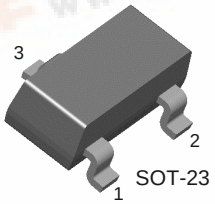
FAIRCHILD SEMICONDUCTOR®

KST4403

Switching Transistor



SOT-23

1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

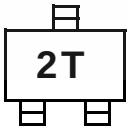
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-600	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -0.1mA, I_E=0	-40		V
BV_{CEO}	* Collector-Emitter Breakdown Voltage	I_C= -1.0mA, I_B=0	-40		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -0.1mA, I_C=0	-5		V
I_{BEV}	Base Cut-off Current	V_{CE}= -35V, V_{BE}= -0.4V		-0.1	µA
I_{CEX}	Collector Cut-off Current	V_{CE}= -35V, V_{BE}= -0.4V		-0.1	µA
h_{FE}	DC Current Gain	V_{CE}= -1V, I_C= -0.1mA V_{CE}= -1V, I_C= -1.0mA V_{CE}= -1V, I_C= -10mA *V_{CE}= -2V, IC= -150mA *V_{CE}= -2V, I_C= -500mA	30 60 100 100 20	 300 	
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C= -150mA, I_B= -15mA I_C= -500mA, I_B= -50mA		-0.4 -0.75	V V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C= -150mA, I_B= -15mA I_C= -500mA, I_B= -50mA	-0.75	-0.95 -1.3	V V
f_T	Current Gain Bandwidth Product	I_C= -20mA, V_{CE}= -10V f=100MHz	200		MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0 f=140KHz		8.5	pF
t_{ON}	Turn On Time	V_{CC}= -30V, V_{BE}= -2V I_C= -150mA, I_{B1}= -15mA		35	ns
t_{OFF}	Turn Off Time	V_{CC}= -30V, I_C= -150mA I_{B1}=I_{B2}= -15mA		255	ns

