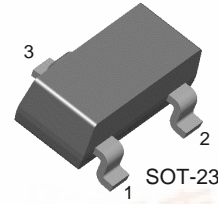


**FAIRCHILD**  
SEMICONDUCTOR®

## KST63/64

**Darlington 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	-30	V
$V_{CES}$	Collector-Emitter Voltage	-30	V
$V_{EBO}$	Emitter-Base Voltage	-10	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

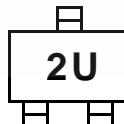
Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CES}$	Collector-Emitter Breakdown Voltage	$I_C = -100, V_{BE} = 0$	-30		V
$I_{CBO}$	Collector Cut-off Current	$V_{CE} = -30V, I_E = 0$		-100	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -10V, I_C = 0$		-100	nA
$h_{FE}$	* DC Current Gain				
	: KST63	$V_{CE} = -5V, I_C = -10mA$	5K		
	: KST64		10K		
	: KST63	$V_{CE} = -5V, I_C = -100mA$	10K		
	: KST64		20K		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -100mA, I_B = -0.1mA$		-1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = -5V, I_C = -100mA$		-2.0	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -5V, I_C = -10mA$ $f = 100MHz$	125		MHz

\* Pulse test:  $PW \leq 300\mu s$ , Duty Cycle  $\leq 2\%$

**Marking Code**

Type	KST63	KST64
Mark	2U	2V

Marking



# Typical Characteristics

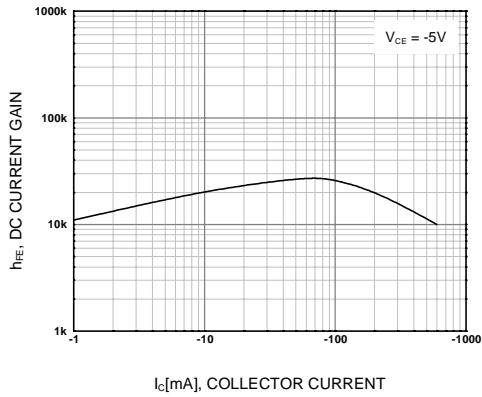


Figure 1. DC current Gain

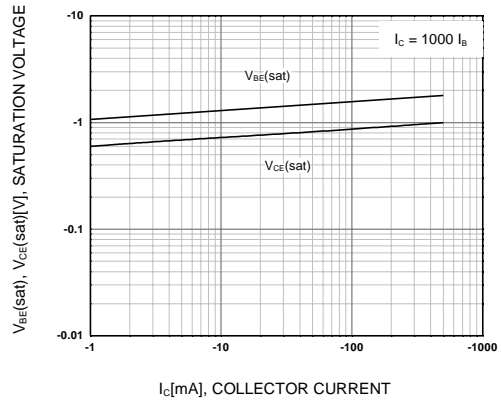


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

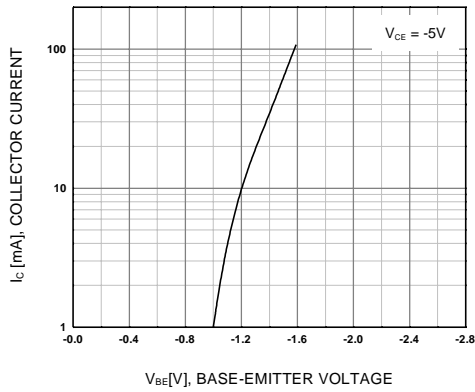


Figure 3. Base-Emitter On Voltage

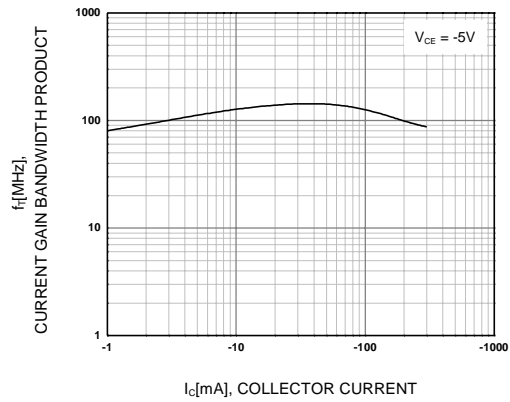
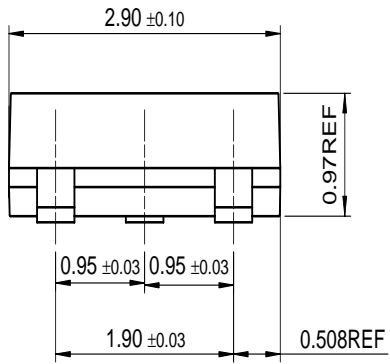
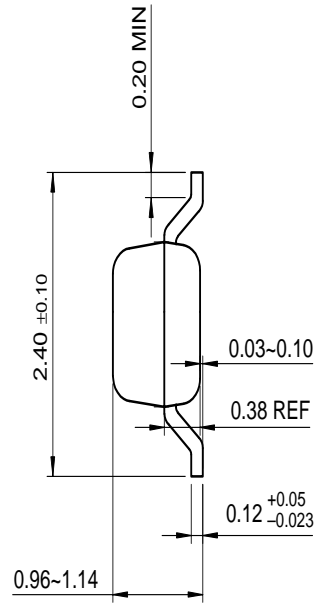
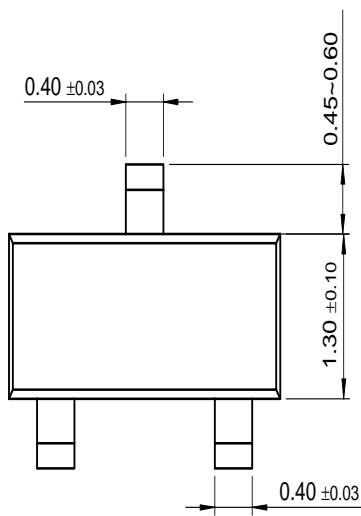


Figure 4. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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## PRODUCT STATUS DEFINITIONS

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