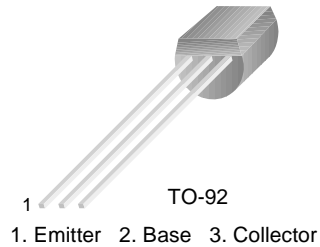


KSP75/76/77

Darlington Transistor

- Collector-Emitter Voltage: V_{CES} = KSP75: 40V
KSP76: 50V
KSP77: 60V
- Collector Power Dissipation: P_C (max)=625mW



PNP Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ 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	$^\circ\text{C}$
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.	Max.	Units
BV_{CEO}	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_B = 0$			
	: KSP75		-40		V
	: KSP76		-50		V
	: KSP77		-60		V
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$			
	: KSP75		-40		V
	: KSP76		-50		V
	: KSP77		-60		V
I_{CBO}	Collector Cut-off Current				nA
	: KSP75	$V_{CE} = -30\text{V}, I_E = 0$		-100	nA
	: KSP76	$V_{CE} = -40\text{V}, I_E = 0$		-100	nA
	: KSP77	$V_{CE} = -50\text{V}, I_E = 0$		-100	nA
I_{EBO}	Emitter Cut-off Current	$V_{CE} = -10\text{V}, I_B = 0$		-100	nA
I_{CES}	Collector Cut-off Current				
	: KSP75	$V_{CE} = -30\text{V}, I_E = 0$		-500	nA
	: KSP76	$V_{CE} = -40\text{V}, I_E = 0$		-500	nA
	: KSP77	$V_{CE} = -50\text{V}, I_E = 0$		-500	nA
h_{FE}	DC Current Gain	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	10K		
		$V_{CE} = -5\text{V}, I_C = -100\text{mA}$	10K		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -100\text{mA}, I_B = -0.1\text{mA}$		-1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = -5\text{V}, I_C = -100\text{mA}$		2	V

Typical Characteristics

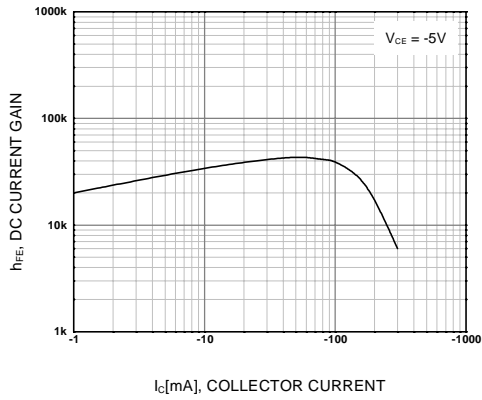


Figure 1. DC current Gain

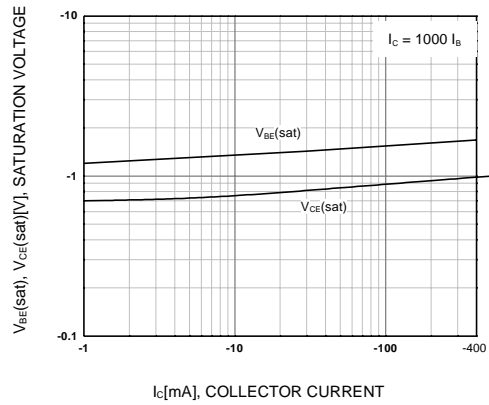


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

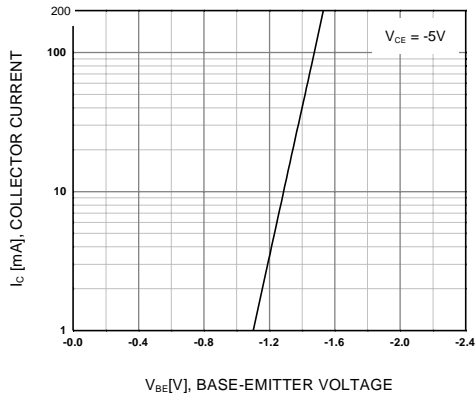


Figure 3. Base-Emitter On Voltage

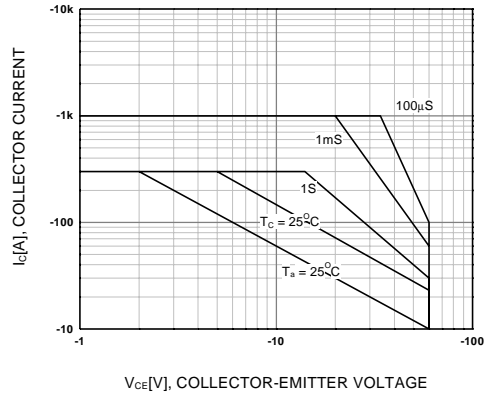
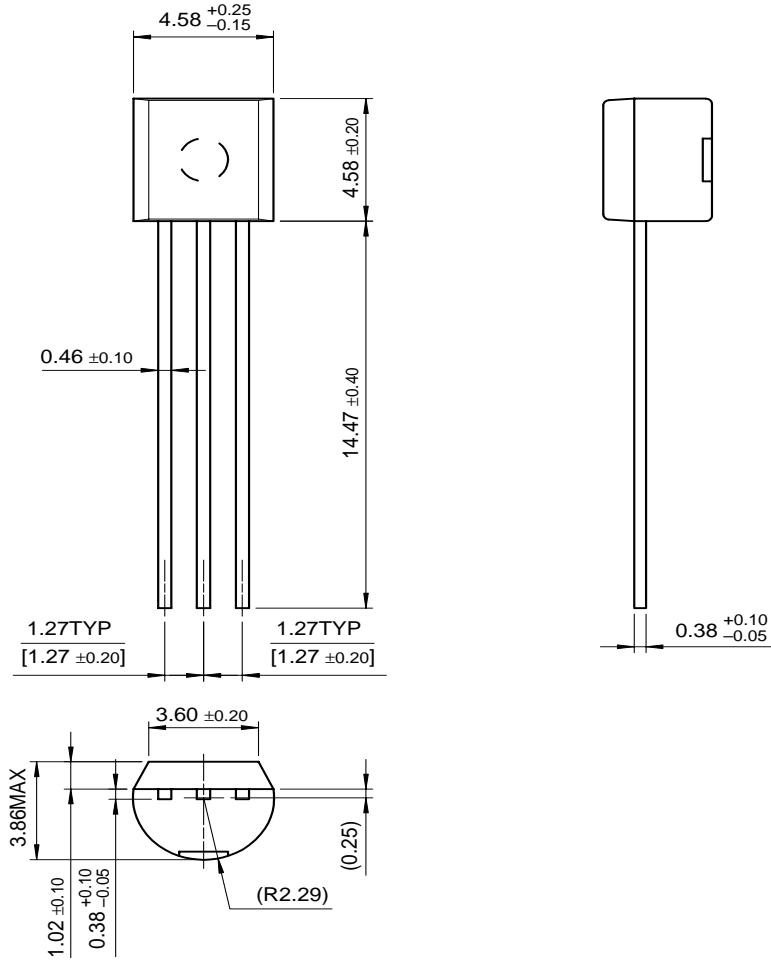


Figure 4. Safe Operating Area

Package Dimensions

TO-92



Dimensions in Millimeters

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