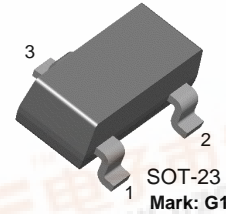


**FAIRCHILD**  
SEMICONDUCTOR®

## KST5551

### Amplifier Transistor

- Collector-Emitter Voltage:  $V_{CE0}=160V$
- Collector Power Dissipation:  $P_C (max)=350mW$



SOT-23  
Mark: G1  
1. Base 2. Emitter 3. Collector

### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	180	V
$V_{CEO}$	Collector-Emitter Voltage	160	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	600	mA
$P_C$	Collector Power Dissipation	350	mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

• Refer to 2N5551 for graphs

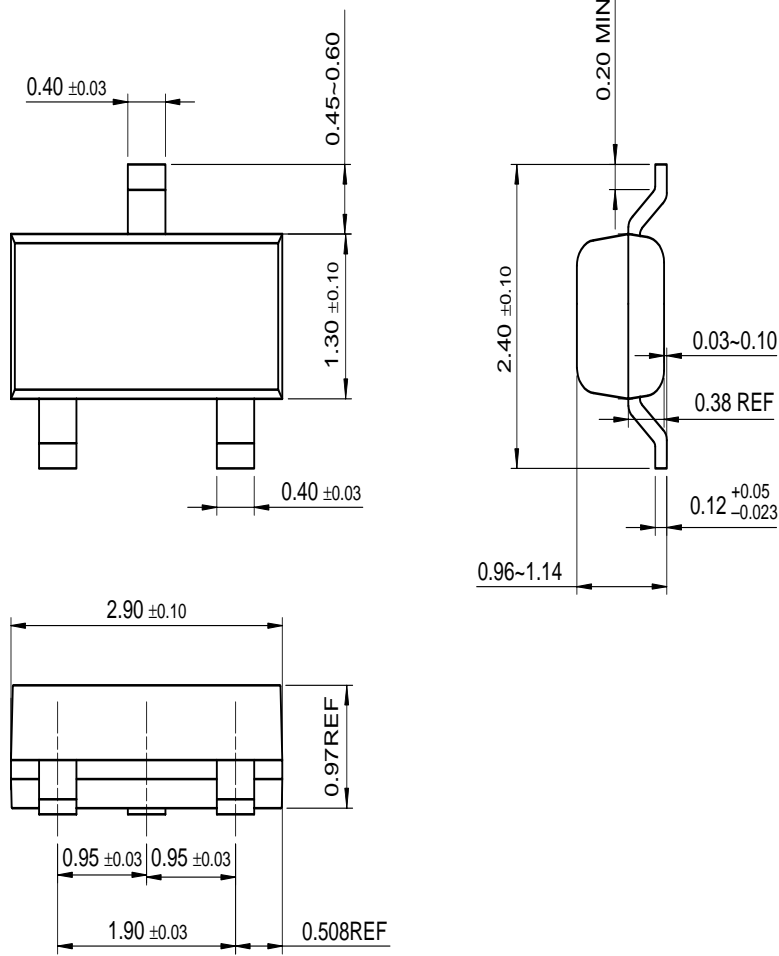
#### Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	180		V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1mA, I_B=0$	160		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	6		V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=120V, I_E=0$		50	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=4V, I_C=0$		50	nA
$h_{FE}$	DC Current Gain	$V_{CE}=5V, I_C=1mA$ $V_{CE}=5V, I_C=10mA$ $V_{CE}=5V, I_C=50mA$	80 80 30	250	
$V_{CE (sat)}$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$ $I_C=50mA, I_B=5mA$		0.15 0.2	V
$V_{BE (sat)}$	Base-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$ $I_C=50mA, I_B=5mA$		1 1	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=10V, I_C=10mA,$ $f=100MHz$	100	300	MHz
$C_{ob}$	Output Capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		6	pF
NF	Noise Figure	$V_{CE}=5V, I_C=250\mu A, R_S=1K\Omega,$ $f=10Hz$ to 15.7KMz		8	dB

\* Pulse Test: Pulse Width=300 $\mu s$ , Duty Cycle=2%

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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## PRODUCT STATUS DEFINITIONS

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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.
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