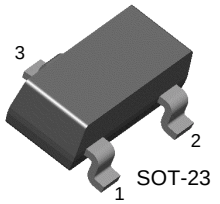
FAIRCHILD
SEMICONDUCTOR®

KST10

VHF/UHF Transistor



SOT-23

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

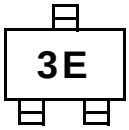
Symbol	Parameter	Value	Units
V_{CBO}	Collector Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	3	V
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	°C
R_{TH}(j-a)	Thermal Resistance junction to Ambient	357	°C/W

• Refer to KSP10 for graphs

Electrical Characteristics T_a=25°C unless otherwise noted

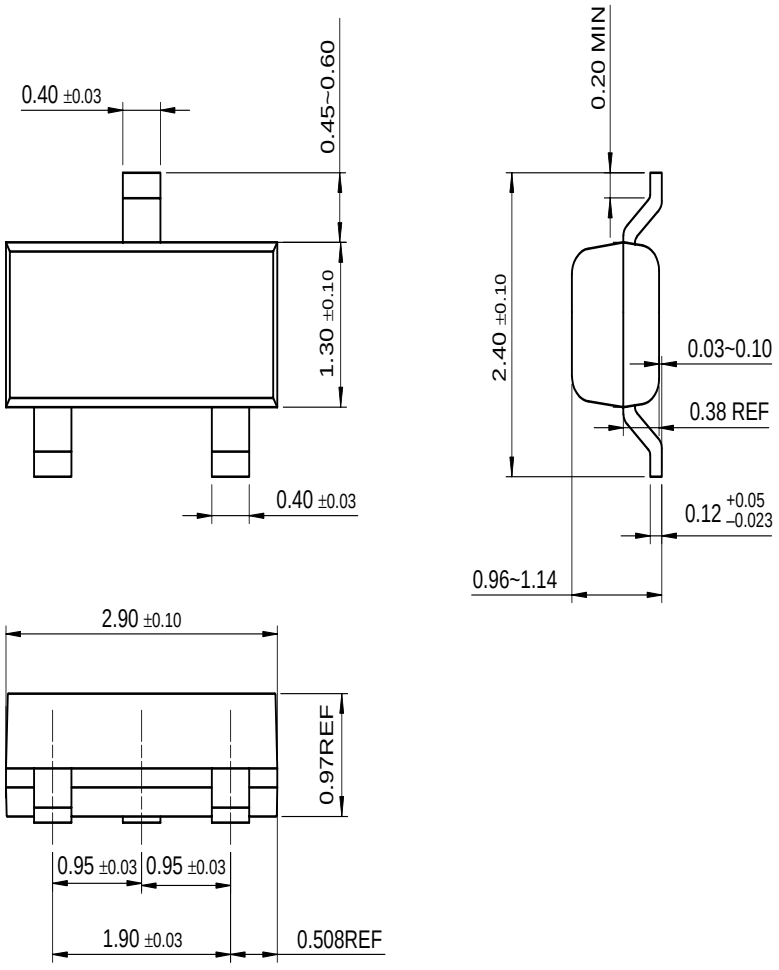
Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=100μA, I_E=0	30		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=1mA, I_B=0	25		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=10μA, I_C=0	3		V
I_{CBO}	Collector Cut-off Current	V_{CB}=25V, I_E=0		100	nA
I_{EBO}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