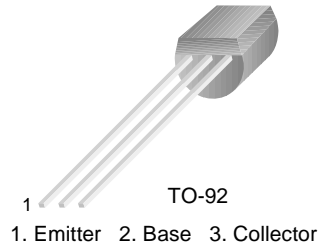


KSP12

Darlington Transistor

- Collector-Emitter Voltage: $V_{CES}=20V$
- Collector Power Dissipation: $P_C(\text{max})=625mW$



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	20	V
V_{EBO}	Emitter-Base Voltage	10	V
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.	Typ.	Max.	Units
BV_{CES}	Collector-Emitter Breakdown Voltage	$I_C=100\mu\text{A}, I_B=0$	20			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=15V, I_E=0$			100	nA
I_{CES}	Collector Cut-off Current	$V_{CE}=15V, I_B=0$			100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EC}=10V, I_C=0$			100	nA
h_{FE}	DC Current Gain	$V_{CE}=5V, I_C=10mA$	20K			
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=0.01mA$			1	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=5V, I_C=10mA$			1.4	V

Typical Characteristics

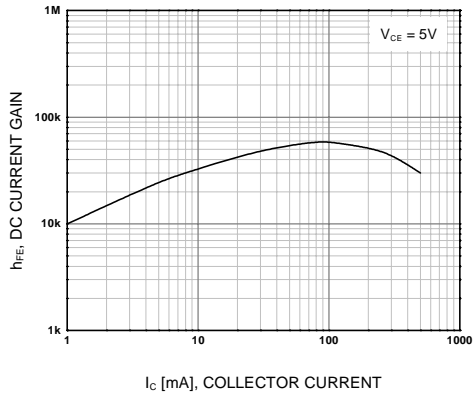


Figure 1. DC current Gain

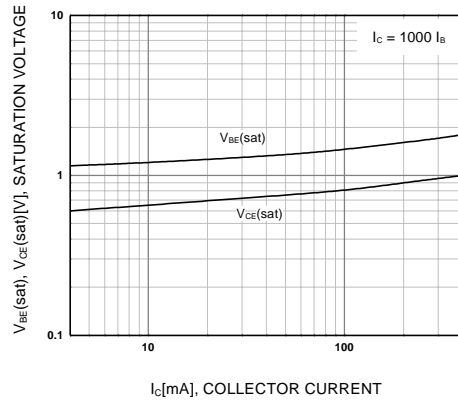


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

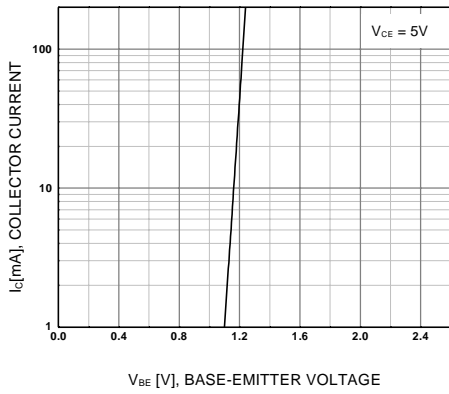


Figure 3. Base-Emitter On Voltage

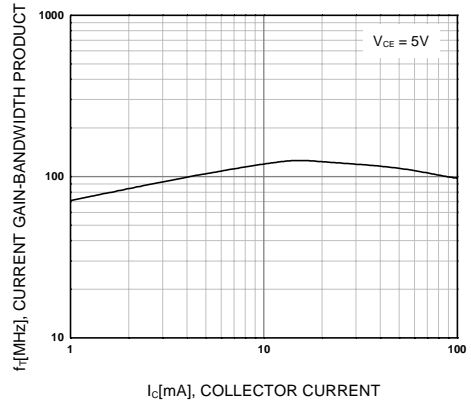


Figure 4. Current Gain Bandwidth Product

Package Dimensions

KSP12

TO-92



Dimensions in Millimeters

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