FAIRCHILD SEMICONDUCTOR®

KSP25/26/27

Darlington Transistor

- Collector-Emitter Voltage: V_{CES}=KSP25: 40V
  KSP26: 50V
  KSP27: 60V
- Collector Power Dissipation: P_C (max) =625mW

1 TO-92

1. Emitter 2. Base 3. Collector

NPN Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage		
	: KSP25	40	V
	: KSP26	50	V
	: KSP27	60	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_E=0			
	: KSP25		40		V
	: KSP26		50		V
	: KSP27		60		V
BV_{CBO}	Collector-Base Breakdown Voltage	I_C=100μA, I_E=0			
	: KSP25		40		V
	: KSP26		50		V
	: KSP27		60		V
I_{CBO}	Collector Cut-off Current				
	: KSP25	V_{CE}=30V, I_E=0		100	nA
	: KSP26	V_{CE}=40V, I_E=0		100	nA
	: KSP27	V_{CE}=50V, I_E=0		100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}=10V, I_B=0		100	nA
h_{FE}	* DC Current Gain	V_{CE}=5V, I_C=10mA	10K		
		V_{CE}=5V, I_C=100mA	10K		
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	V

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Typical Characteristics

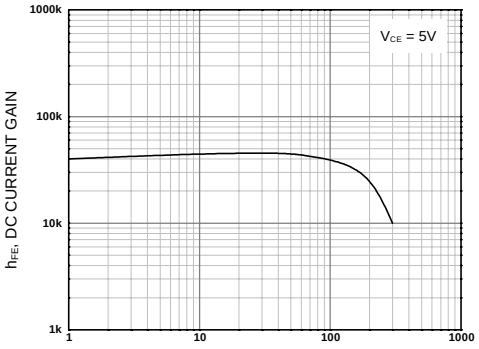

Figure 1. DC current Gain

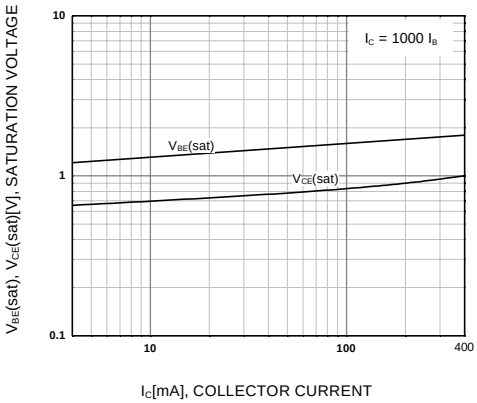

Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

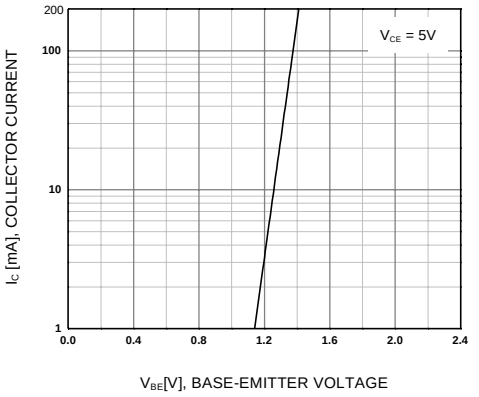

Figure 3. Base-Emitter On Voltage

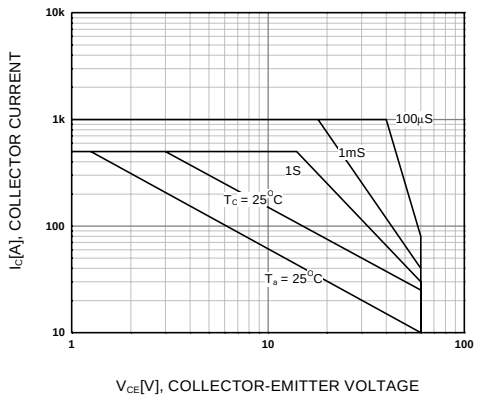

Figure 4. Safe Operating Area

Package Dimensions

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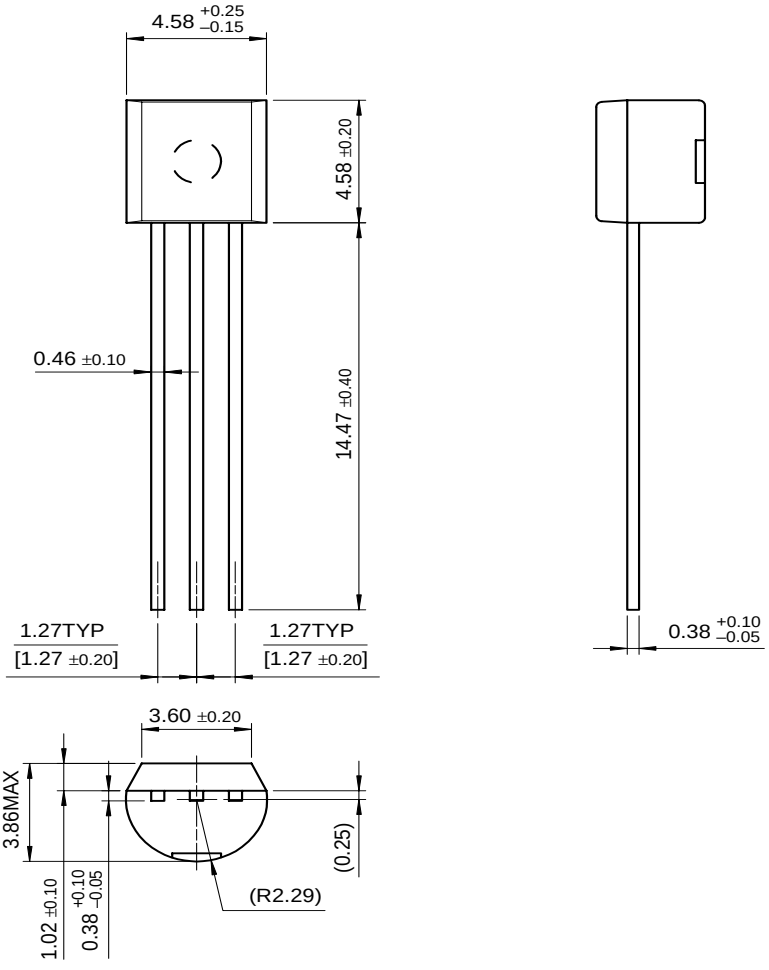

Dimensions in Millimeters

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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™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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