

**/ Descriptions**

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

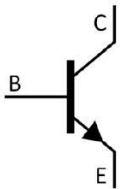
**/ Features**

$P_C$  ,  $h_{FE}$                           , 9015MG  
High  $P_C$  and  $h_{FE}$ , excellent  $h_{FE}$  linearity, complementary pair with 9015MG,HF Product.

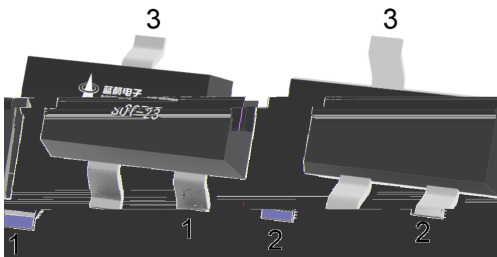
**/ Applications**

Low frequency, low noise pre-amplifier.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base          PIN 2 Emitter          PIN 3 Collector

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

$h_{FE}$ Classifications Symbol	A	B	C	D
$h_{FE}$ Range	60 150	100 300	200 600	400 1000
Marking	GJ6A	GJ6B	GJ6C	GJ6D

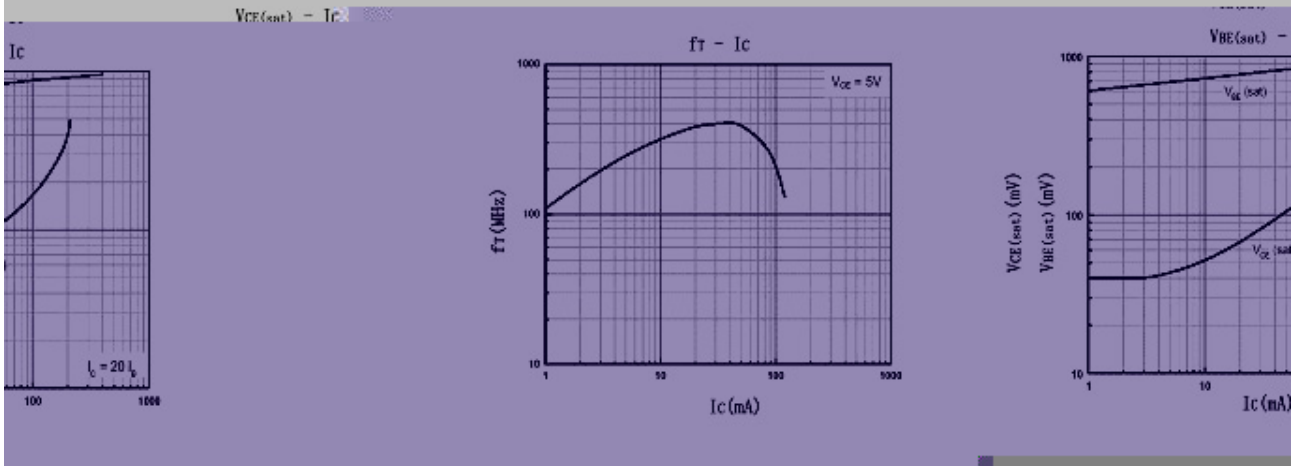
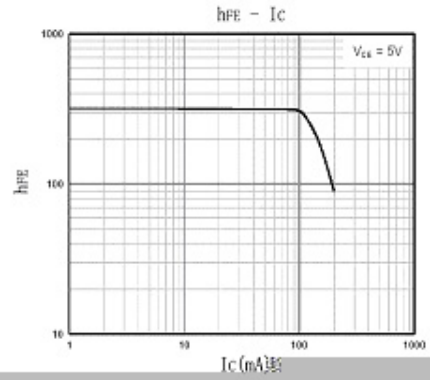
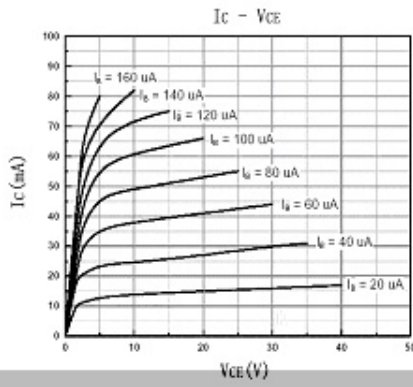
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V <sub>CB0</sub>	50	V
Collector to Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter to Base Voltage	V <sub>EBO</sub>	5.0	V
Collector Current	I <sub>C</sub>	100	mA
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	
Storage Temperature Range	T <sub>stg</sub>	-55 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V <sub>CB0</sub>	I <sub>C</sub> =0.1mA I <sub>E</sub> =0	50			V
Collector to Emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>C</sub> =1.0mA I <sub>B</sub> =0	45			V
Emitter to Base Breakdown Voltage	V <sub>EBO</sub>	I <sub>E</sub> =0.1mA I <sub>C</sub> =0	5.0			V
Collector Cut-Off Current	I <sub>CB0</sub>	V <sub>CB</sub> =50V I <sub>E</sub> =0			0.05	μA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5.0V I <sub>C</sub> =0			0.05	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5.0V I <sub>C</sub> =1.0mA	60		1000	
Collector-Emitter Saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA I <sub>B</sub> =5.0mA		0.14	0.3	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100mA I <sub>B</sub> =5.0mA		0.84	1.0	V
Base-Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =5.0V I <sub>C</sub> =2.0mA		0.63	0.7	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =5.0V I <sub>C</sub> =10mA	150	270		MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V f=1.0MHz I <sub>E</sub> =0		2.2	3.5	pF
Noise Figure	NF	V <sub>CE</sub> =5.0V I <sub>C</sub> =-0.2mA R <sub>g</sub> =2.0K f=1.0KHz Δf=200Hz		0.9	10	dB