* Pulse Test: Pulse Width≤300µs, Duty Cycle≤2%

Marking



Typical Characteristics

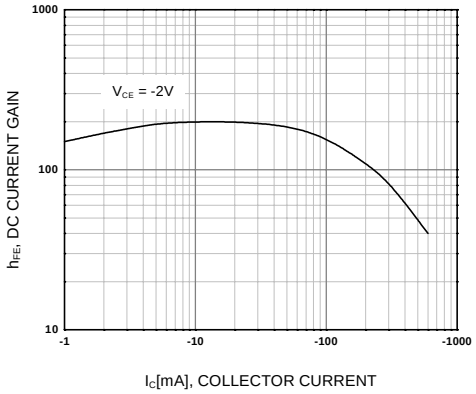


Figure 1. DC current Gain

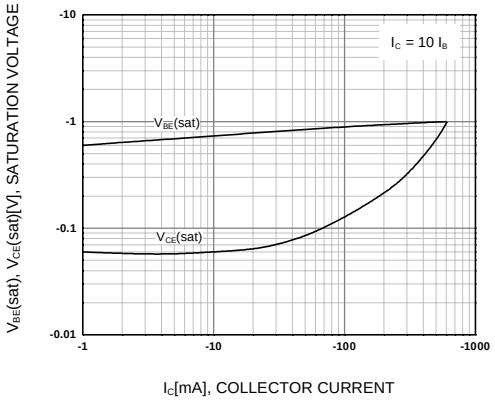


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

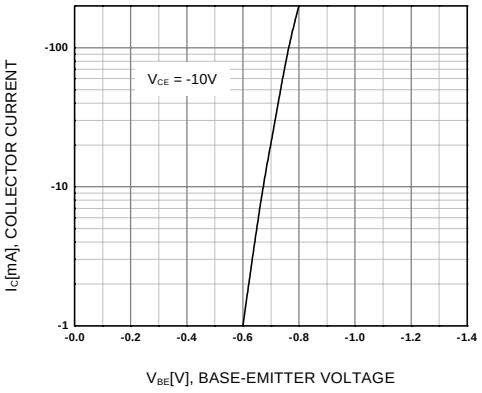


Figure 3. Base-Emitter On Voltage

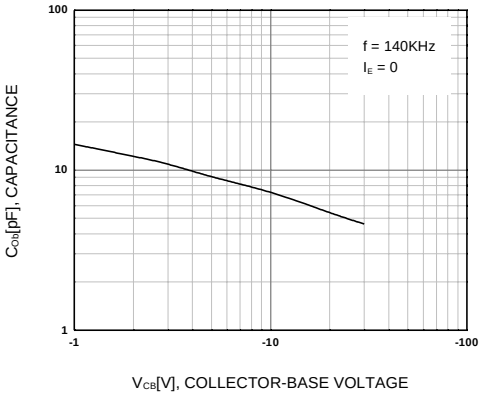


Figure 4. Collector-Base Capacitance

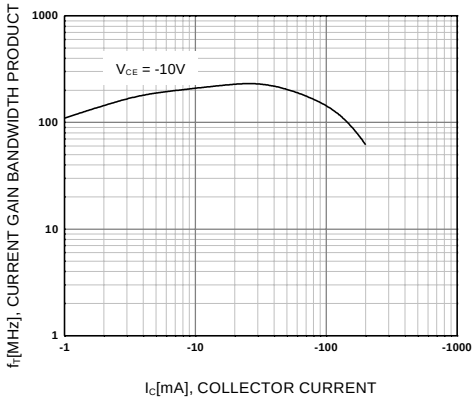
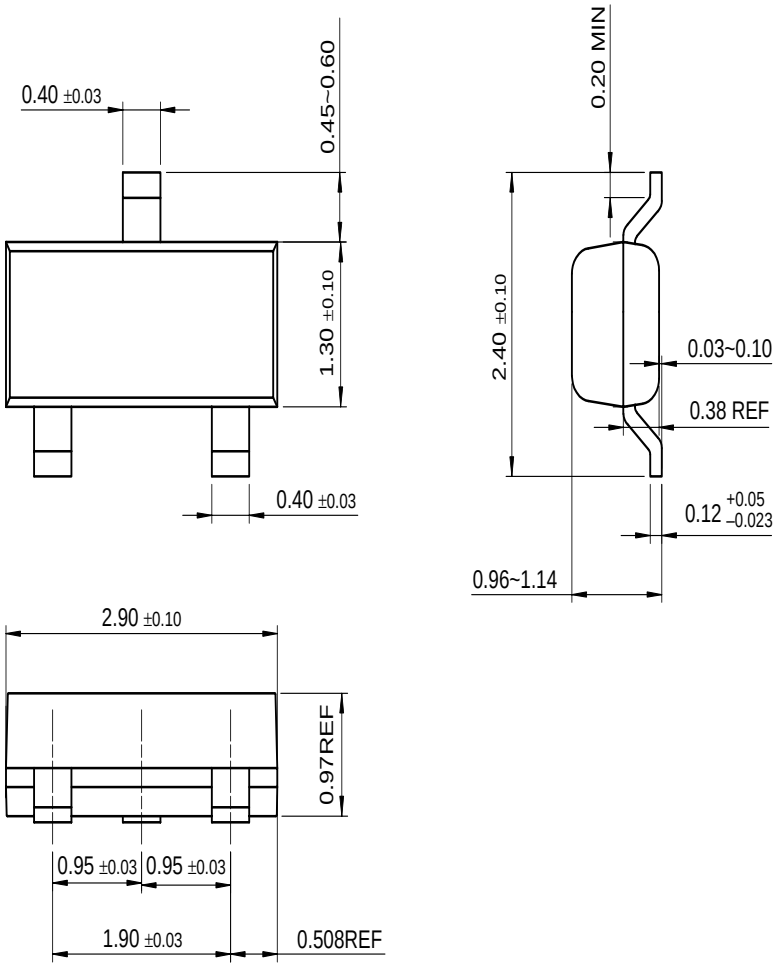


Figure 5. Current Gain Bandwidth Product

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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