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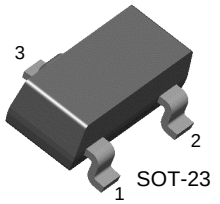
KST92/93

High Voltage Transistor



SOT-23

1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector Base Voltage		
	: KST92	-300	V
	: KST93	-200	V
V_{CEO}	Collector-Emitter Voltage		
	: KST92	-300	V
	: KST93	-200	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-500	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 KSP92/93 for graphs

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, I_E=0			
	: KST92		-300		V
	: KST93		-200		V
BV_{CEO}	* Collector-Emitter Breakdown Voltage	I_C= -1mA, I_B=0			
	: KST92		-300		V
	: KST93		-200		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -100μA, I_C=0	-5		V
I_{CBO}	Collector Cut-off Current				
	: KST92	V_{CB}= -200V, I_E=0		-0.25	μA
	: KST93	V_{CB}= -160V, I_E=0		-0.25	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -5V, I_C=0		-0.1	μA
h_{FE}	* DC Current Gain	V_{CE}= -10V, I_C= -1mA	25		
		V_{CE}= -10V, I_C= -10mA	40		
		V_{CE}= -10V, I_C= -30mA	25		
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C= -20mA, I_B= -2mA		-0.5	V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C= -20mA, I_B= -2mA		-0.9	V
C_{ob}	Output Capacitance				
	: KST92	V_{CB}= -20V, I_E=0		6	pF
	: KST93	f=1MHz		8	pF
f_T	Current Gain Bandwidth Product	V_{CE}= -20V, I_C= -10mA f=100MHz	50		MHz

* Pulse Test: PW≤300μs, Duty Cycle≤2%

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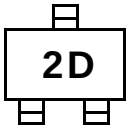
Marking Code

Type	KST92	KST93
Mark	2D	2E

Marking



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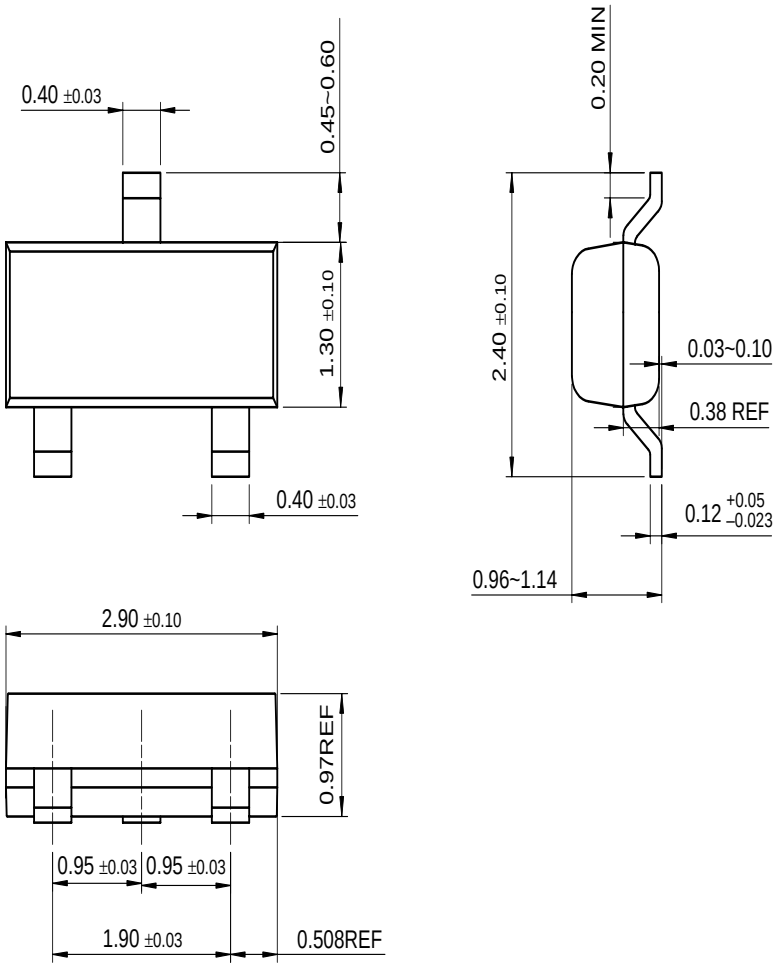
Package Dimensions

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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