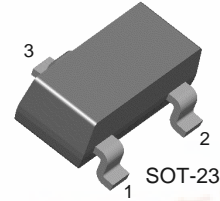


**FAIRCHILD**  
SEMICONDUCTOR®

## KST4124

### General Purpose Transistor



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	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	200	mA
$P_C$	Collector Power Dissipation	350	mW
$T_{STG}$	Storage Temperature	150	$^\circ\text{C}$

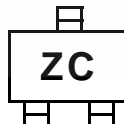
• Refer to KST3904 for graphs

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}, I_E=0$	30		V
$BV_{CEO}$	* Collector-Emitter Breakdown Voltage	$I_C=1.0\text{mA}, I_B=0$	25		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}, I_C=0$	5		V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=20\text{V}, I_E=0$		50	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=3\text{V}, I_C=0$		50	nA
$h_{FE}$	* DC Current Gain	$V_{CE}=1\text{V}, I_C=2\text{mA}$ $V_{CE}=1\text{V}, I_C=50\text{mA}$	120 60	360	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.3	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.95	V
$f_T$	Current Gain Bandwidth Product	$I_C=10\text{mA}, V_{CE}=20\text{V}$ $f=100\text{MHz}$	300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=5\text{V}, I_E=0, f=1.0\text{MHz}$		4	pF
NF	Noise Figure	$I_C=100\mu\text{A}, V_{CE}=5\text{V}$ $R_S=1\text{K}\Omega$ $f=10\text{Hz to } 15.7\text{KHz}$		5	dB

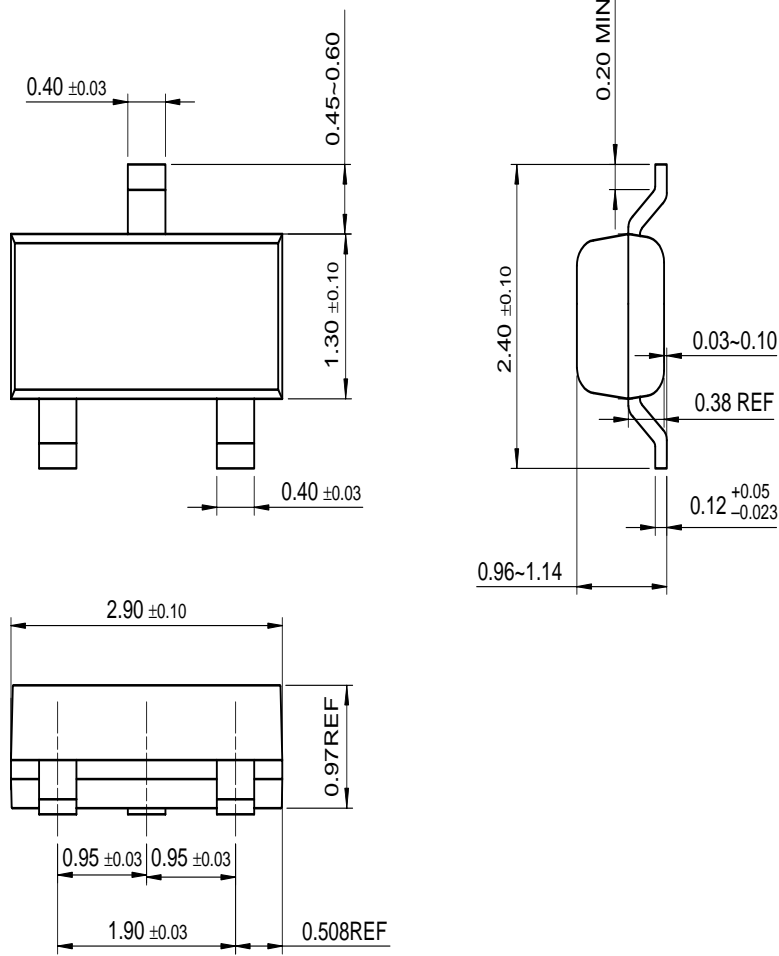
\* Pulse Test:  $PW \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

Marking



# Package Dimensions

## SOT-23



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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