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FAIRCHILD
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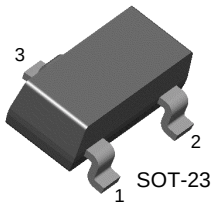
KST5401

High Voltage Transistor



SOT-23

1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

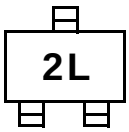
Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-500	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= -100μA, I_E=0	-160		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -1.0mA, I_B=0	-150		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -10μA, I_C=0	-5		V
I_{CBO}	Collector Cut-off Current	V_{CB}= -100V, I_E=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	50 60 50	 240	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -10mA, I_B= -1.0mA I_C= -50mA, I_B= -5mA		-0.2 -0.5	V V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C= -10mA, I_B= -1.0mA I_C= -50mA, I_B= -5mA		-1.0 -1.0	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
NF	Noise Figure	V_{CE}= -5V, I_C= -200μA R_S=10KΩ, f=10Hz to 15.7KHz		8.0	dB

Marking



Typical Characteristics

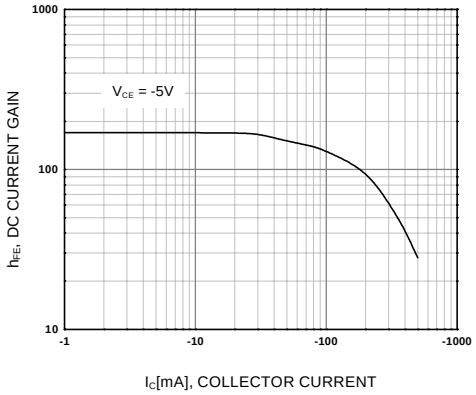


Figure 1. DC current Gain

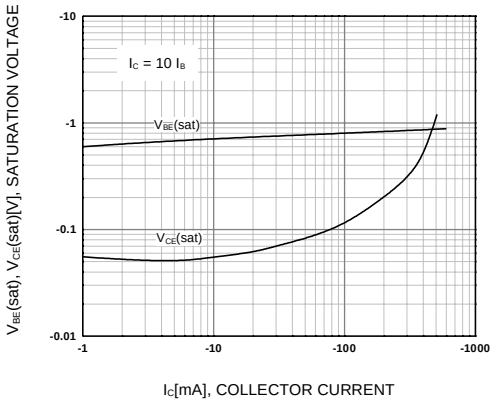


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

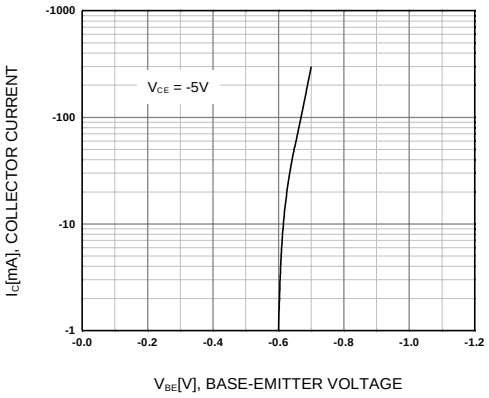


Figure 3. Base-Emitter On Voltage

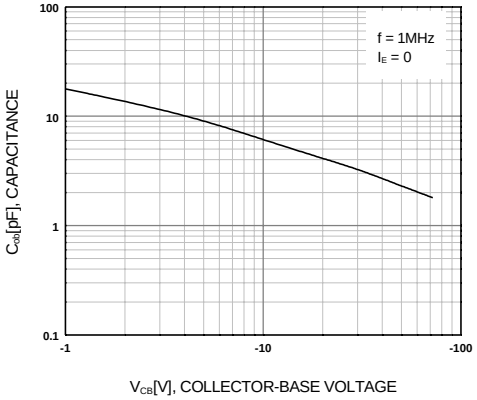


Figure 4. Output Capacitance

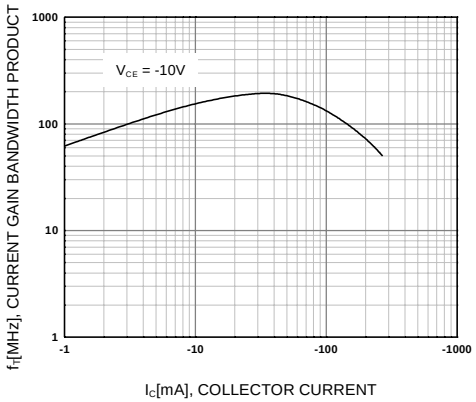
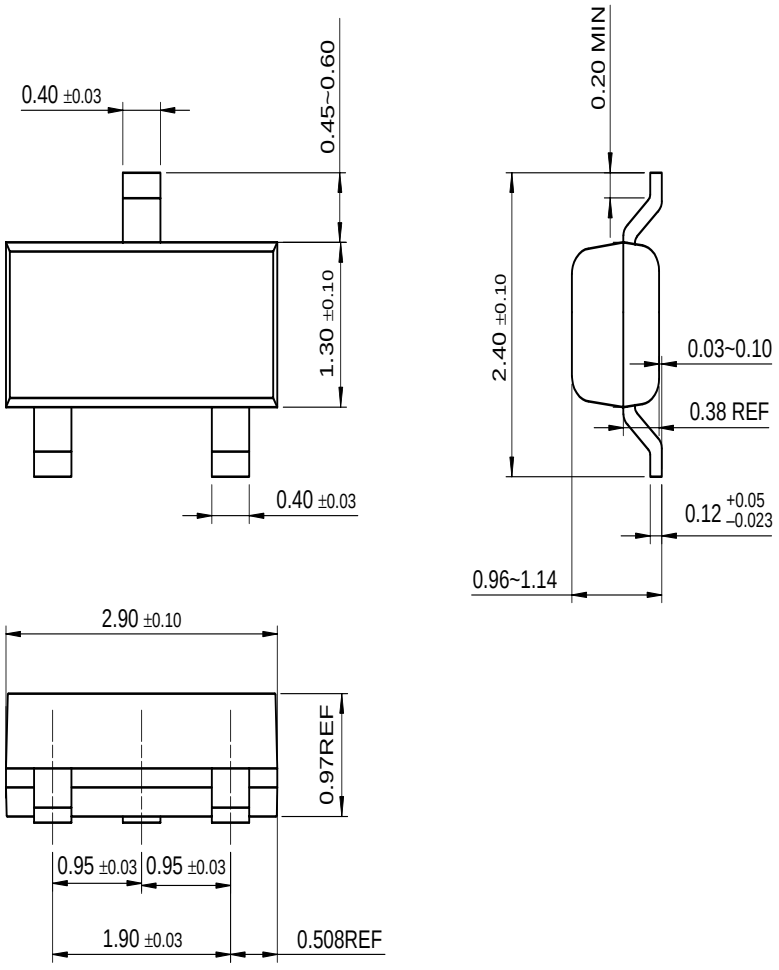


Figure 5. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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