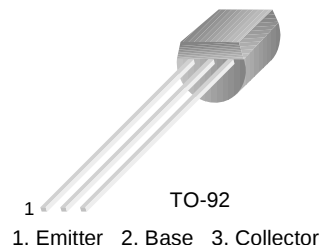


KSP25/26/27

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 Cycles $\leq 2\%$

Typical Characteristics

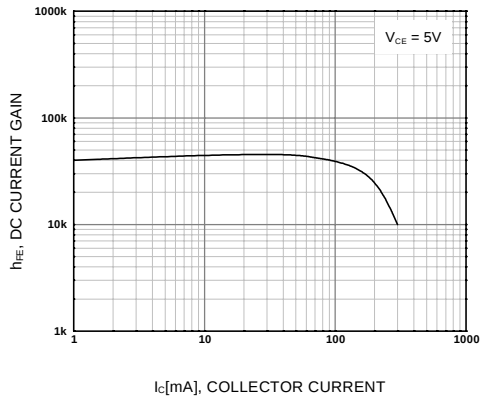


Figure 1. DC current Gain

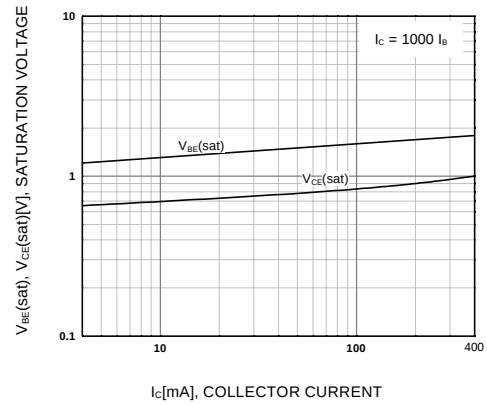


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

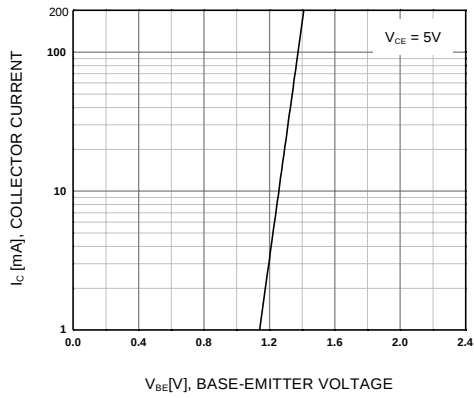


Figure 3. Base-Emitter On Voltage

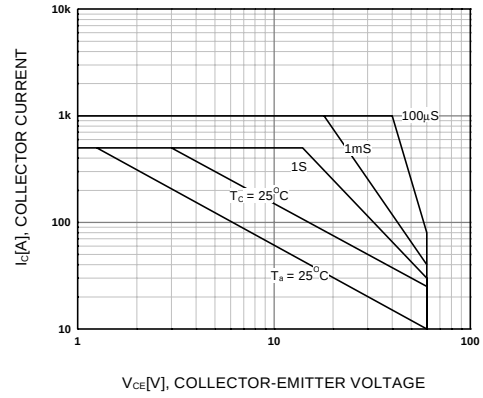


Figure 4. Safe Operating Area

Package Dimensions

TO-92



Dimensions in Millimeters

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