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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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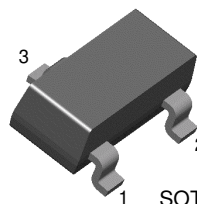


KSC3123

KSC3123

Mixer for UHF TV Tuner

- $G_{CE}=23\text{dB}$
- $C_{RE}=0.4\text{pF}$



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current	50	mA
I_B	Base Current	25	mA
P_C	Collector Power Dissipation	150	mW
T_J	Junction Temperature	1500	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

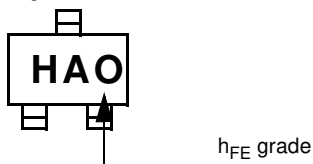
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$	20			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=25\text{V}, I_E=0$			0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=3\text{V}, I_C=0$			1	μA
h_{FE}	DC Current Gain	$V_{CE}=10\text{V}, I_C=5\text{mA}$	60		240	
f_T	Current Gain Bandwidth Product	$V_{CE}=10\text{V}, I_C=5\text{mA}$	900	1400		MHz
C_{RE}	Reverse Transfer Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		0.4	0.5	pF
G_{CE}	Conversion Gain	$V_{CC}=12\text{V}, f=200\text{MHz}$ $f_L=260\text{MHz}$	20	23		dB
NF	Output Capacitance	$V_{CE}=12\text{V}, f=200\text{MHz}$, $f_L=260\text{MHz}$		3.8	5.5	dB

h_{FE} Classification

Classification	R	O	Y
h_{FE}	60 ~ 120	90 ~ 180	120 ~ 240

Marking



Typical Characteristics

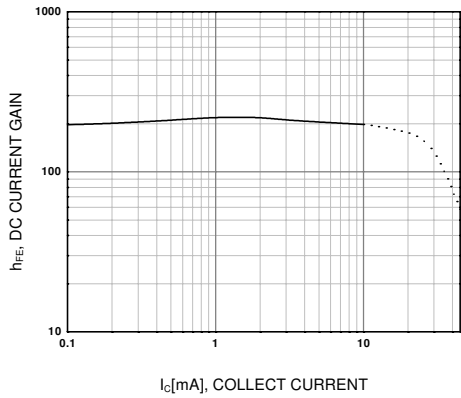


Figure 1. DC current Gain

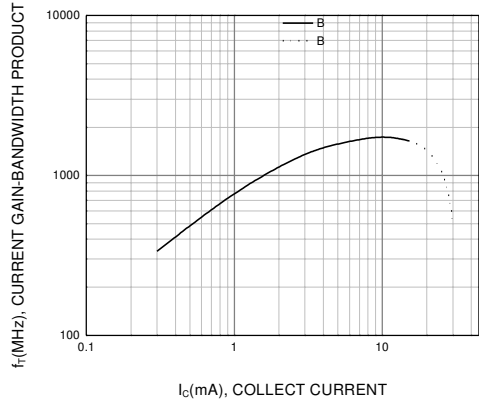


Figure 2. Current Gain Bandwidth Product

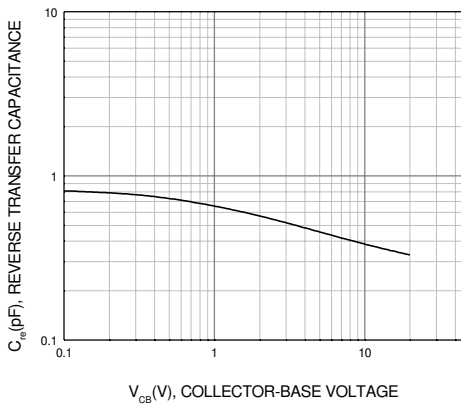


Figure 3. C_{RE} - V_{CB}

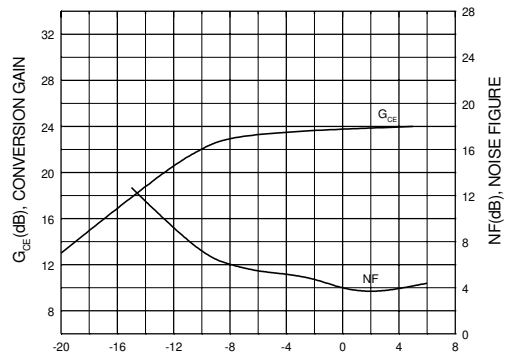


Figure 4. G_{CE} , NF-

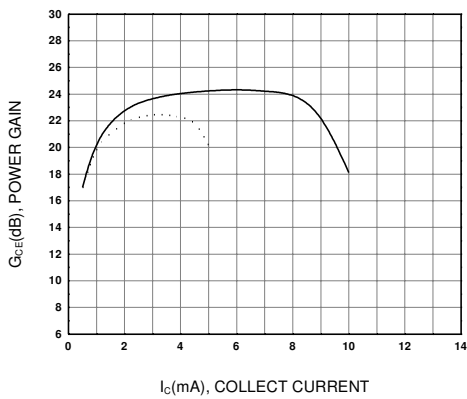


Figure 5. G_{CE} - I_C

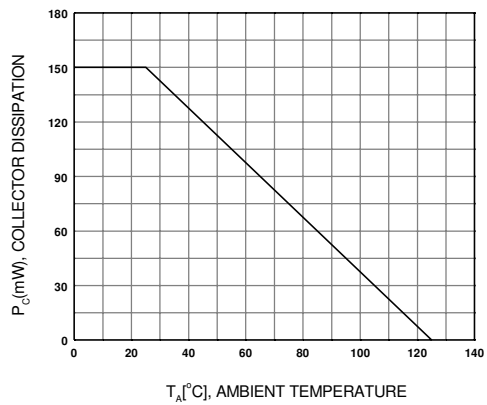


Figure 6. P_C - T_A

Typical Characteristics (Continued)

