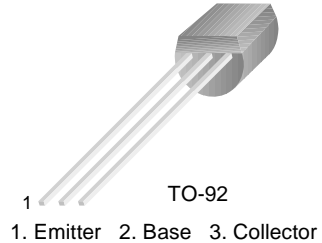




## KSP25/26/27

### Darlington Transistor

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



### NPN Epitaxial Silicon Darlington Transistor

#### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ 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	$^\circ\text{C}$
$T_{STG}$	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
$BV_{CES}$	Collector-Emitter Breakdown Voltage	$I_C=100\mu\text{A}, I_E=0$			
	: KSP25		40		V
	: KSP26		50		V
	: KSP27		60		V
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu\text{A}, I_E=0$			
	: KSP25		40		V
	: KSP26		50		V
	: KSP27		60		V
$I_{CBO}$	Collector Cut-off Current				
	: KSP25	$V_{CE}=30\text{V}, I_E=0$		100	nA
	: KSP26	$V_{CE}=40\text{V}, I_E=0$		100	nA
	: KSP27	$V_{CE}=50\text{V}, I_E=0$		100	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=10\text{V}, I_B=0$		100	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		
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C=100\text{mA}, I_B=0.1\text{mA}$		1.5	V
$V_{BE}(\text{on})$	* Base-Emitter On Voltage	$V_{CE}=5\text{V}, I_C=100\text{mA}$		2	V

\* Pulse Test:  $PW \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

# Typical Characteristics

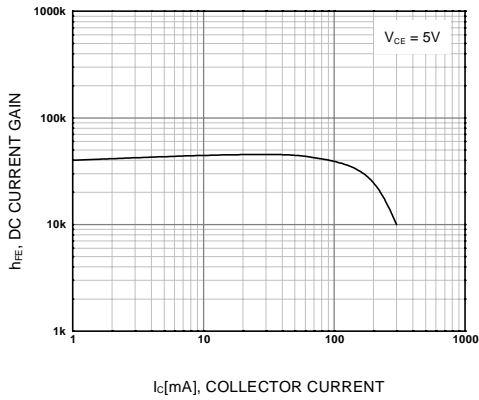


Figure 1. DC current Gain

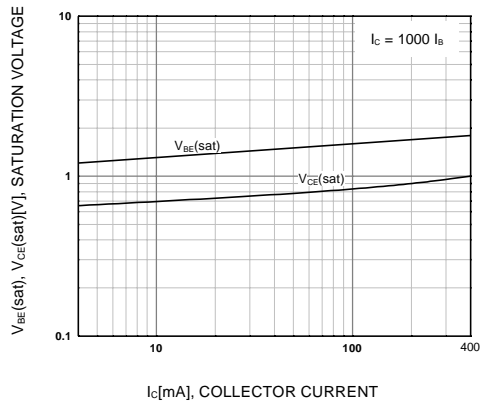


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

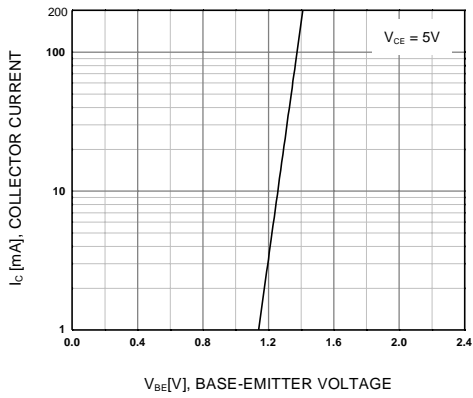


Figure 3. Base-Emitter On Voltage

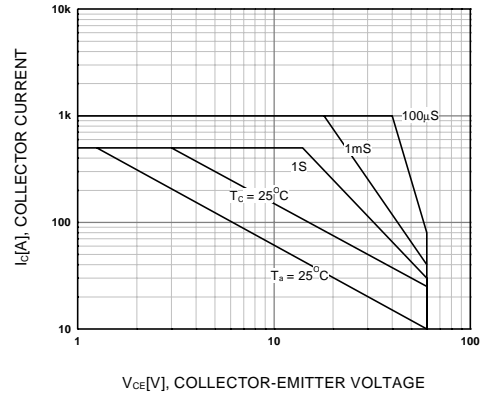
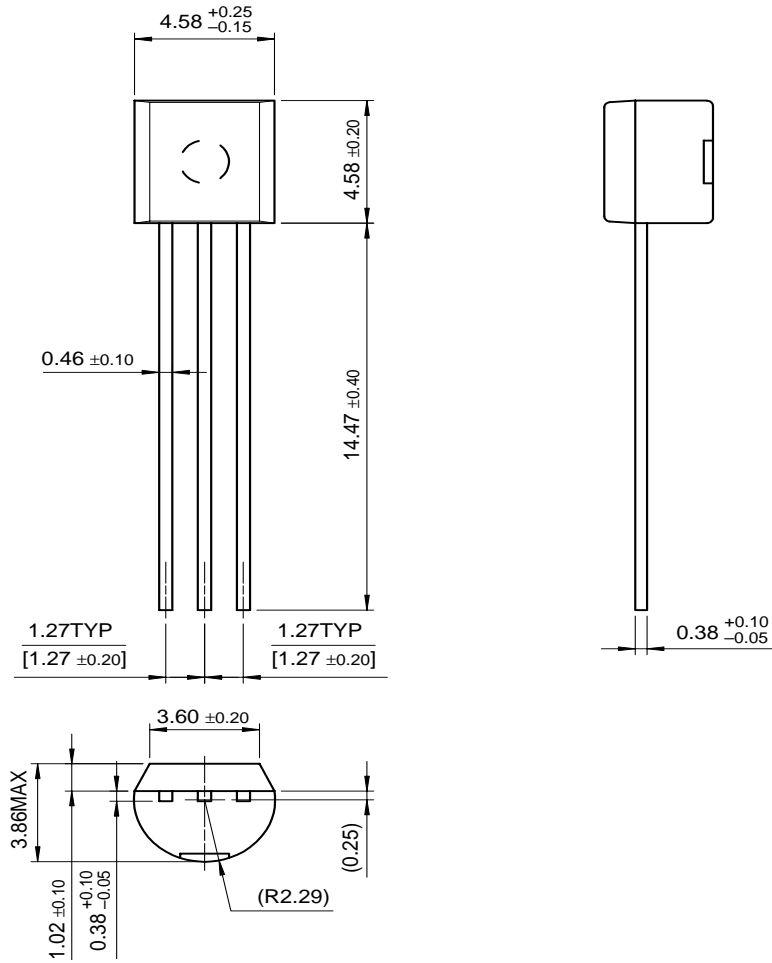


Figure 4. Safe Operating Area

# Package Dimensions

KSP25/26/27

## TO-92



Dimensions in Millimeters

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