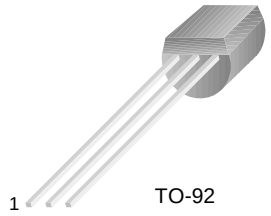
FAIRCHILD
SEMICONDUCTOR®

KSP75/76/77

Darlington Transistor

- Collector-Emitter Voltage: V_{CES}= KSP75: 40V
  KSP76: 50V
  KSP77: 60V
- 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_{CES}	Collector-Base Voltage		
	: KSP75	-40	V
	: KSP76	-50	V
	: KSP77	-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_{CEO}	Collector-Base Breakdown Voltage	I_C= -100μA, I_B=0			
	: KSP75		-40		V
	: KSP76		-50		V
	: KSP77		-60		V
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, I_E=0			
	: KSP75		-40		V
	: KSP76		-50		V
	: KSP77		-60		V
I_{CBO}	Collector Cut-off Current				nA
	: KSP75	V_{CE}= -30V, I_E=0		-100	nA
	: KSP76	V_{CE}= -40V, I_E=0		-100	nA
	: KSP77	V_{CE}= -50V, I_E=0		-100	nA
I_{EBO}	Emitter Cut-off Current	V_{CE}= -10V, I_B=0		-100	nA
I_{CES}	Collector Cut-off Current				
	: KSP75	V_{CE}= -30V, I_E=0		-500	nA
	: KSP76	V_{CE}= -40V, I_E=0		-500	nA
	: KSP77	V_{CE}= -50V, I_E=0		-500	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

Typical Characteristics

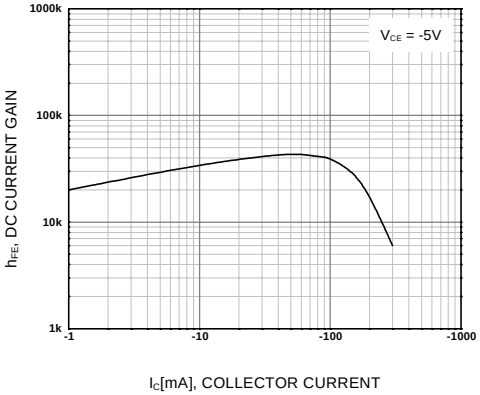


Figure 1. DC current Gain

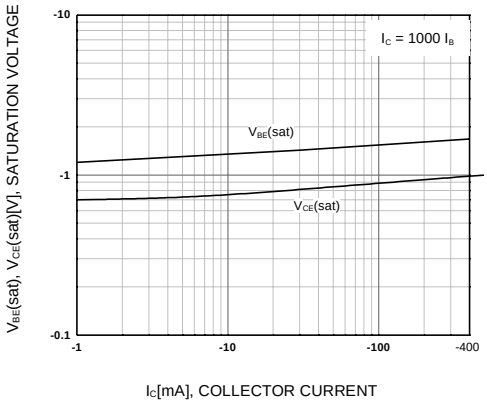


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

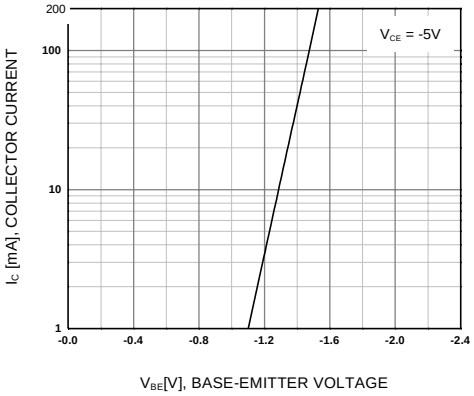


Figure 3. Base-Emitter On Voltage

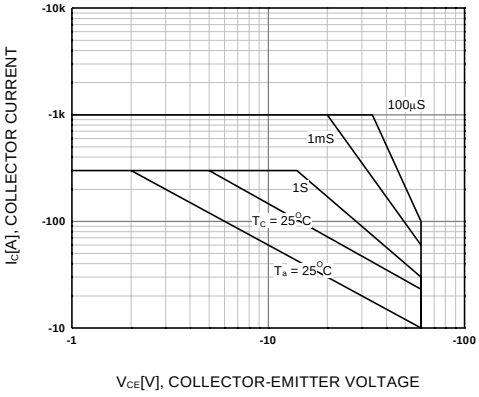
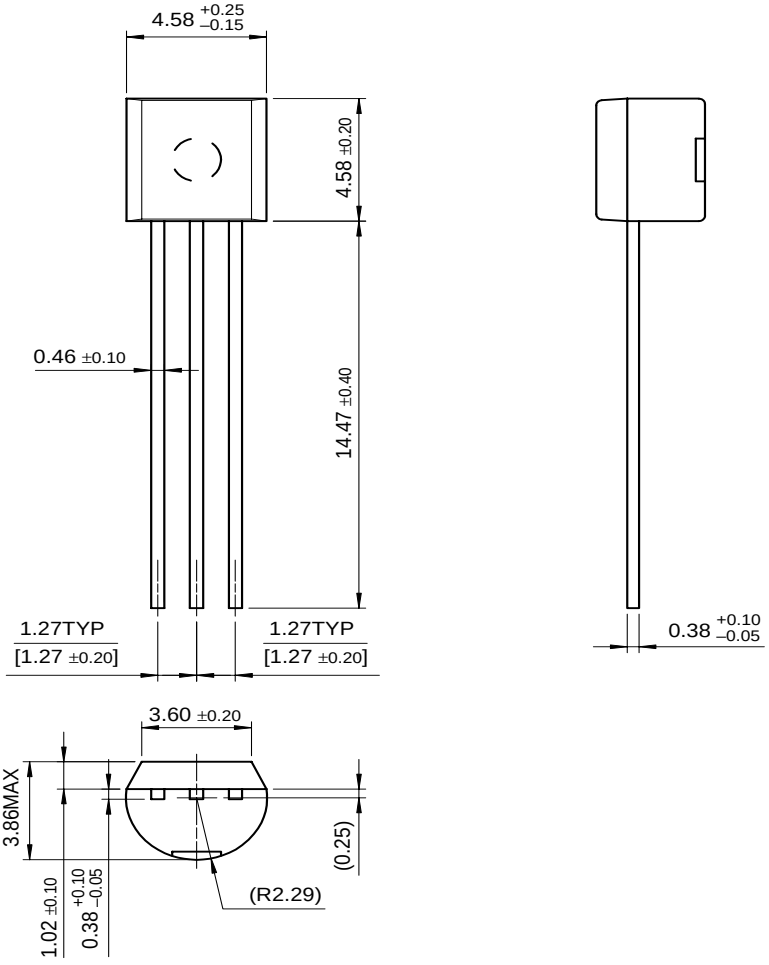


Figure 4. Safe Operating Area

Package Demensions

TO-92



Dimensions in Millimeters

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