

## SOT-23 Plastic-Encapsulate Transistors

**S9013** TRANSISTOR (NPN)

### FEATURES

Complimentary to S9012  
 Collector current:  $I_C=0.5A$

MARKING: J3



### MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol (符号)	Parameter (参数名称)	Value (额定值)	Units (单位)
<b>VCBO</b>	Collector-Base Voltage (集电极-基极电压)	40	V
<b>VCEO</b>	Collector-Emitter Voltage (集电极-发射极电压)	25	V
<b>VEBO</b>	Emitter-Base Voltage (发射极-基极电压)	5	V
<b>IC</b>	Collector Current -Continuous (集电极电流)	0.5	A
<b>PC</b>	Collector Power Dissipation (耗散功率)	0.3	W
<b>Tj</b>	Junction Temperature (结温)	150	°C
<b>Tstg</b>	Storage Temperature (储存温度)	-55-150	°C

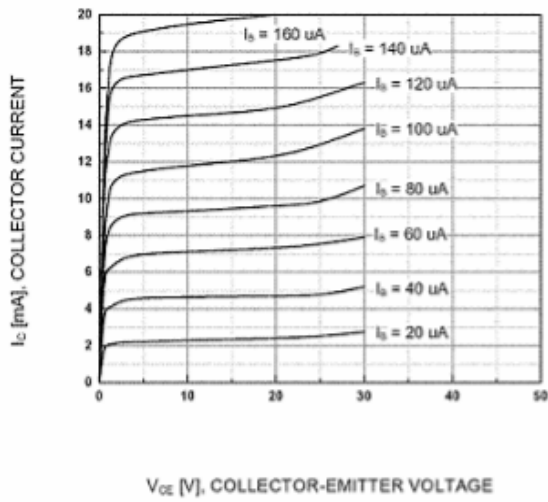
### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter (参数名称)	Symbol (符号)	Test conditions (测试条件)	MIN (最小值)	TYP (典型值)	MAX (最大值)	UNIT (单位)
Collector-base breakdown voltage 集电极-基极击穿电压	V(BR)CBO	IC= 100μA, IE=0	40			V
Collector-emitter breakdown voltage 集电极-发射极击穿电压	V(BR)CEO	IC= 1mA, IB=0	25			V
Emitter-base breakdown voltage 发射极-基极击穿电压	V(BR)EBO	IE=100μA, IC=0	5			V
Collector cut-off current 集电极-基极截止电流	ICBO	VCB=30 V, IE=0			1	μ A
Collector cut-off current 集电极-发射极截止电流	ICEO	VCE=25V, IB=0			10	μ A
Emitter cut-off current 发射极-基极截止电流	IEBO	VEB=5V, IC=0			1	μ A
DC current gain 直流电流增益	hFE	VCE=1V, IC= 50mA	80		400	
Collector-emitter saturation voltage 集电极-发射极饱和压降	VCE(sat)	IC=500mA, IB= 50mA			0.5	V
Base-emitter saturation voltage 发射极-基极饱和压降	VBE(sat)	IC=500mA, IB= 50mA			1.2	V

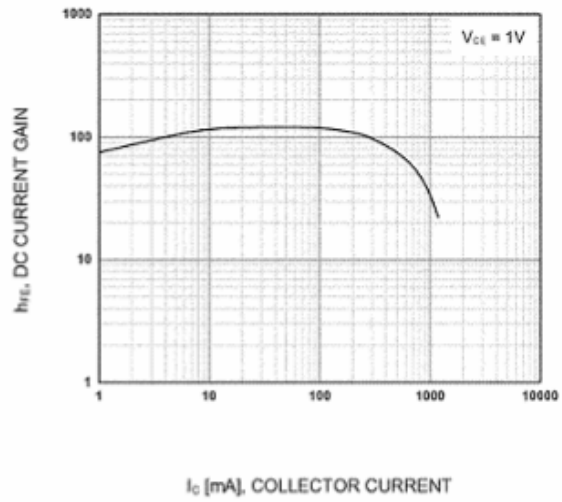
### CLASSIFICATION OF hFE

Range	80-100	100-200	200-400	400-600

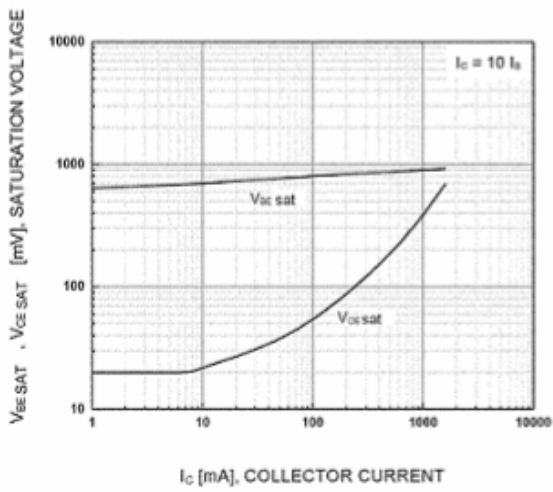
## Typical Characteristics



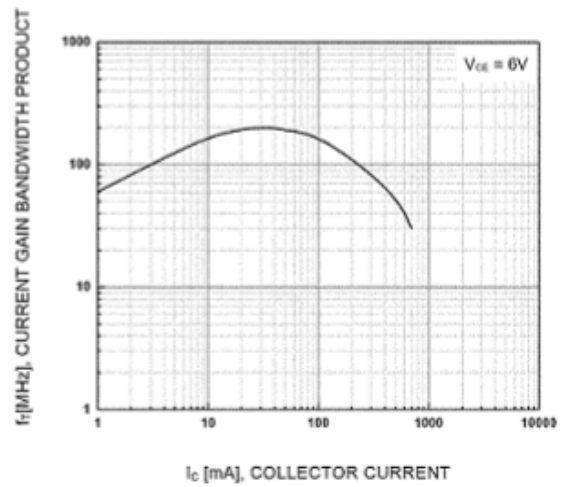
Static Characteristic



DC current Gain



Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage



Current Gain Bandwidth Product

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