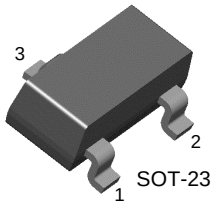
FAIRCHILD
SEMICONDUCTOR®

KST24

VHF Mixer Transistor



SOT-23

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	°C
R_{TH}(j-a)	Thermal Resistance Junction to Ambient	357	°C/W

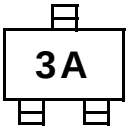
• Refer to KSP24 for graphs

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=100μA, I_E=0	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=1mA, I_B=0	30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=10μA, I_C=0	4			V
I_{CBO}	Collector Cut-off Current	V_{CB}=15V, I_E=0			50	nA
h_{FE}	DC Current Gain	V_{CE}=10V, I_C=8mA	30			
f_T	* Current Gain Bandwidth Product	V_{CE}=10V, I_C=8mA f=100MHz	400	620		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz		0.25	0.36	pF
G_G	Conversion Gain (213MHz to 45MHz) (60MHz to 45MHz)	I_C=8mA, V_{CC}=20V Oscillator Injection=150mV	19 24	24 29		dB dB

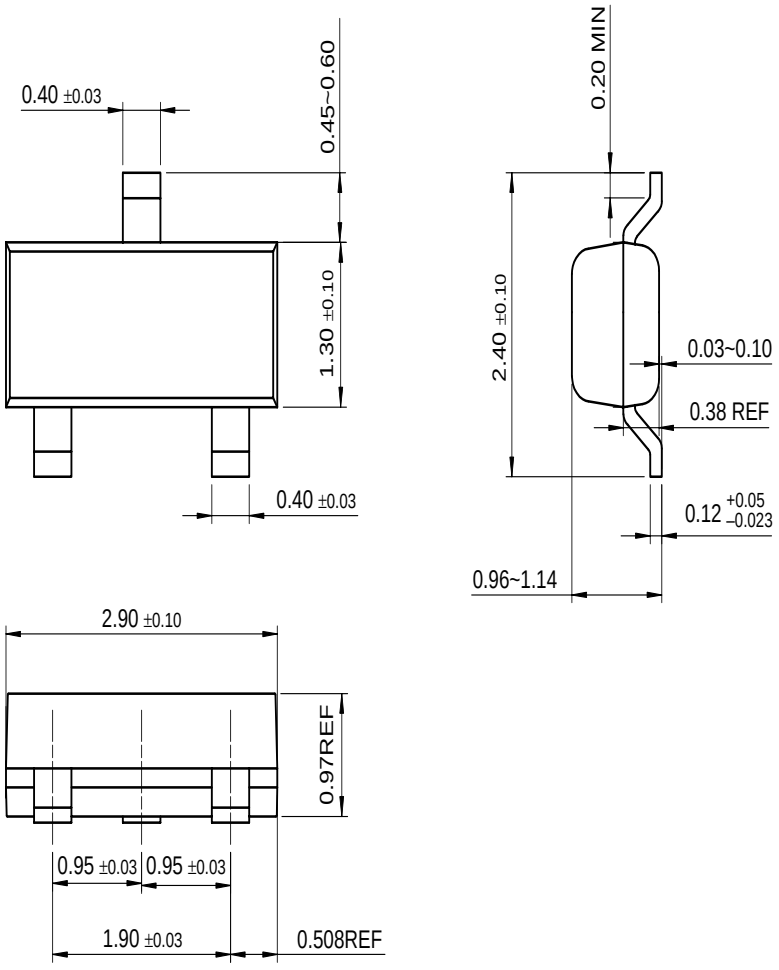
* Pulse Test: PW≤300μs, Duty Cycle≤2%

Marking



Package Dimensions

SOT-23



Dimensions in Millimeters

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CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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