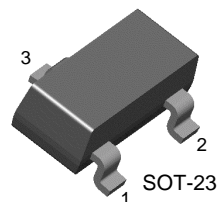


# KST5401

KST5401

## High Voltage Transistor



1. Base 2. Emitter 3. Collector

## PNP Epitaxial Silicon Transistor

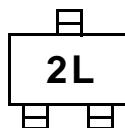
### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-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	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-160		V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1.0\text{mA}, I_B = 0$	-150		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -100\text{V}, I_E = 0$		-50	nA
$h_{FE}$	DC Current Gain	$V_{CE} = -5\text{V}, I_C = -1.0\text{mA}$ $V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $V_{CE} = -5\text{V}, I_C = -50\text{mA}$	50 60 50	240	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1.0\text{mA}$ $I_C = -50\text{mA}, I_B = -5\text{mA}$		-0.2 -0.5	V V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1.0\text{mA}$ $I_C = -50\text{mA}, I_B = -5\text{mA}$		-1.0 -1.0	V 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
NF	Noise Figure	$V_{CE} = -5\text{V}, I_C = -200\mu\text{A}$ $R_S = 10\text{K}\Omega, f = 10\text{Hz to } 15.7\text{KHz}$		8.0	dB

### Marking



# Typical Characteristics

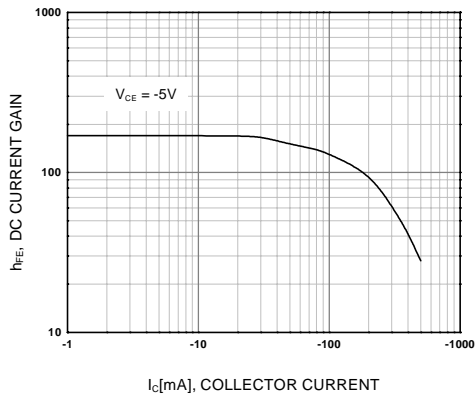


Figure 1. DC current Gain

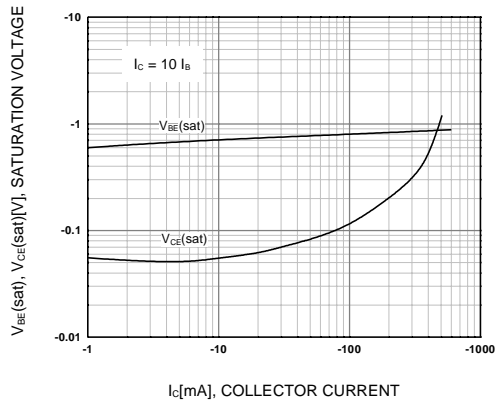


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emmitter Saturation Voltage

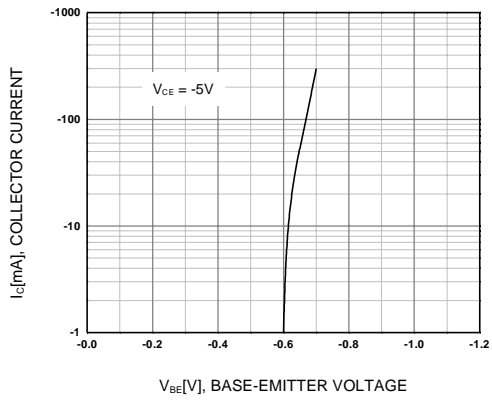


Figure 3. Base-Emitter On Voltage

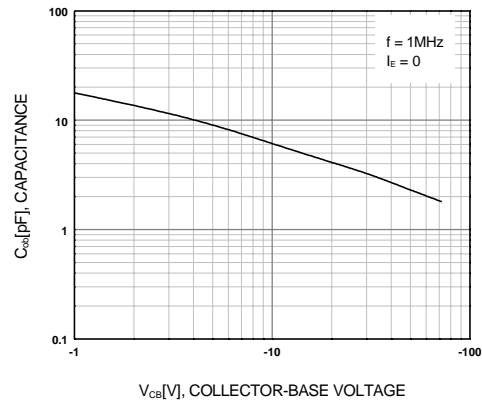


Figure 4. Output Capacitance

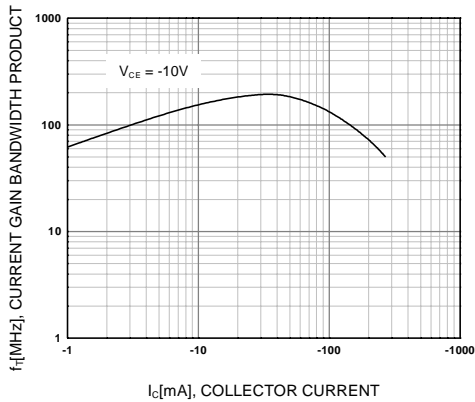


Figure 5. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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