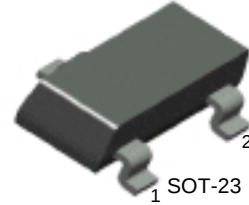


KST2222

KST2222

General Purpose Transistor



1 SOT-23
1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

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

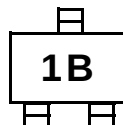
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CES}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	600	mA
P_C	Collector Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}$, $I_E=0$	60		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}$, $I_B=0$	30		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}$, $I_C=0$	5		V
I_{CEX}	Collector Cut-off Current	$V_{CE}=60\text{V}$, $V_{EB}=3\text{V}$		10	nA
I_{CBO}	Collector Cut-off Current	$V_{CB}=50\text{V}$, $I_E=0$		0.01	μA
h_{FE}	DC Current Gain	$V_{CE}=10\text{V}$, $I_C=0.1\text{mA}$ $V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$ $V_{CE}=10\text{V}$, $I_C=10\text{mA}$ * $V_{CE}=10\text{V}$, $I_C=150\text{mA}$ * $V_{CE}=10\text{V}$, $I_C=500\text{mA}$	35 50 75 100 30	300	
$V_{CE}(\text{sat})$	* 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 1.6	V V
$V_{BE}(\text{sat})$	* Base-Emitter Saturation Voltage	$I_C=150\text{mA}$, $I_B=15\text{mA}$ $I_C=500\text{mA}$, $I_B=50\text{mA}$		1.3 2.6	V V
f_T	Current Gain Bandwidth Product	$I_C=20\text{mA}$, $V_{CE}=20\text{V}$ $f=100\text{MHz}$	250		MHz
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$		8.0	pF
t_{ON}	Turn On Time	$V_{CC}=30\text{V}$, $V_{BE}=0.5\text{V}$ $I_C=150\text{mA}$, $I_{B1}=15\text{mA}$		35	ns
t_{OFF}	Turn Off Time	$V_{CC}=30\text{V}$, $I_C=150\text{mA}$ $I_{B1}=I_{B2}=15\text{mA}$		285	ns

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

Marking



Typical Characteristics

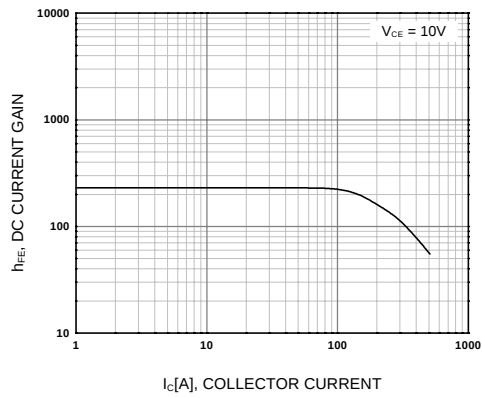


Figure 1. DC current Gain

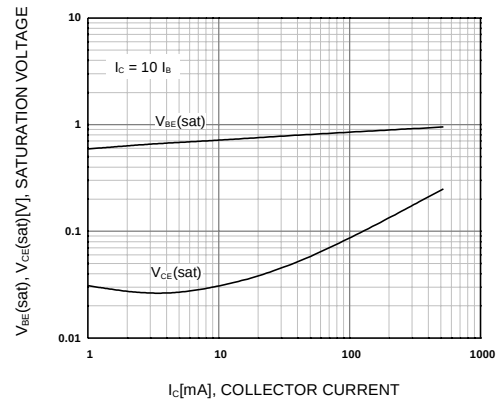


Figure 2. Collector-Base Saturation Voltage
Base-Emitter Saturation Voltage

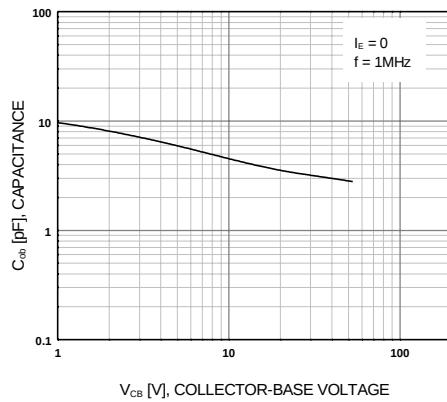


Figure 3. Output Capacitance

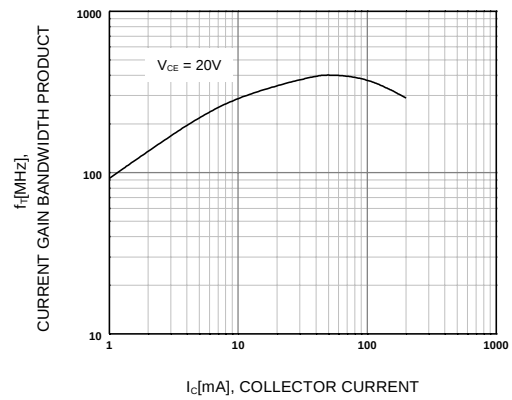


Figure 4. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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