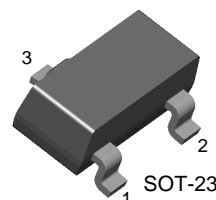


# KST4403

KST4403

## Switching Transistor



1. Base 2. Emitter 3. Collector

## PNP Epitaxial Silicon Transistor

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

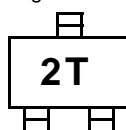
Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-40	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-600	mA
$P_C$	Collector Power Dissipation	350	mW
$T_{STG}$	Storage Temperature	150	$^\circ\text{C}$

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

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

\* Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

### Marking



# Typical Characteristics

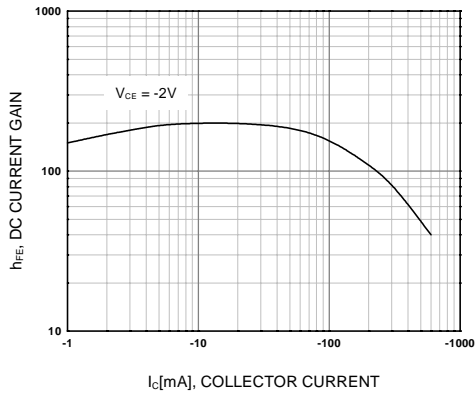


Figure 1. DC current Gain

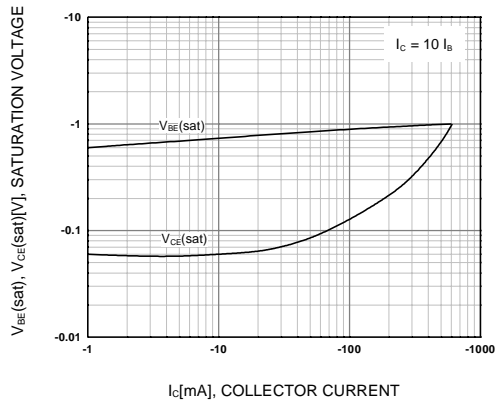


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emmitter Saturation Voltage

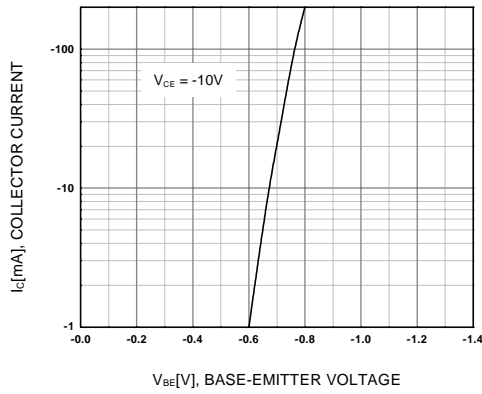


Figure 3. Base-Emitter On Voltage

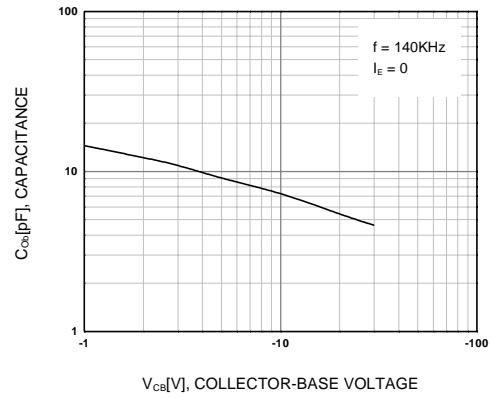


Figure 4. Collector-Base Capacitance

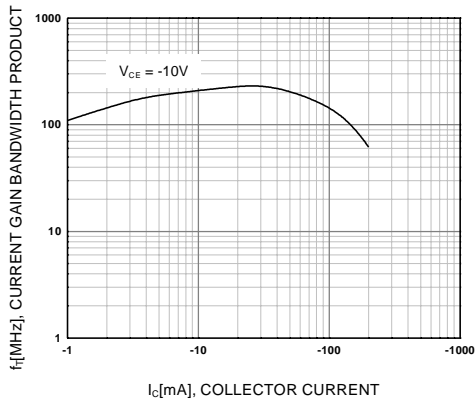


Figure 5. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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