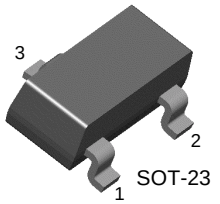
FAIRCHILD
SEMICONDUCTOR®

KST05/06

Driver Transistor

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



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}	Collecto-Base Voltage : KST05 : KST06	 60 80	 V V
V_{CEO}	Collector-Emitter Voltage : KST05 : KST06	 60 80	 V 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	°C
R_{TH}(j-a)	Thermal Resistance junction to Ambient	357	°C/W

Electrical Characteristics T_a=25°C unless otherwise noted

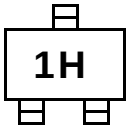
Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	* Collector-Emitter Breakdown Voltage : KST05 : KST06	 I_C=1mA, I_B=0	 60 80		 V V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=100μA, I_C=0	4		V
I_{CBO}	Collector Cut-off Current : KST05 : KST06	V_{CB}=60V, I_E=0 V_{CB}=80V, I_E=0		 0.1 0.1	 μA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

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Marking Code

Type	KST05	KST06
Mark	1H	1G

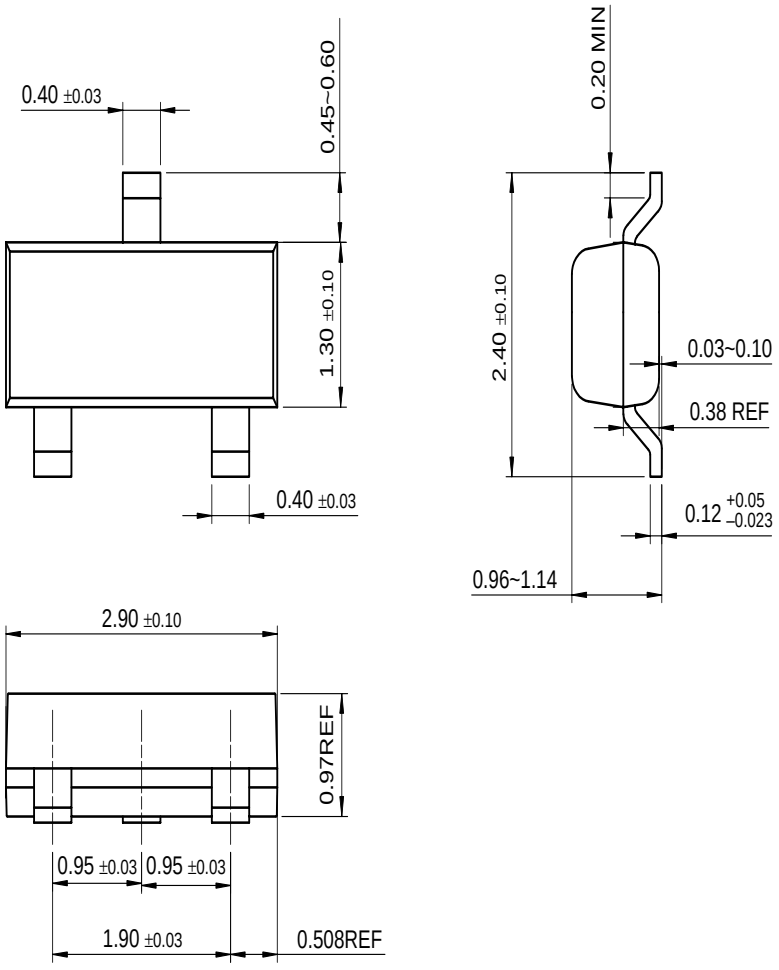
Marking



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Package Dimensions

SOT-23



Dimensions in Millimeters

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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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