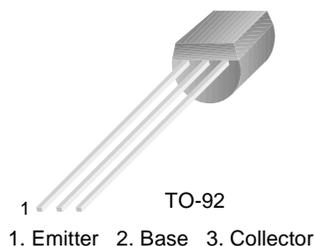


KSP05/06

Amplifier Transistor

- Collector-Emitter Voltage: V_{CE0} = KSP05: 60V
KSP06: 80V
- Collector Dissipation: P_C (max)=625mW
- Complement to KSP55/56



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector Base Voltage		
	: KSP05	60	V
	: KSP06	80	V
V_{CE0}	Collector-Emitter Voltage		
	: KSP05	60	V
	: KSP06	80	V
V_{EBO}	Emitter-Base Voltage	4	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_{CE0}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}, I_B=0$			
	: KSP05		60		V
	: KSP06		80		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\mu\text{A}, I_C=0$	4		V
I_{CBO}	Collector Cut-off Current				
	: KSP05	$V_{CB}=60\text{V}, I_E=0$		0.1	μA
	: KSP06	$V_{CB}=80\text{V}, I_E=0$		0.1	μA
I_{CEO}	Collector Cut-off Current	$V_{CE}=60\text{V}, I_B=0$		0.1	μA
h_{FE}	DC Current Gain	$V_{CE}=1\text{V}, I_C=10\text{mA}$	50		
		$V_{CE}=1\text{V}, I_C=100\text{mA}$	50		
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}, I_B=10\text{mA}$		0.25	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=1\text{V}, I_C=100\text{mA}$		1.2	V
f_T	Current Gain Bandwidth Product	$V_{CE}=2\text{V}, I_C=10\text{mA}$ $f=100\text{MHz}$	100		MHz

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

Typical Characteristics

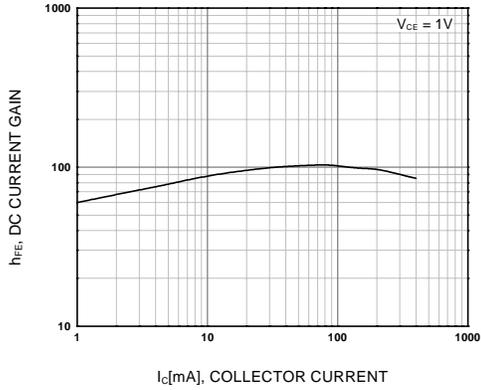


Figure 1. DC current Gain

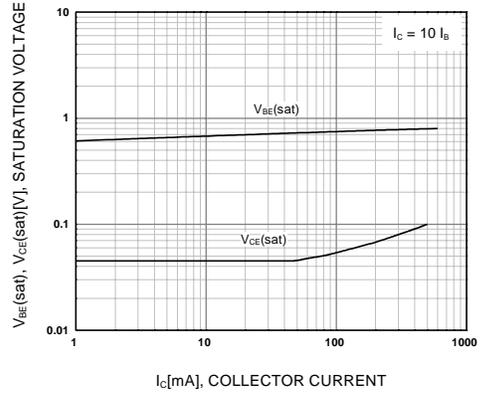


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

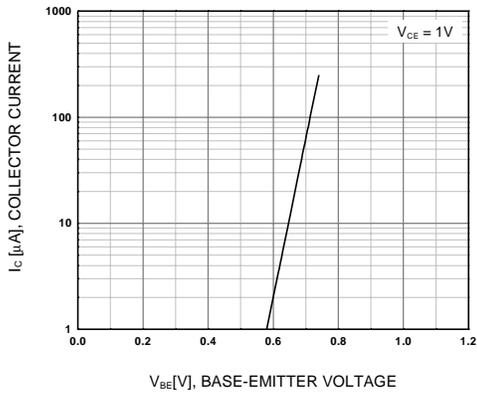


Figure 3. Base-Emitter On Voltage

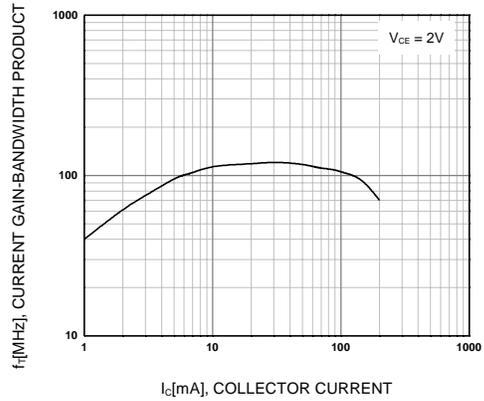
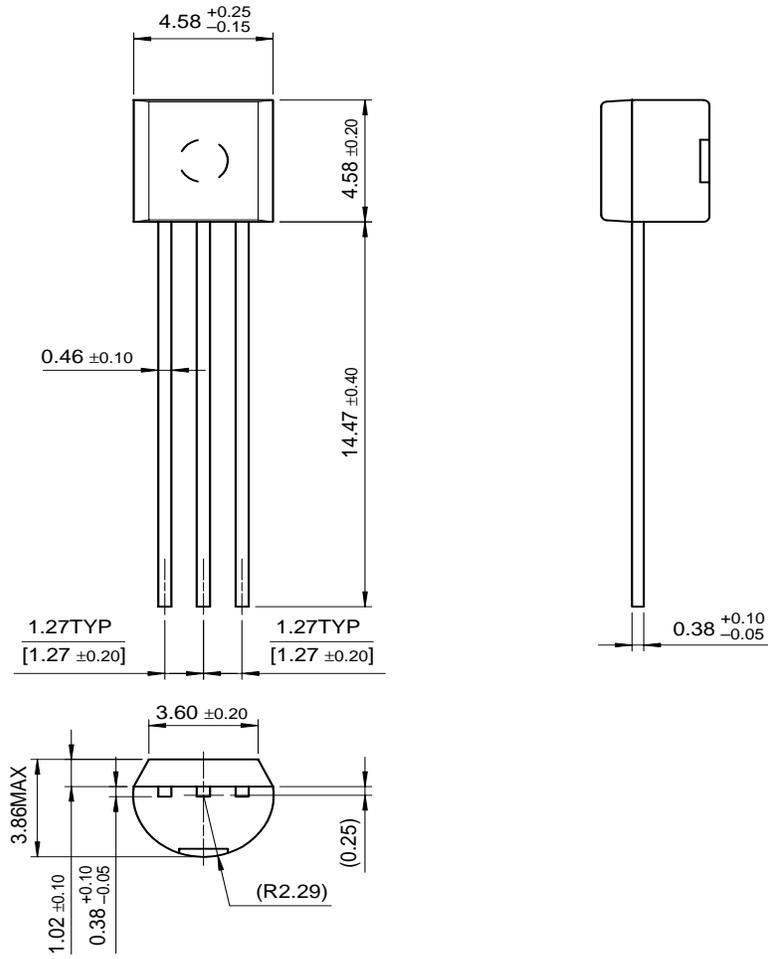


Figure 4. Current Gain Bandwidth Product

Package Dimensions

KSP05/06

TO-92



Dimensions in Millimeters

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