

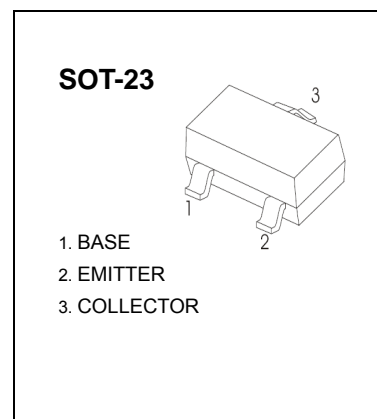
SOT-23 Plastic-Encapsulate Transistors

S9018 TRANSISTOR (NPN)

FEATURES

- AM/FM Amplifier, Local Oscillator of FM/VHF Tuner
- High Current Gain Bandwidth Product

MARKING: J8



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	30	V
V _{CEO}	Collector-Emitter Voltage	15	V
V _{EBO}	Emitter-Base Voltage	5	V
I _c	Collector Current -Continuous	50	mA
P _c	Collector Power Dissipation	200	mW
θ _{JA}	Thermal Resistance from Junction to Ambient	625	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

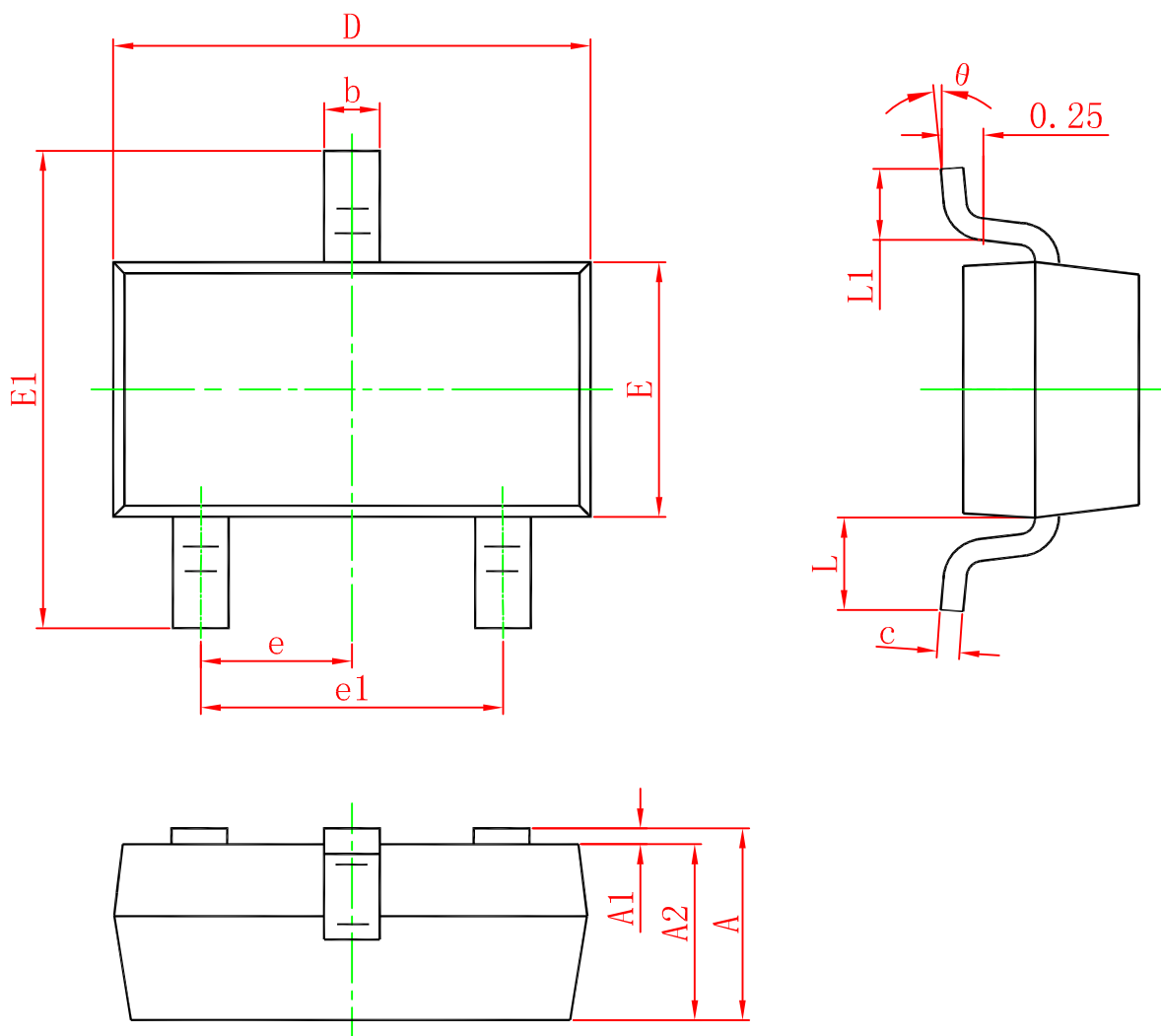
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100μA, I _E =0	30			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, I _B =0	15			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =12V, I _E =0			0.05	μA
Collector cut-off current	I _{CEO}	V _{CE} =12V, I _B =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 3V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =5V, I _C = 1mA	70		190	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =10mA, I _B = 1mA			0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =10mA, I _B = 1mA			1.4	V
Transition frequency	f _T	V _{CE} =5V, I _C = 5mA f=400MHz		800		MHz

CLASSIFICATION OF h_{FE}

Rank	L	H
Range	70-105	105-190

SOT-23 Plastic-Encapsulate Transistors

SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	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	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°