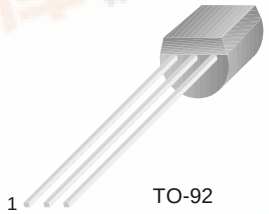
FAIRCHILD SEMICONDUCTOR®

KSP62/63/64

Darlington Transistor

- Collector-Emitter Voltage: V_{CES}=KSP62: 20V
  KSP63/64: 30V
- Collector Power Dissipation: P_C (max)=625mW



TO-92

1. Emitter 2. Base 3. Collector

PNP Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage		
	: KSP62	-20	V
	: KSP63/64	-30	V
V_{CEO}	Collector-Emitter Voltage		
	: KSP62	-20	V
	: KSP63/64	-30	V
V_{EBO}	Emitter-Base Voltage	-10	V
I_C	Collector Current	-500	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55~150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CES}	Collector-Emitter Breakdown Voltage	I_C= -100μA, I_B=0			
	: KSP62		-20		V
	: KSP63/64		-30		V
I_{CBO}	Collector Cut-off Current				
	: KSP62	V_{CB}= -15V, I_E=0		-100	nA
	: KSP63/64	V_{CB}= -30V, I_E=0		-100	nA
I_{EBO}	Emitter Cut-off Current	V_{BE}= -10V, I_C=0		-100	nA
h_{FE}	* DC Current Gain				
	: KSP62	V_{CE}= -5V, I_C= -10mA	20K		
	: KSP63		5K		
	: KSP64		10K		
	: KSP63	V_{CE}= -5V, I_C= -100mA	10K		
	: KSP64		20K		
V_{CE} (sat)	* Collector-Emitter Saturation Voltage				
	: KSP62	I_C= -10mA, I_B= -0.01mA		-1.0	V
	: KSP63/64	I_C= -100mA, I_B= -0.1mA		-1.5	V
V_{BE} (on)	* Base-Emitter On Voltage				
	: KSP62	V_{CE}= -5V, I_C= -10mA		-1.4	V
	: KSP63/64	V_{CE}= -5V, I_C= -100mA		-2	V
f_T	Current Gain Bandwidth Product	V_{CE}= -5V, I_C= -100mA	125		MHz
	: KSP63/64	f=100MHz			

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Typical Characteristics

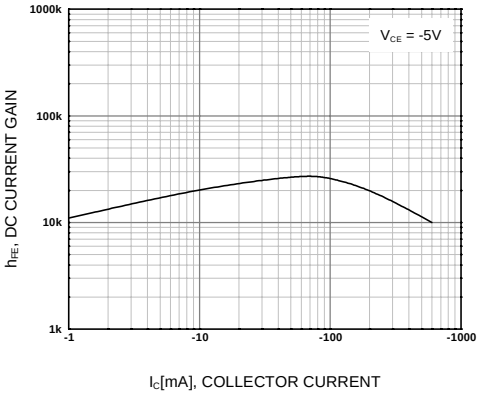


Figure 1. DC current Gain

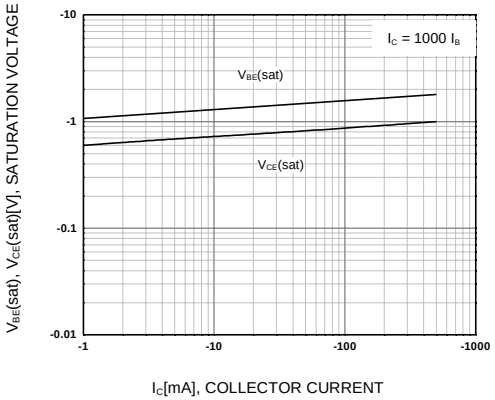


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

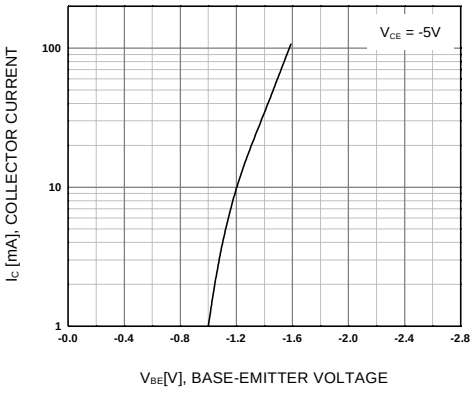


Figure 3. Base-Emitter On Voltage

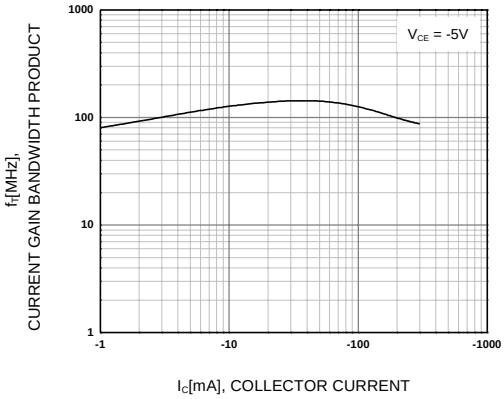


Figure 4. Current Gain Bandwidth Product

Package Dimensions

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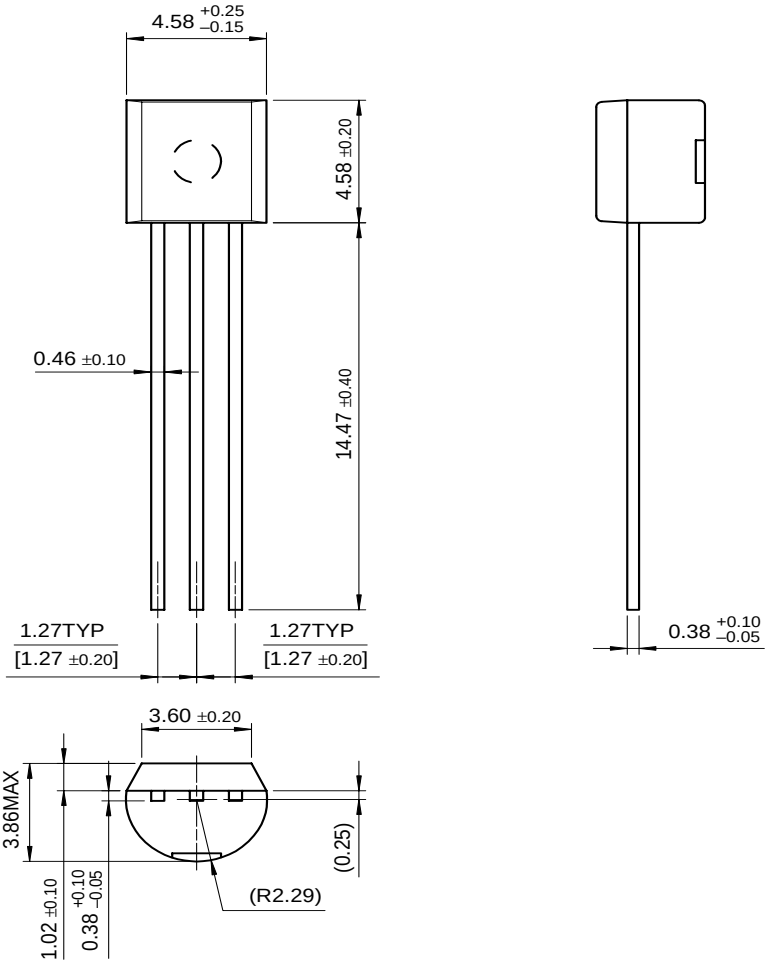

Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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