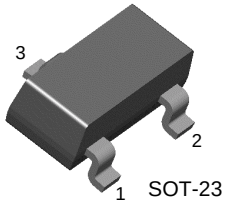
FAIRCHILD
SEMICONDUCTOR®

KST5550

High Voltage Transistor



SOT-23

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

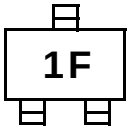
Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	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	°C

Electrical Characteristics T_a=25°C unless otherwise noted

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

Marking



Typical Characteristics

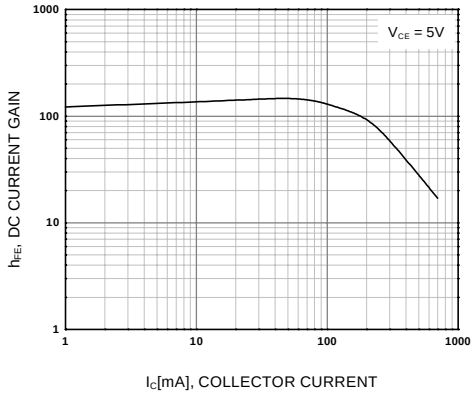


Figure 1. DC current Gain

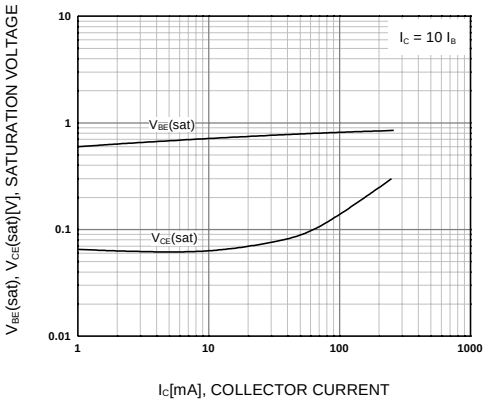


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

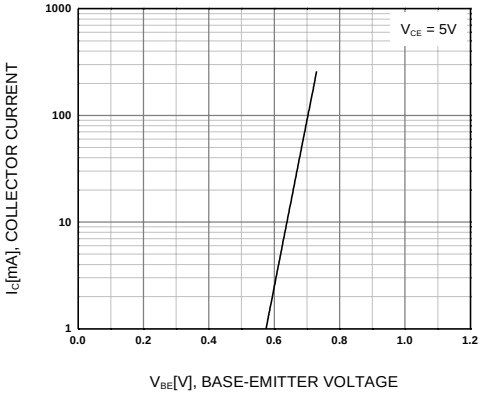


Figure 3. Base-Emitter On Voltage

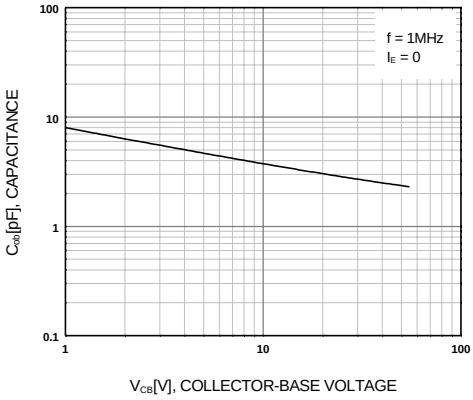


Figure 4. Output Capacitance

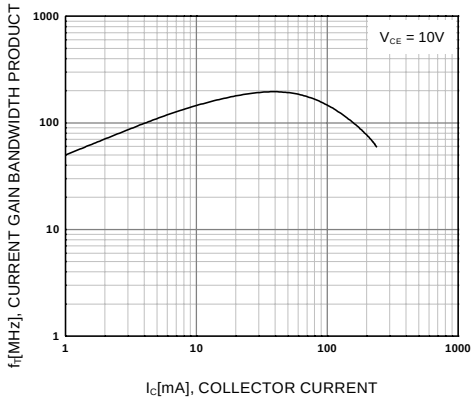
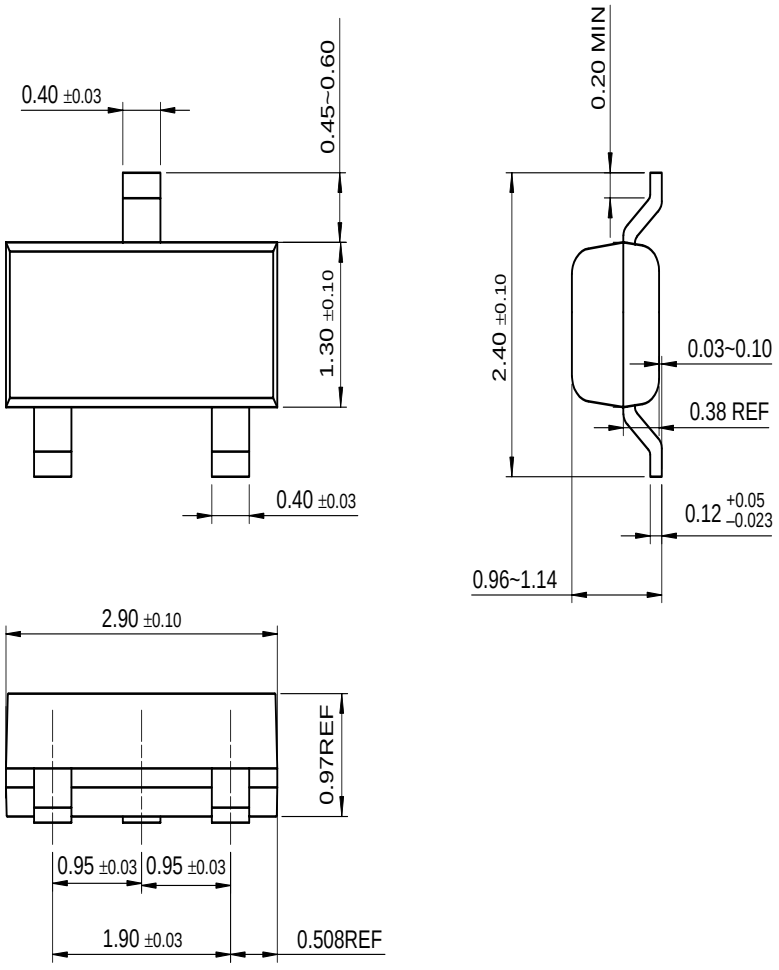


Figure 5. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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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™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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