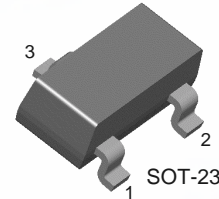


FAIRCHILD
SEMICONDUCTOR®

KST10

VHF/UHF Transistor



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

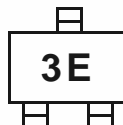
Symbol	Parameter	Value	Units
V_{CBO}	Collector Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	3	V
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$
$R_{TH(j-a)}$	Thermal Resistance junction to Ambient	357	$^\circ\text{C/W}$

• Refer to KSP10 for graphs

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

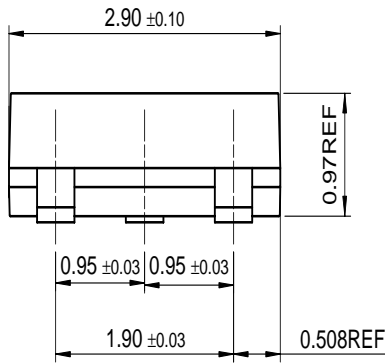
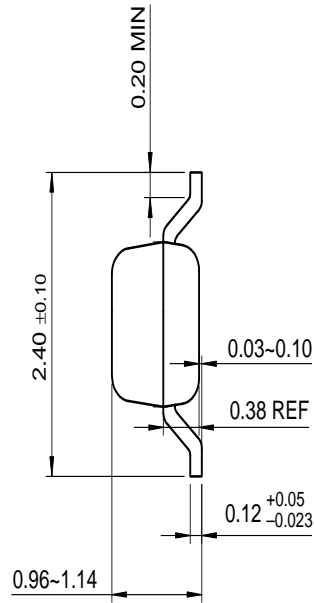
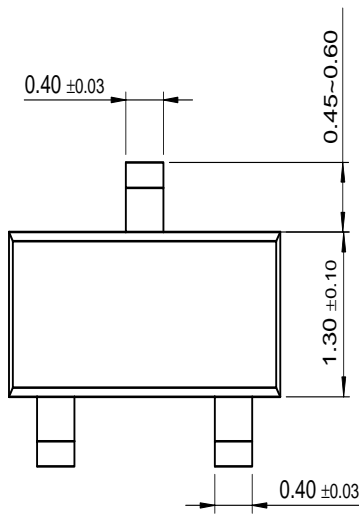
Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=100\mu\text{A}, I_E=0$	30		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$	25		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}, I_C=0$	3		V
I_{CBO}	Collector Cut-off Current	$V_{CB}=25\text{V}, I_E=0$		100	nA
I_{EBO}	Emitter Cut-off Current	$V_{BE}=2\text{V}, I_C=0$		100	nA
h_{FE}	DC Current Gain	$V_{CE}=10\text{V}, I_C=4\text{mA}$	60		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{mA}, I_B=0.4\text{mA}$		0.5	V
V_{BE}	Base-Emitter On Voltage	$V_{CE}=10\text{V}, I_C=4\text{mA}$		0.95	V
f_T	Current Gain Bandwidth Product	$V_{CE}=10\text{V}, I_C=4\text{mA}, f=100\text{MHz}$	650		MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		0.7	pF
C_{rb}	Common-Base Feedback Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		0.65	pF
$C_{c-rbb'}$	Collector Base Time Constant	$V_{CB}=10\text{V}, I_C=4\text{mA}, f=31.8\text{MHz}$		9	pF

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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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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