Low Frequency Transistor

2SA2119K

Features

HF

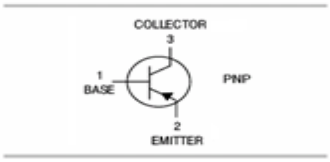
- A collector current is large.
- Collector saturation voltage is low.

Applications

- For switching, for muting.

Mechanical Data

- Case: SOT-23.
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208.



SOT-23

Ordering Information

Part Number	Package	Shipping	Marking Code
2SA2119K	SOT-23	3000 pcs / Tape & Reel	T146

Maximum Ratings (@T_A=25℃ unless otherwise specified)

Symbol	Parameter	Value	Units
MAXIMUM RATINGS			
V_{CBO}	Collector-Base Voltage	-15	V
V_{CEO}	Collector-Emitter Voltage	-12	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current - Continuous	0.5	A
Thermal Characteristic			
P_D	Power Dissipation Ta=25℃	200	mW
T_J	Junction Temperature	150	℃
T_{STG}	Junction and Storage Temperature	-55 to +150	℃

Electrical Characteristics (@T_A=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA,I_E=0	-15	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-12	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-6	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=-15V,I_E=0	-	-	-100	nA
Emitter cut-off current	I_{EBO}	I_C=0,V_{EB}=-6V			-100	nA
DC Current Gain	h_{FE}	V_{CE} = -2V, I_C = -10mA	270	-	680	-
Collector-Emitter Saturation Voltage (Note 2)	$V_{CE(sat)}$	I_C=-50mA, I_B=-5mA	-	-0.1	-0.25	V
Transition frequency	f_T	V_{CE}=-2V, I_E=10mA f=100MHz	-	260	-	MHz
Collector output capacitance	C_{obo}	V_{CB}=-10V,f=1MHz	-	6.5	-	pF

