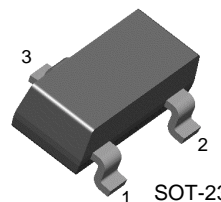


# KSC1623

KSC1623

## Low Frequency Amplifier & High Frequency OSC.

- Complement to KSA812



1. Base 2. Emitter 3. Collector

## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	100	mA
$P_C$	Collector Power Dissipation	200	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

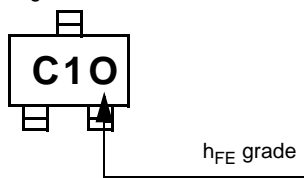
### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=60\text{V}, I_E=0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$V_{CE}=6\text{V}, I_C=1\text{mA}$	90	200	600	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}, I_B=10\text{mA}$		0.15	0.3	V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C=100\text{mA}, I_B=10\text{mA}$		0.86	1.0	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=6\text{V}, I_C=1\text{mA}$	0.55	0.62	0.65	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=6\text{V}, I_C=10\text{mA}$		250		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$		3		pF

### $h_{FE}$ Classification

Classification	O	Y	G	L
$h_{FE}$	90 ~ 180	135 ~ 270	200 ~ 400	300 ~ 600

Marking



# Typical Characteristics

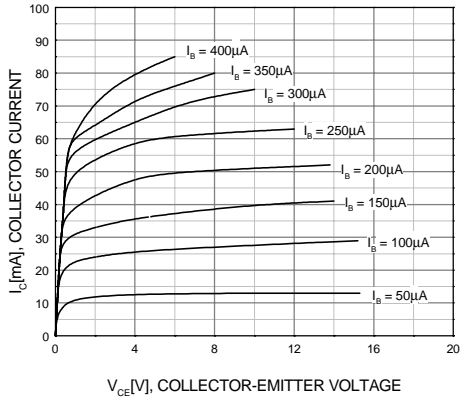


Figure 1. Static Characteristic

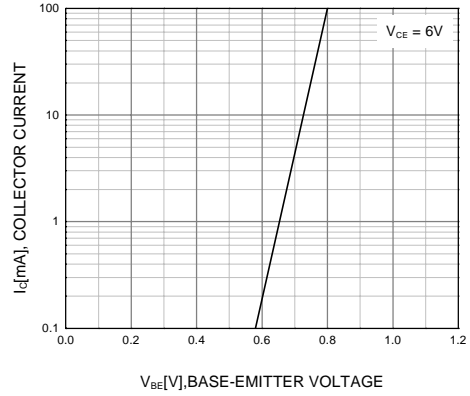


Figure 2. Transfer Characteristic

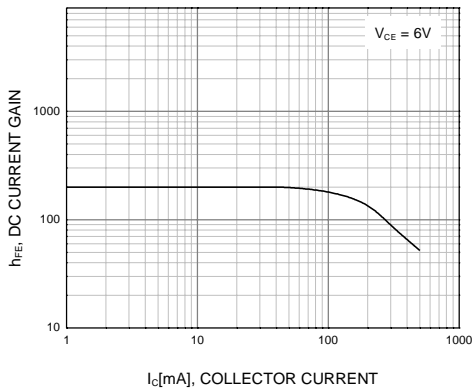


Figure 3. DC current Gain

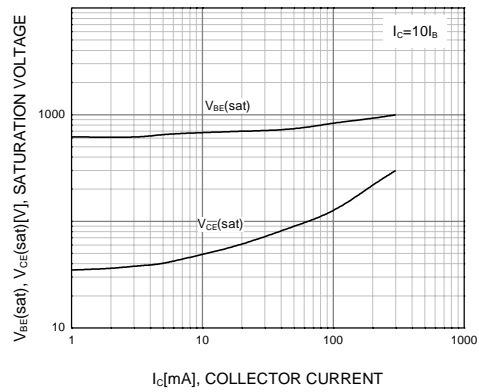


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

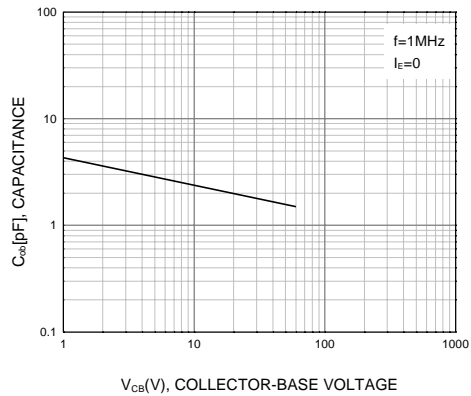


Figure 5. Output Capacitance

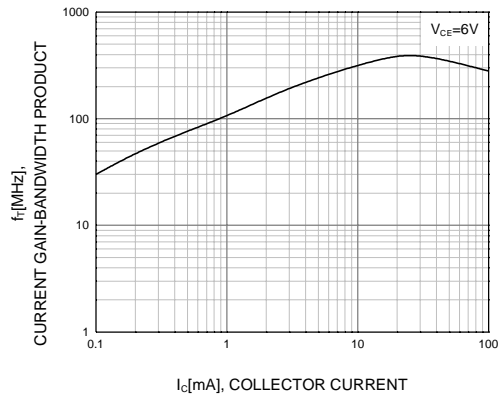


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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ActiveArray <sup>™</sup>	FACT Quiet series <sup>™</sup>	ISOPLANAR <sup>™</sup>	POP <sup>™</sup>	Stealth <sup>™</sup>
Bottomless <sup>™</sup>	FAST <sup>®</sup>	LittleFET <sup>™</sup>	Power247 <sup>™</sup>	SuperSOT <sup>™</sup> -3
CoolFET <sup>™</sup>	FAST <sup>r</sup> <sup>™</sup>	MicroFET <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
CROSSVOLT <sup>™</sup>	FRFET <sup>™</sup>	MicroPak <sup>™</sup>	QFET <sup>™</sup>	SuperSOT <sup>™</sup> -8
DOMET <sup>™</sup>	GlobalOptoisolator <sup>™</sup>	MICROWIRE <sup>™</sup>	QS <sup>™</sup>	SyncFET <sup>™</sup>
EcoSPARK <sup>™</sup>	GTO <sup>™</sup>	MSX <sup>™</sup>	QT Optoelectronics <sup>™</sup>	TinyLogic <sup>™</sup>
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## PRODUCT STATUS DEFINITIONS

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