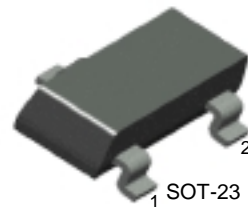


# KST2222A

KST2222A

## General Purpose Transistor



SOT-23  
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	75	V
$V_{CEO}$	Collector-Emitter Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	600	mA
$P_C$	Collector Dissipation	350	mW
$T_{STG}$	Storage Temperature	150	$^\circ\text{C}$

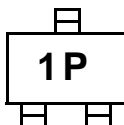
• Refer to KST2222 for graphs

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}, I_E=0$	75		V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	40		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}, I_C=0$	6		V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=60\text{V}, I_E=0$		0.01	$\mu\text{A}$
$h_{FE}$	* DC Current Gain	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$ $V_{CE}=10\text{V}, I_C=1\text{mA}$ $V_{CE}=10\text{V}, I_C=10\text{mA}$ $V_{CE}=10\text{V}, I_C=150\text{mA}$ $V_{CE}=10\text{V}, I_C=500\text{mA}$	35 50 75 100 40	300	
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C=150\text{mA}, I_B=15\text{mA}$ $I_C=500\text{mA}, I_B=50\text{mA}$		0.3 1.0	V V
$V_{BE}(\text{sat})$	* Base-Emitter Saturation Voltage	$I_C=150\text{mA}, I_B=15\text{mA}$ $I_C=500\text{mA}, I_B=50\text{mA}$	0.6	1.2 2.0	V V
$f_T$	Current Gain Bandwidth Product	$I_C=20\text{mA}, V_{CE}=20\text{V}, f=100\text{MHz}$	300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8	pF
NF	Noise Figure	$I_C=100\mu\text{A}, V_{CE}=10\text{V}$ $R_S=1\text{K}\Omega, f=1\text{MHz}$		4	dB
$t_{ON}$	Turn On Time	$V_{CC}=30\text{V}, I_C=150\text{mA}$ $V_{BE}=0.5\text{V}, I_{B1}=15\text{mA}$		35	ns
$t_{OFF}$	Turn Off Time	$V_{CC}=30\text{V}, I_C=150\text{mA}$ $I_{B1}=I_{B2}=15\text{mA}$		285	ns

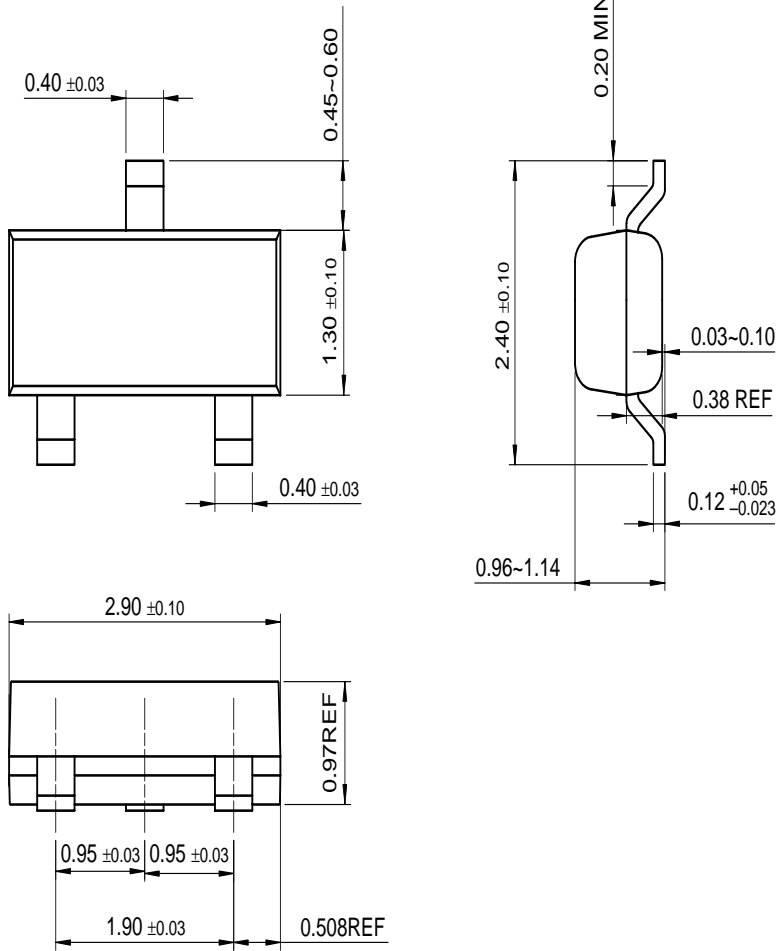
\* Pulse Test:  $PW \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

Marking



# Package Dimensions

## SOT-23



Dimensions in Millimeters

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CROSSVOLT™	POP™	UHC™
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