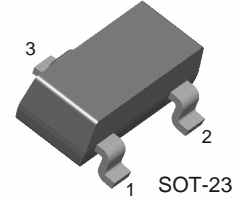


FAIRCHILD
SEMICONDUCTOR®

KST5550

High Voltage Transistor



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

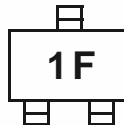
Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	600	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}, I_E=0$	160		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$	140		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}, I_C=0$	6		V
I_{CBO}	Collector Cut-off Current	$V_{CB}=100\text{V}, I_E=0$		100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=4\text{V}, I_C=0$		50	nA
h_{FE}	DC Current Gain	$V_{CE}=5\text{V}, I_C=1.0\text{mA}$ $V_{CE}=5\text{V}, I_C=10\text{mA}$ $V_{CE}=5\text{V}, I_C=50\text{mA}$	60 60 20	250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{mA}, I_B=1\text{mA}$ $I_C=50\text{mA}, I_B=5\text{mA}$		0.15 0.25	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{mA}, I_B=1\text{mA}$ $I_C=50\text{mA}, I_B=5\text{mA}$		1.0 1.2	V
f_T	Current Gain Bandwidth Product	$I_C=10\text{mA}, V_{CE}=10\text{V}$ $f=100\text{MHz}$	100	300	MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		6.0	pF

Marking



Typical Characteristics

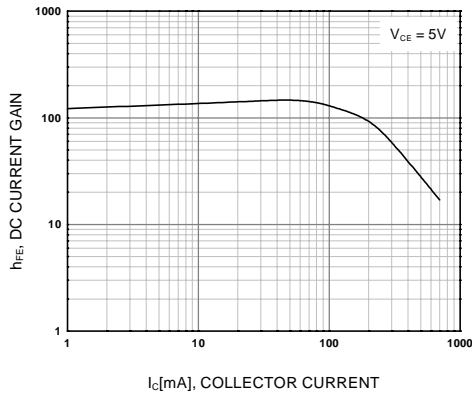


Figure 1. DC current Gain

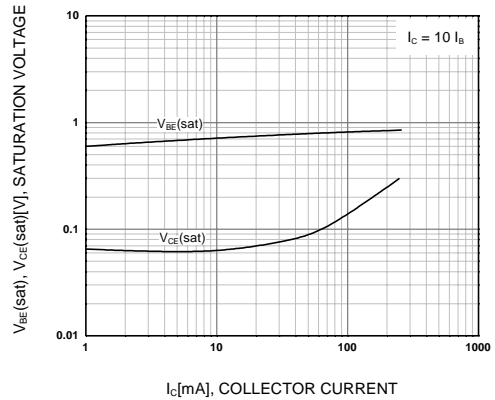


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

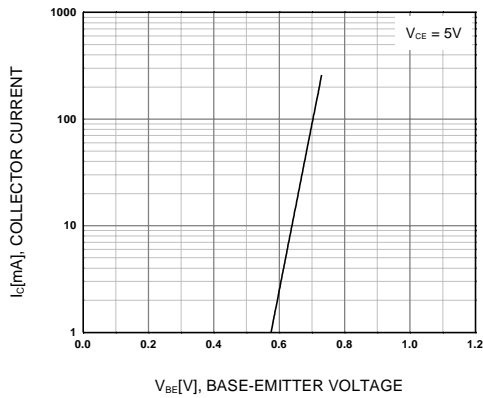


Figure 3. Base-Emitter On Voltage

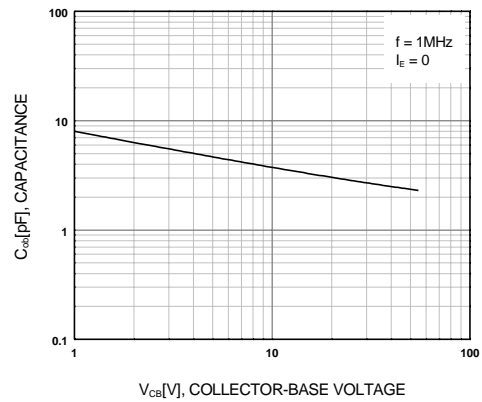


Figure 4. Output Capacitance

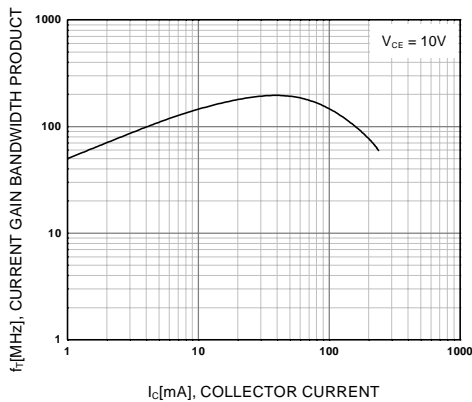
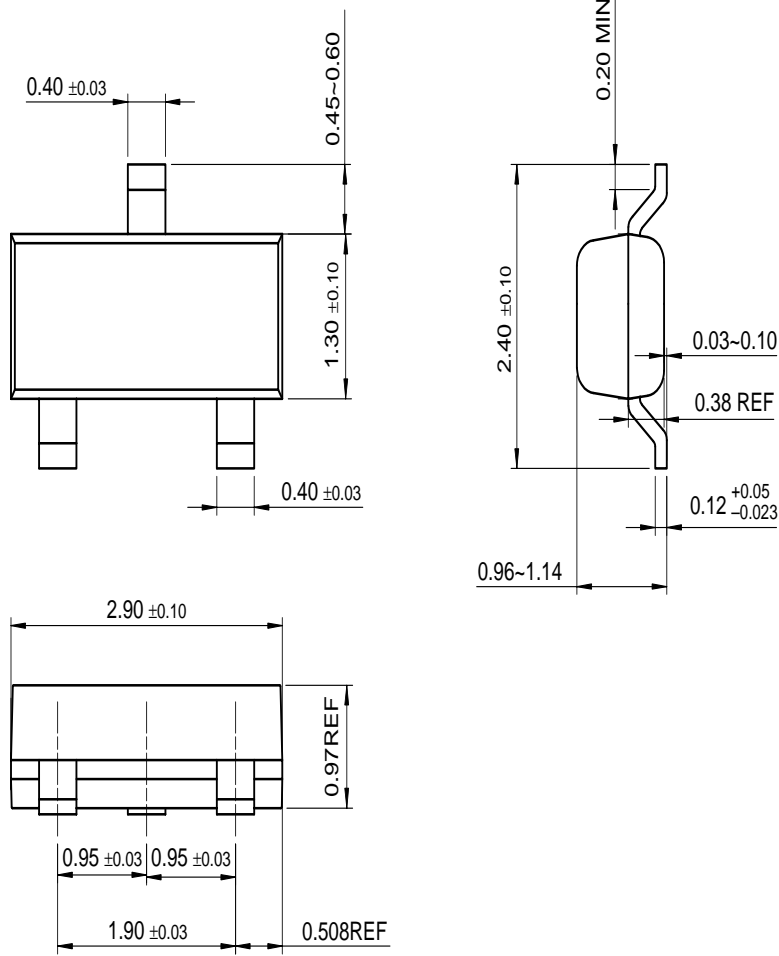


Figure 5. Current Gain Bandwidth Product

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
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	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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