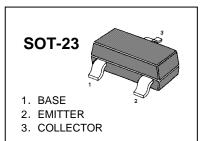
# S9018 TRANSISTOR (NPN)

#### **FEATURES**

AM/FM Amplifier, Local Oscillator of FM/VHF Tuner High Current Gain Bandwidth Product f<sub>T</sub>=1.1 GHz (Typ)

**MARKING: J8** 



MAXIMUM RATINGS (T<sub>A</sub>=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units	
V <sub>CBO</sub>	Collector-Base Voltage	30	V	
V <sub>CEO</sub>	Collector-Emitter Voltage	15	V	
V <sub>EBO</sub>	Emitter-Base Voltage	5	V	
Ic	Collector Current -Continuous	50	mA	
Pc	Collector Power Dissipation	200	mW	
Tj	Junction Temperature	150	°C	
T <sub>stg</sub>	Storage Temperature	-55-150	°C	

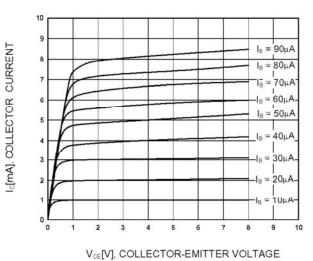
**ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)** 

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 100μA, I <sub>E</sub> =0	30			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, I <sub>B</sub> =0	15			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =12V, I <sub>E</sub> =0			0.05	μΑ
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =12V, I <sub>B</sub> =0			0.1	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 3V, I <sub>C</sub> =0			0.1	μΑ
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> = 1mA	105		195	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> =10mA, I <sub>B</sub> = 1mA			0.5	V
Base-emitter saturation voltage	V <sub>BE</sub> (sat)	I <sub>C</sub> =10mA, I <sub>B</sub> = 1mA			1.4	V
Transition frequency	f⊤	V <sub>CE</sub> =5V, I <sub>C</sub> = 5mA <b>f</b> =400MHz	600			MHz

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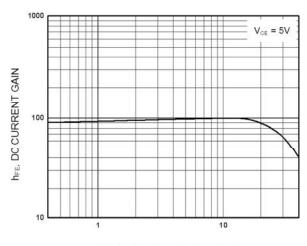


# **Typical Characteristics**



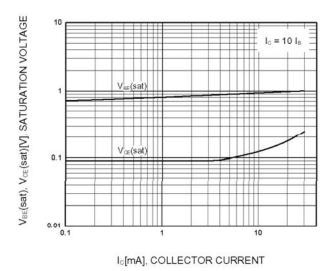
### **Static Characteristic**

## S9018

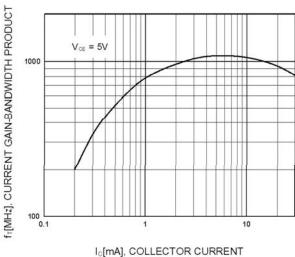


Io[mA], COLLECTOR CURRENT

#### **DC Current Gain**



**Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage** 



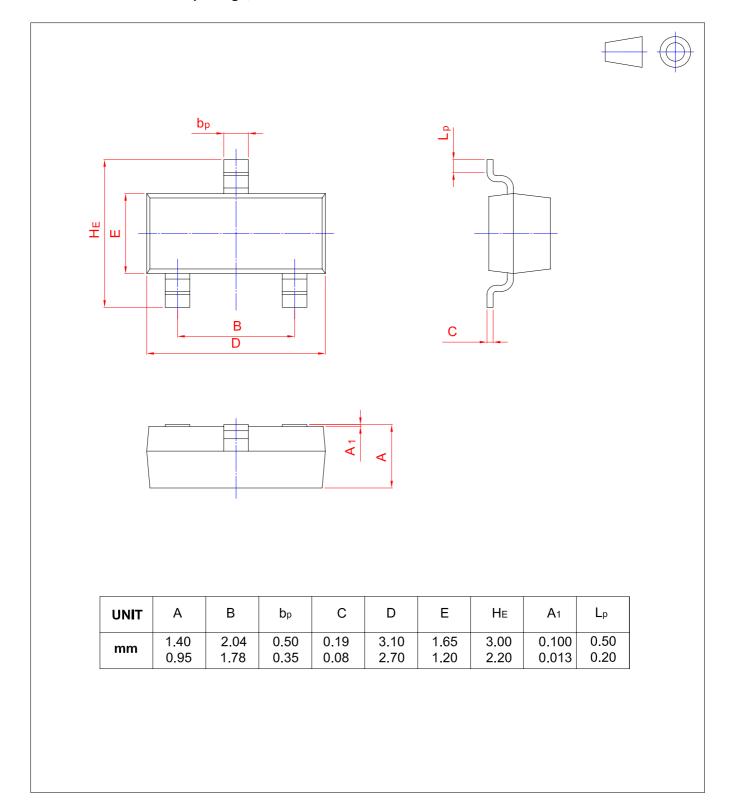
**Current Gain Bandwidth Product** 

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### **PACKAGE OUTLINE**

### Plastic surface mounted package; 3 leads

SOT-23



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