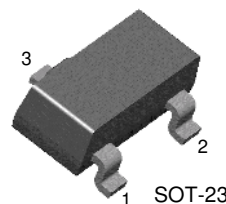


KSC1623

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	$^\circ\text{C}$

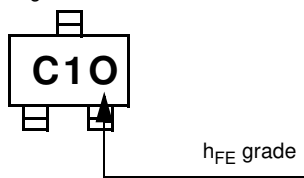
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB}=60\text{V}, I_E=0$			0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
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

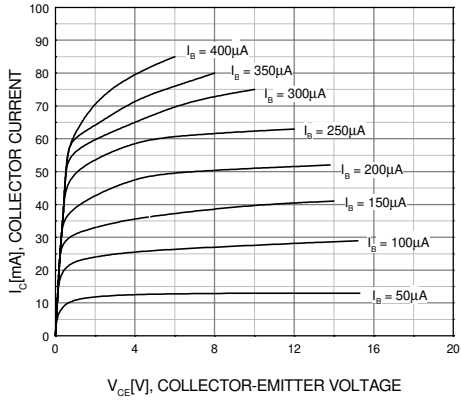


Figure 1. Static Characteristic

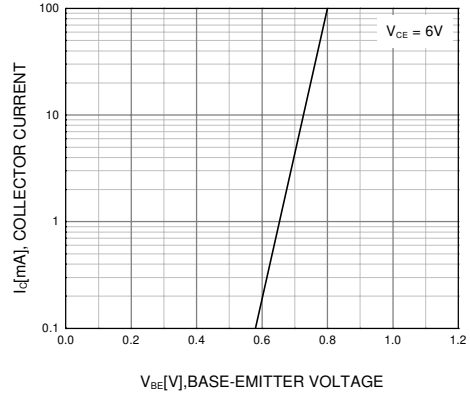


Figure 2. Transfer Characteristic

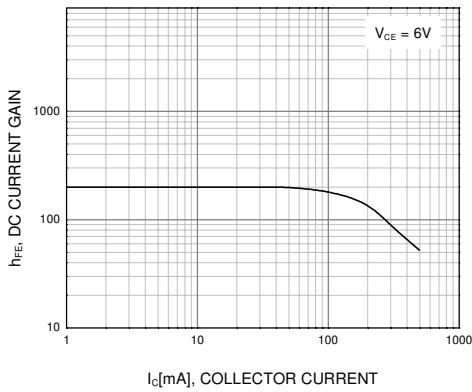


Figure 3. DC current Gain

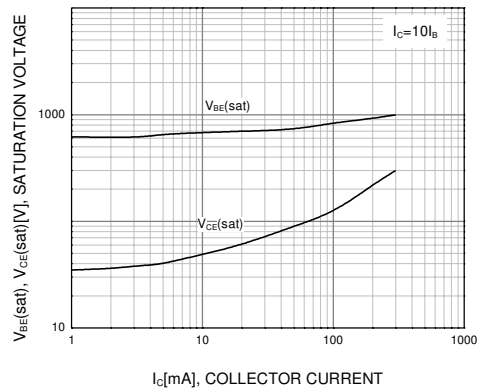


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

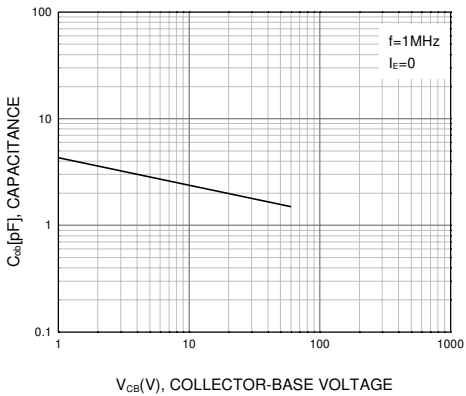


Figure 5. Output Capacitance

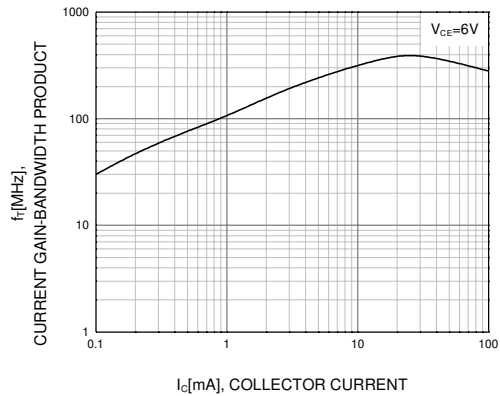
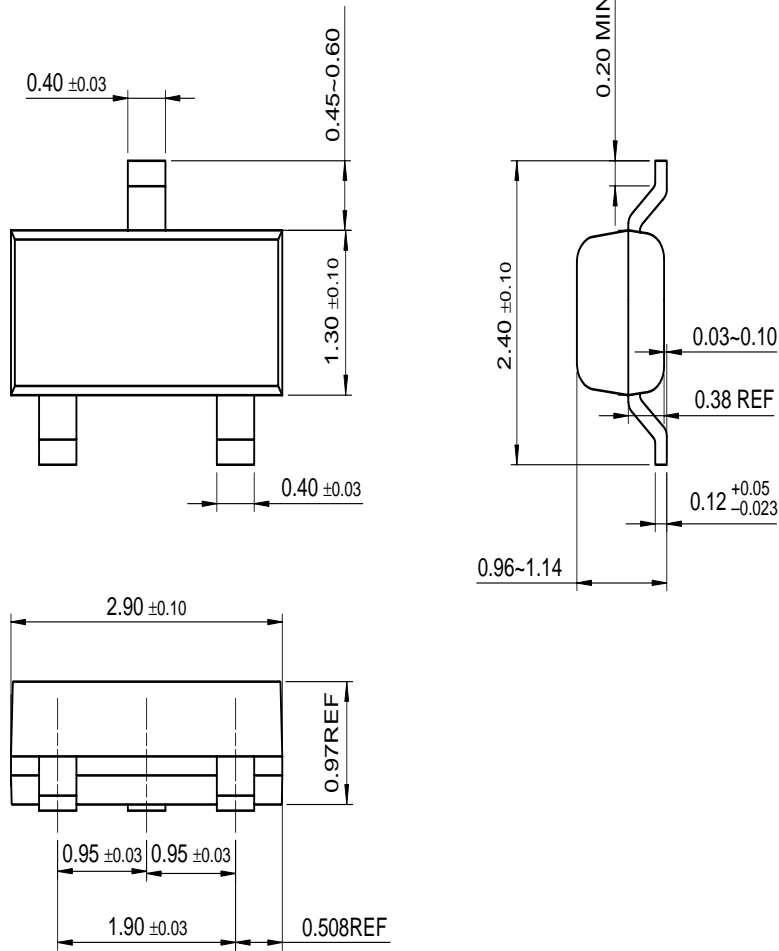


Figure 6. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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KSC1623

NPN Epitaxial Silicon Transistor

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Features

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Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
