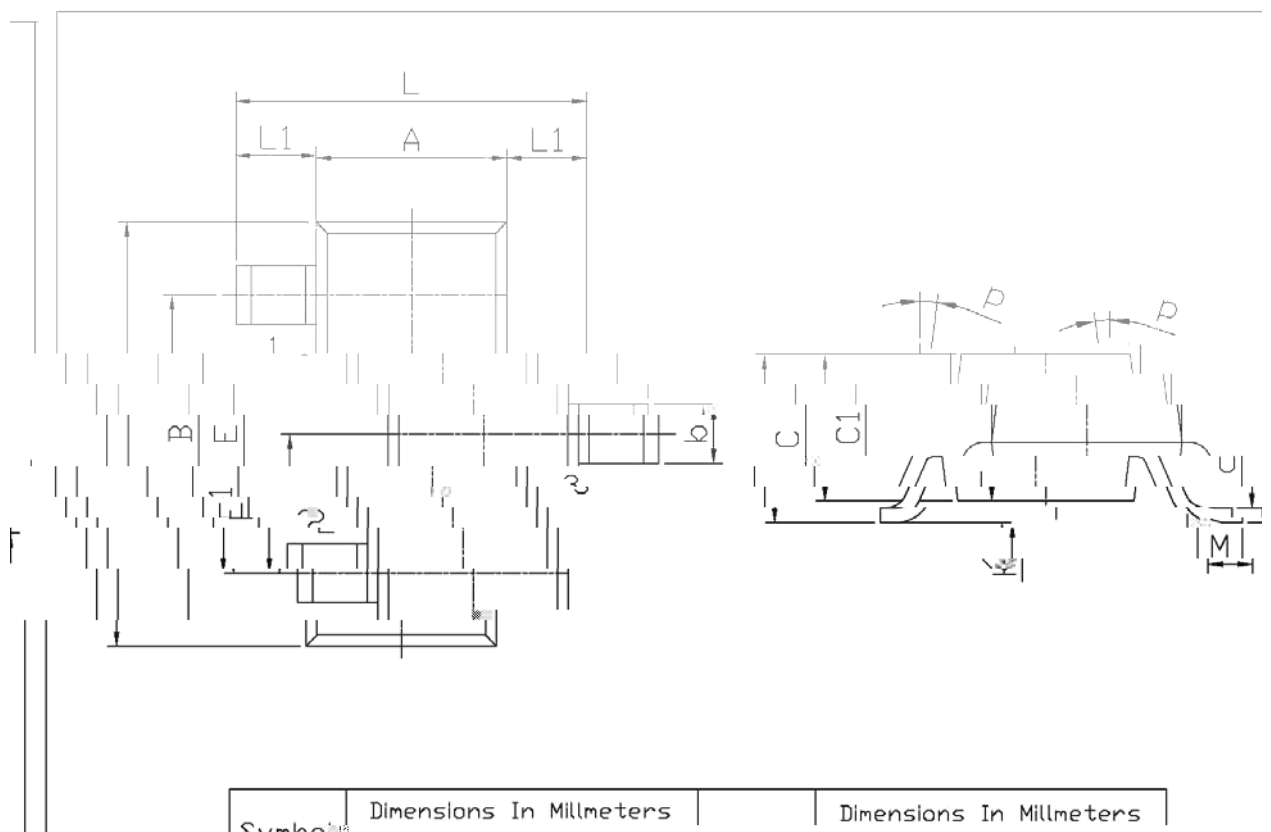
/ Electrical Characteristic Curve



**/ Package Dimensions**

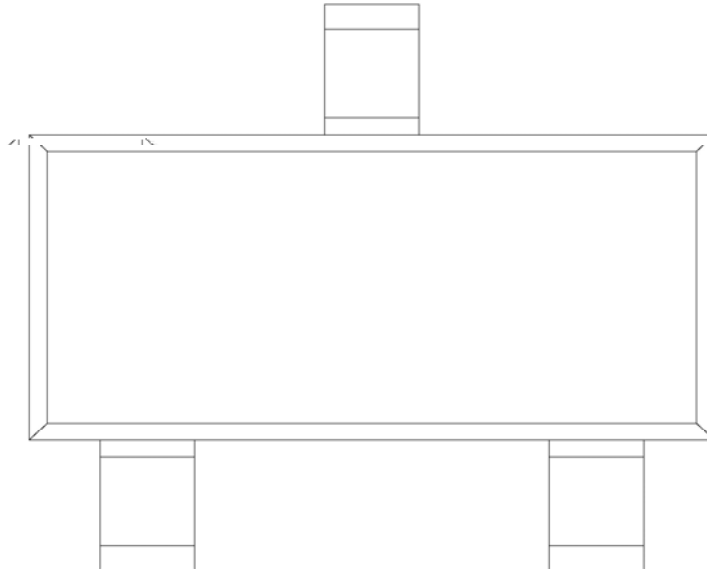
SOT-23

单位: mm



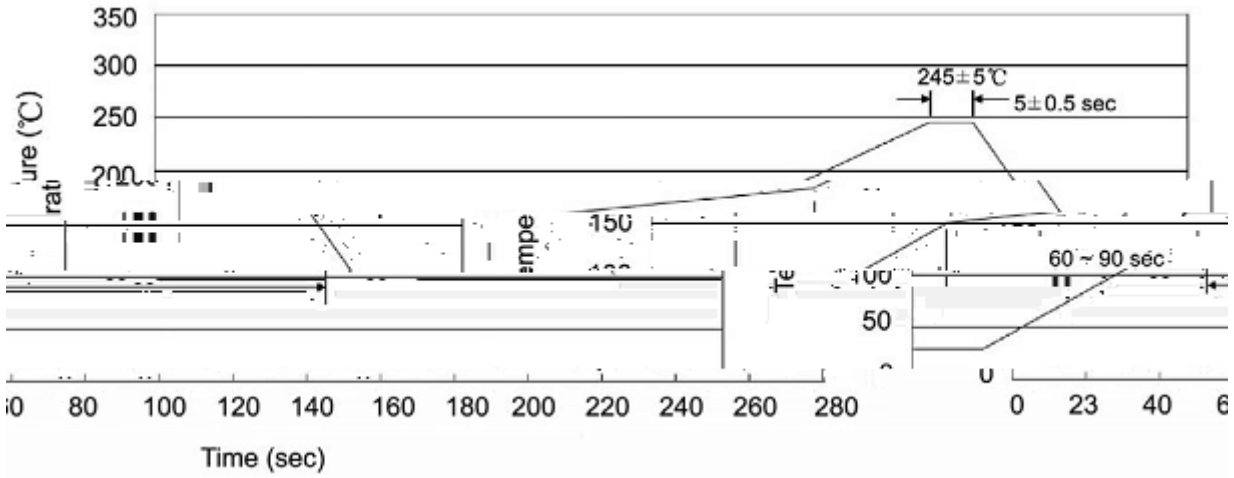
Symbol	Dimensions In Millimeters	Dimensions In Millimeters
L	3.00	3.00
L1	0.95	0.95
A	0.95	0.95
B	0.95	0.95
E	0.45	0.45
C	0.45	0.45
C1	0.20	0.20
D	0.60	0.60
U	0.60	0.60
M	0.20	0.20
p	0.10	0.10

/ Marking Instructions



?  
MB  
F  $h_{FE}$   
Note:  
H: Company Code.

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |       |     |       |        |   |
|---|-------|-----|-------|--------|---|
| 1 | 25    | 150 | 60    | 90sec; | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245±5 |     | 5±0.5 | sec;   | 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	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