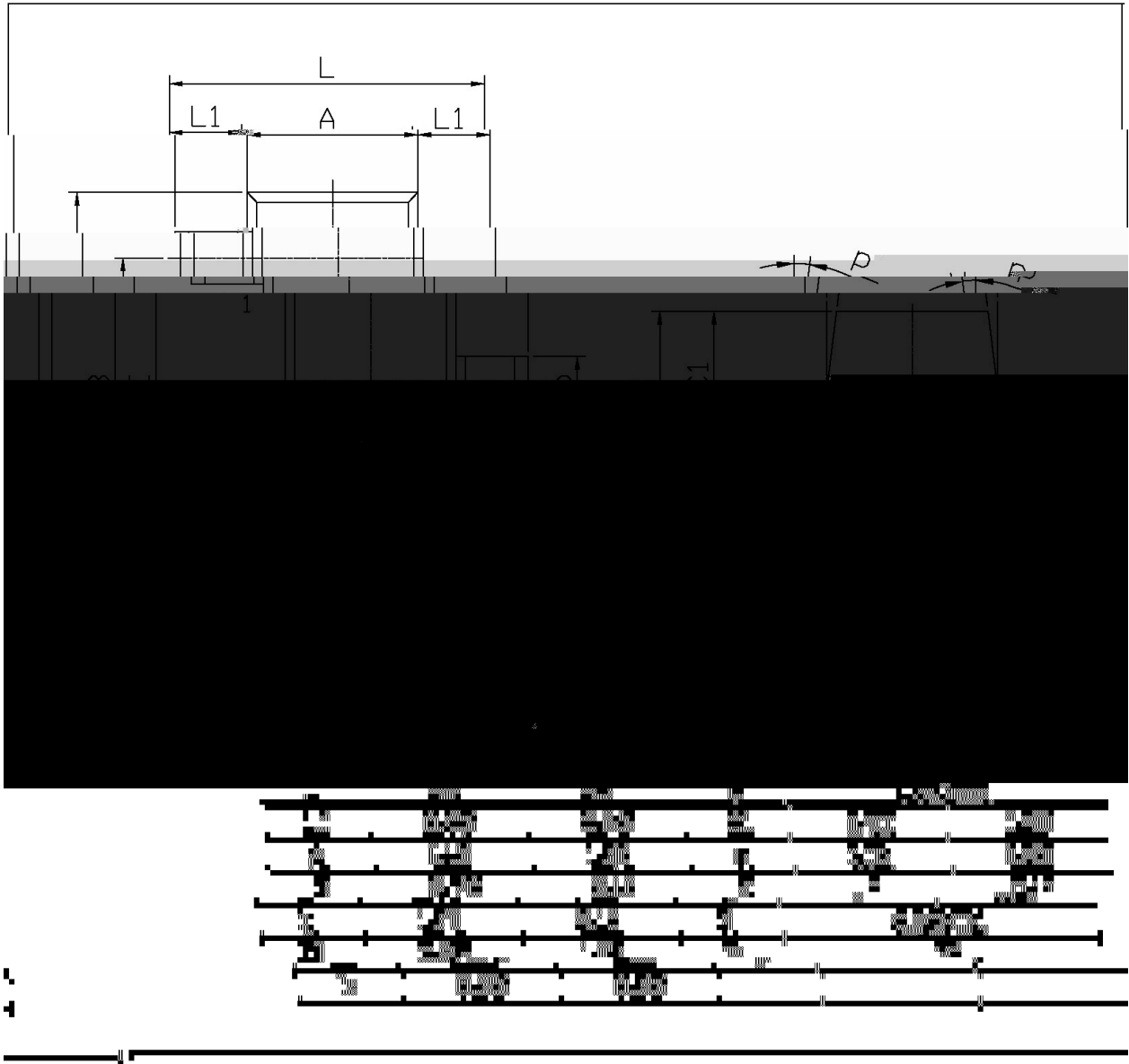
/ Electrical Characteristic Curve



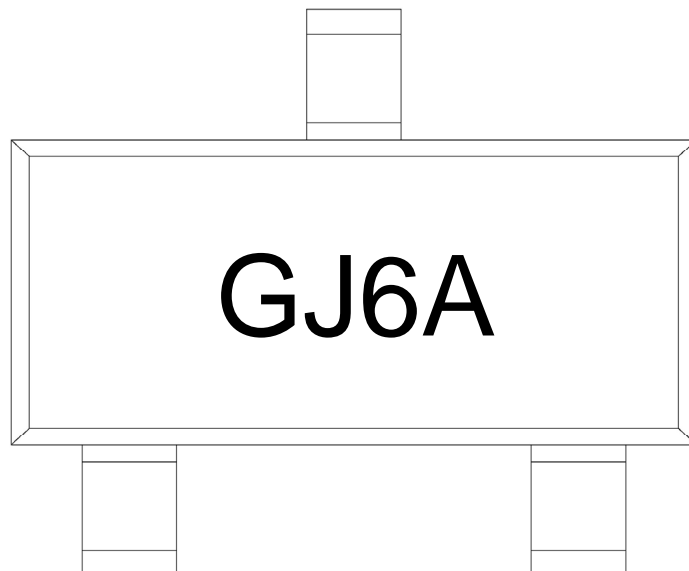
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



G

J6

A

h<sub>FE</sub>

Note:

G

HF Product Code

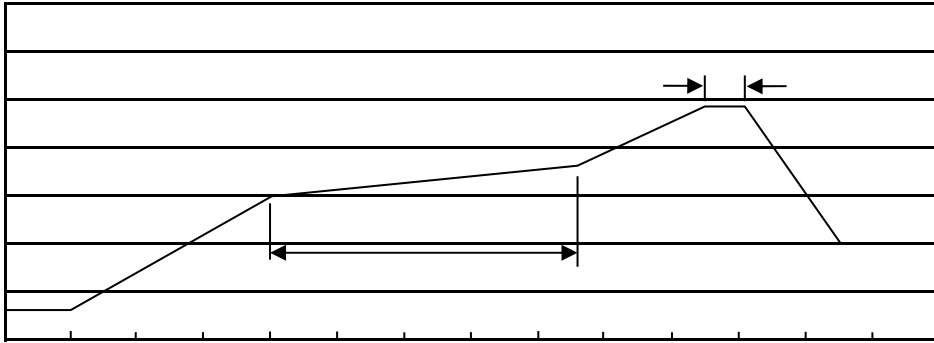
J6

Product Type Code

A

h<sub>FE</sub> Classifications Symbol Code

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



Note:

- |   |       |     |           |          |   |
|---|-------|-----|-----------|----------|---|
| 1 | 150   | 180 | 60        | 90sec;   | 1.Preheating:150~180 , 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					Dimension (unit mm <sup>3</sup> )		
SOT-23	3,000	10	30,000	6	180,000	7 x8	180x120x180	390x385x205

/ Notices