KSC1623GMTF	Full Production	Full Production	\$0.0281	SOT-23	3	TAPE REEL	Line 1: C1G
KSC1623GMTF_NL	Full Production	Full Production	N/A	SOT-23	3	TAPE REEL	Line 1: C1G
KSC1623LMTF	Full Production	Full Production	\$0.0281	SOT-23	3	TAPE REEL	Line 1: C1L

KSC1623OMTF	Full Production	 Full Production	\$0.0281	SOT-23	3	TAPE REEL	Line 1: C10
KSC1623YMTF	Full Production	 Full Production	\$0.0281	SOT-23	3	TAPE REEL	Line 1: C1Y
KSC1623YMTF_NL	Full Production	 Full Production	N/A	SOT-23	3	TAPE REEL	Line 1: C1Y

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product KSC1623 is available. [Click here for more information](#).

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Models

Package & leads	Condition	Temperature range	Vcc range	Software version	Revision date
PSPICE					
SOT-23-3	Electrical/Thermal	-55°C to 150°C	0V to 20V	9.2	Jan 15, 2004

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Qualification Support

Click on a product for detailed qualification data

Product
KSC1623GMTF
KSC1623GMTF_NL
KSC1623LMTF
KSC1623OMTF
KSC1623YMTF

[KSC1623YMTF_NL](#)

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