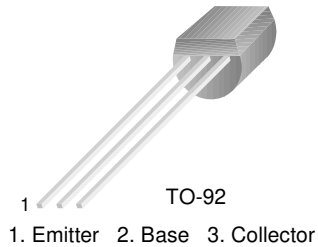


## KSP75/76/77

### 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

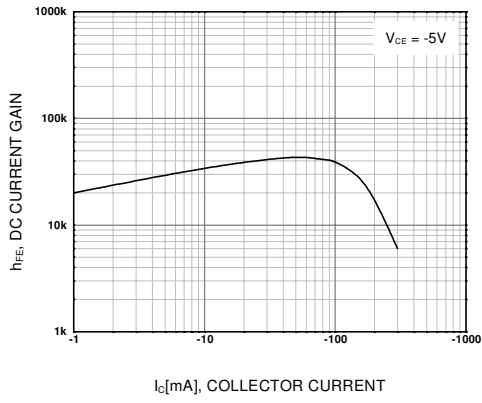


Figure 1. DC current Gain

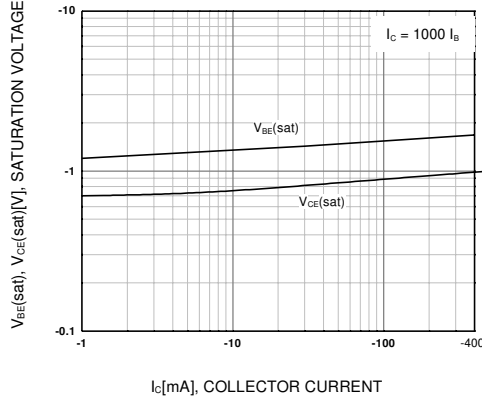


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

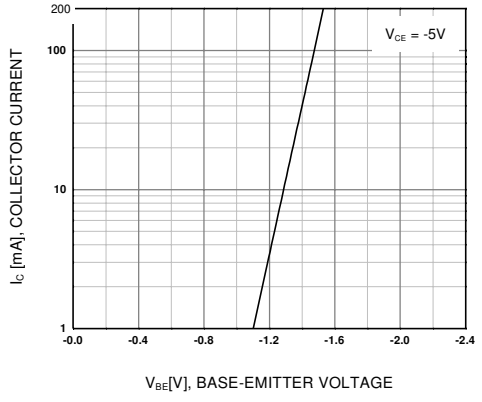


Figure 3. Base-Emitter On Voltage

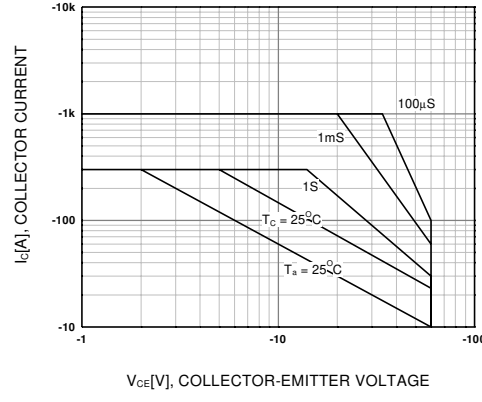
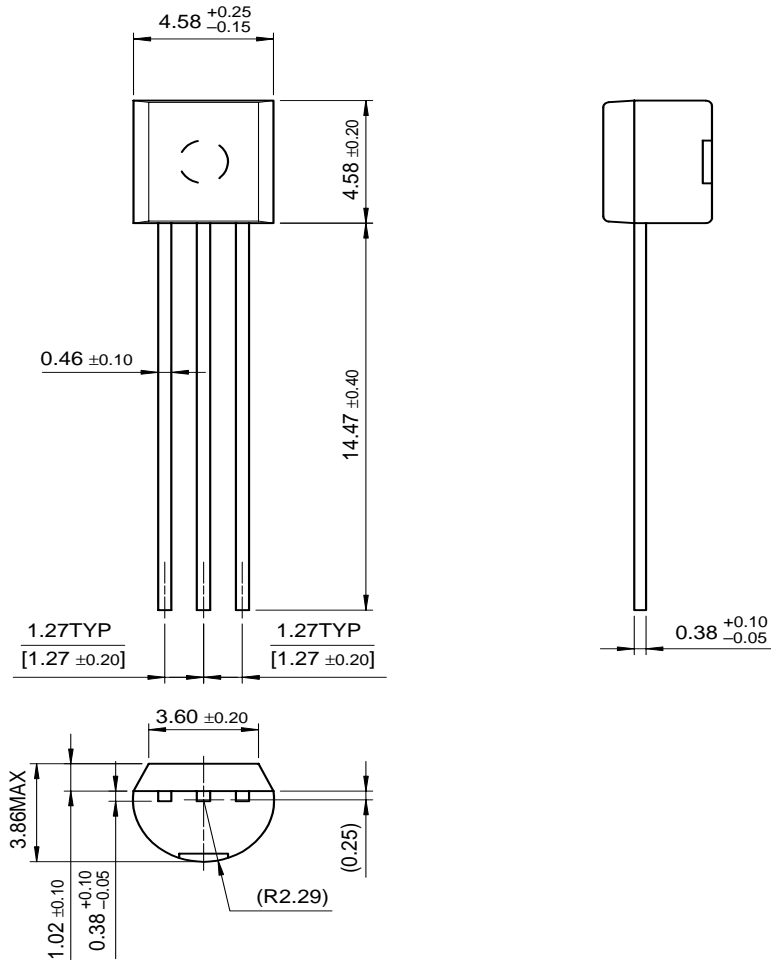


Figure 4. Safe Operating Area

# Package Dimensions

KSP75/76/77

## TO-92



Dimensions in Millimeters

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