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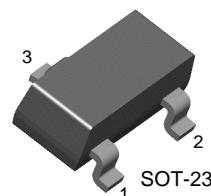
sales@integrated-circuit.com



KST05/06

Driver Transistor

- Collector-Emitter Voltage: V_{CEO} = KST05: 60V
KST06: 80V
- Collector Power Dissipation: P_C (max) = 350mW
- Complement to KST55/56



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}	Collecto-Base Voltage		
	: KST05	60	V
	: KST06	80	V
V_{CEO}	Collector-Emitter Voltage		
	: KST05	60	V
	: KST06	80	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$
$R_{TH(j-a)}$	Thermal Resistance junction to Ambient	357	$^\circ\text{C/W}$

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

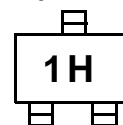
Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	* Collector-Emitter Breakdown Voltage				
	: KST05	$I_C=1\text{mA}, I_B=0$	60		V
	: KST06		80		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\mu\text{A}, I_C=0$	4		V
I_{CBO}	Collector Cut-off Current	$V_{CB}=60\text{V}, I_E=0$		0.1	μA
		$V_{CB}=80\text{V}, I_E=0$		0.1	μA
I_{CEO}	Collector Cut-off Current	$V_{CE}=60\text{V}, I_B=0$		0.1	μA
h_{FE}	DC Current Gain	$V_{CE}=1\text{V}, I_C=10\text{mA}$	50		
		$V_{CE}=1\text{V}, I_C=100\text{mA}$	50		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}, I_B=10\text{mA}$		0.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=1\text{V}, I_C=100\text{mA}$		1.2	V
f_T	Current Gain Bandwidth Product	$V_{CE}=2\text{V}, I_C=100\text{mA}, f=100\text{MHz}$	100		MHz

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

Marking Code

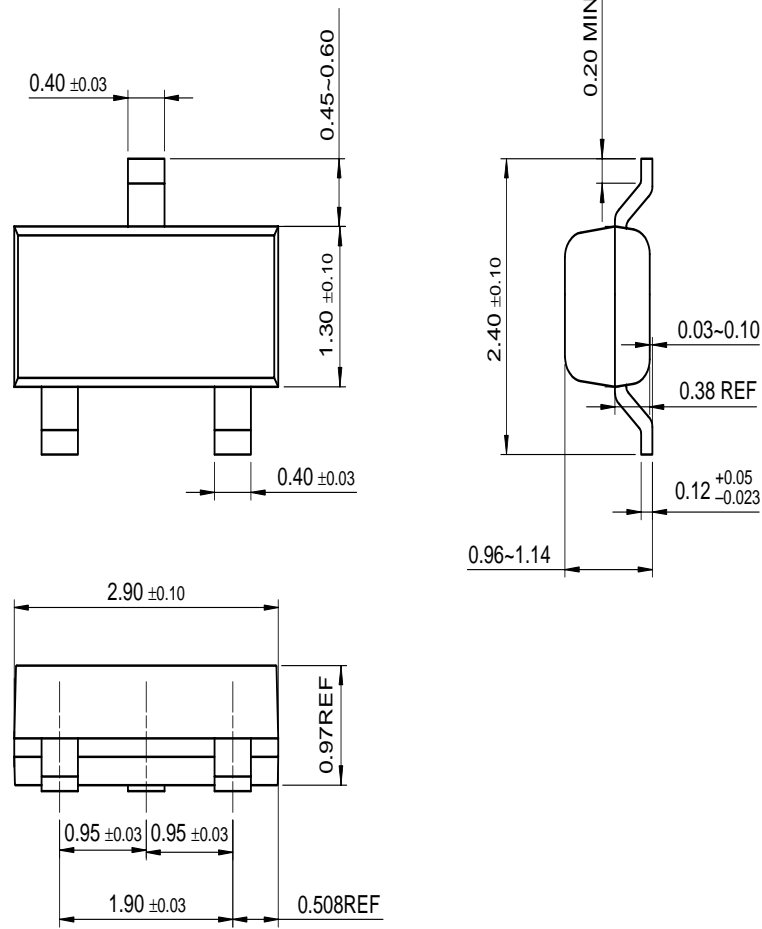
Type	KST05	KST06
Mark	1H	1G

Marking



Package Dimensions

SOT-23



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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E ² COS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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