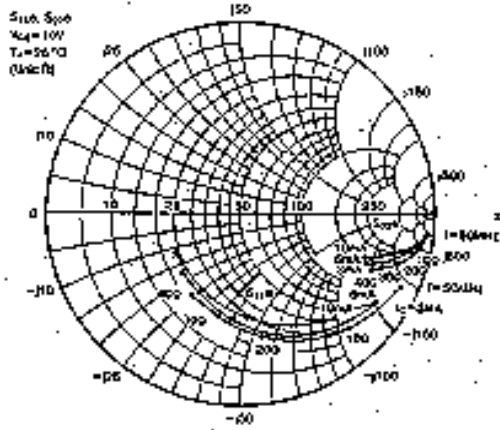


Figure 7.

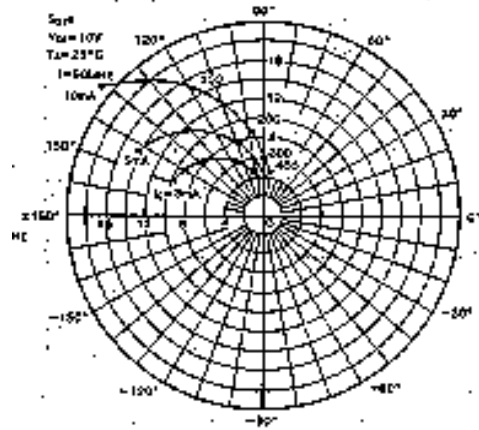


Figure 8.

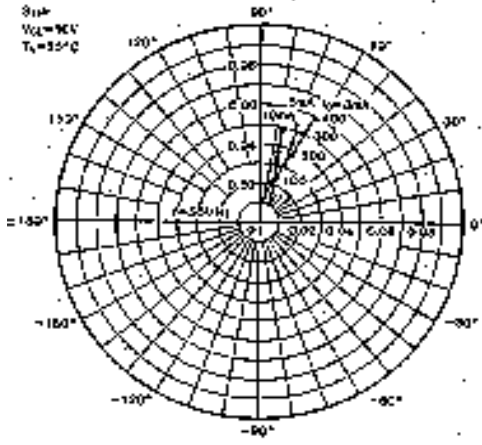
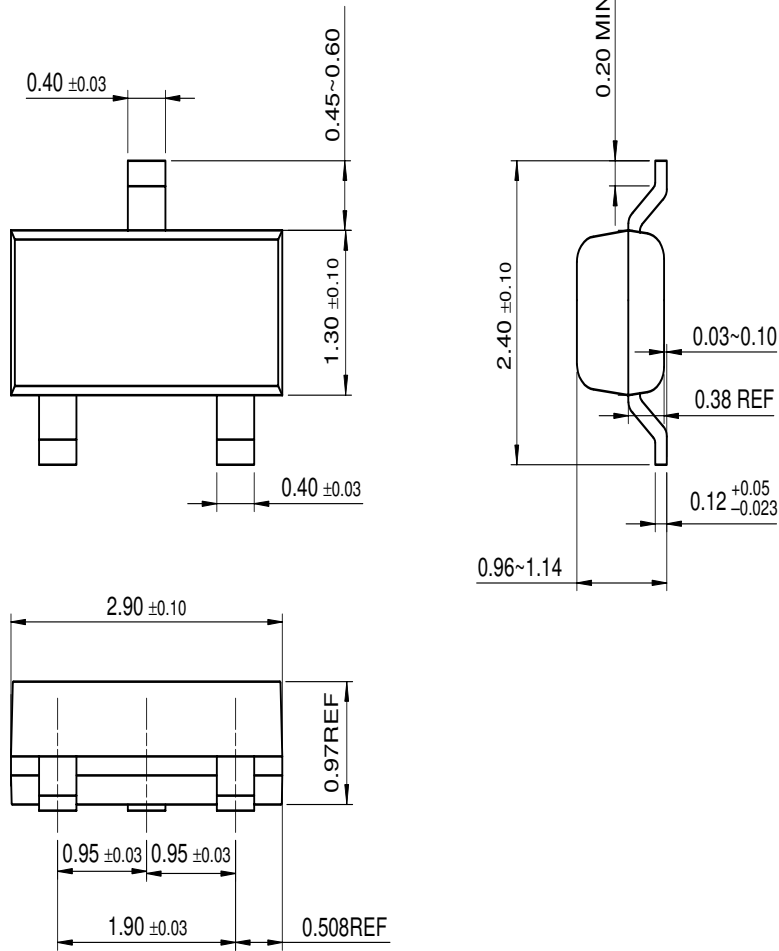


Figure 9.

Package Dimensions

SOT-23



Dimensions in Millimeters

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CoolFET™	FAST _r ™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOL™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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