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

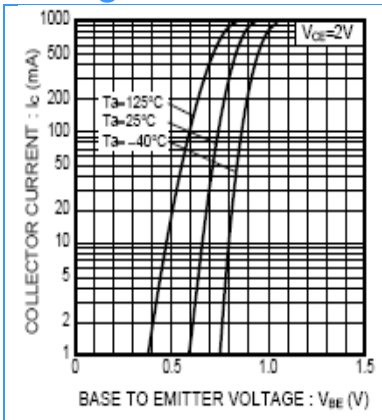


Fig.1 Grounded Emitter Propagation Characteristics

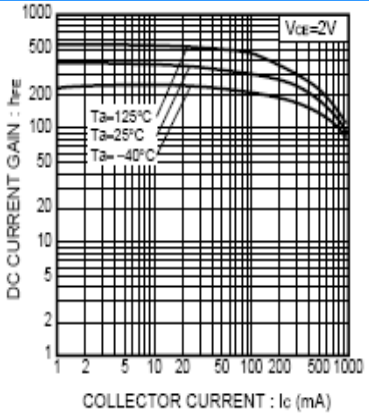


Fig.2 DC Current Gain vs. Collector Current

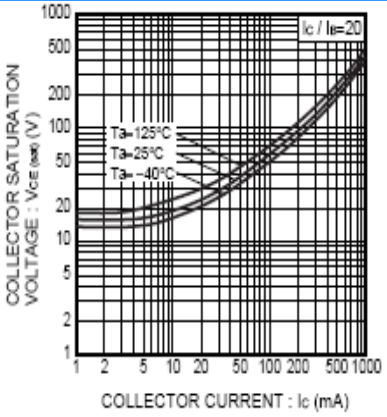


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

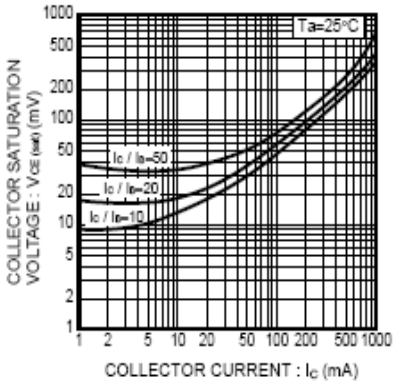


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

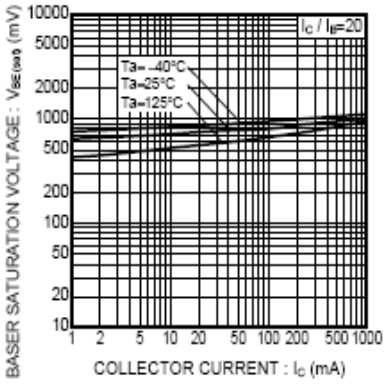


Fig.5 Base-Emitter Saturation Voltage vs.Collecter Current

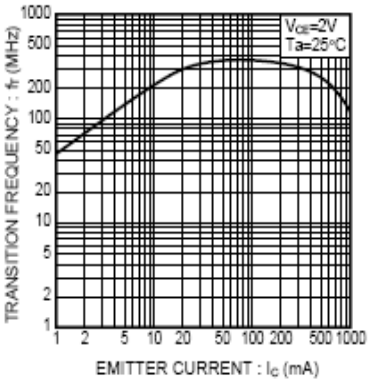


Fig.6 Gain Bandwidth Product vs. Emitter Current

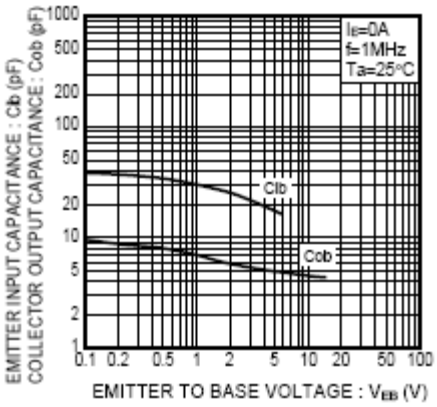
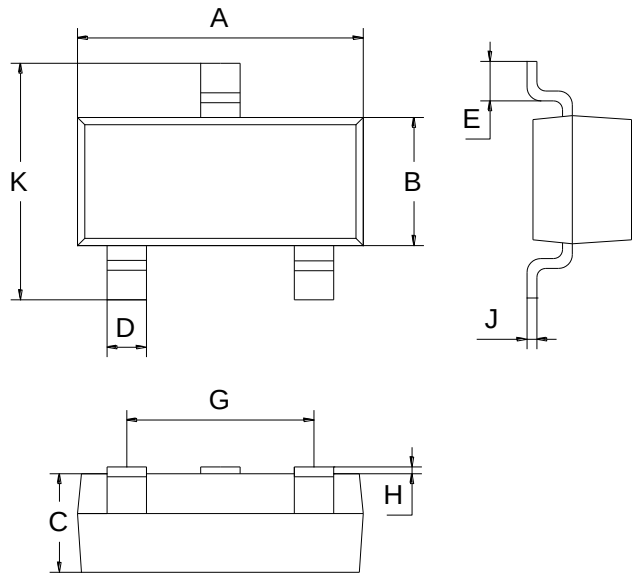


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

Package Outline Dimensions (unit: mm)

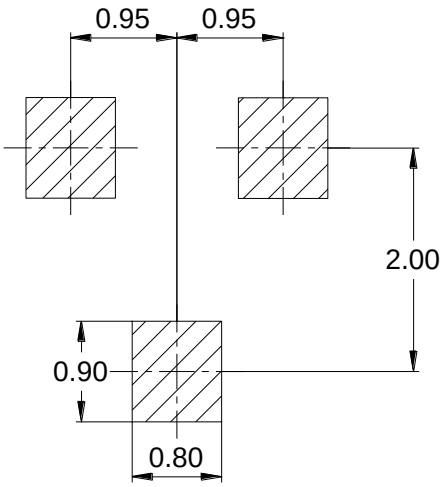
SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.05	0.15
K	2.20	2.60

SOLDERING FOOTPRINT (unit: mm)

SOT-23



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