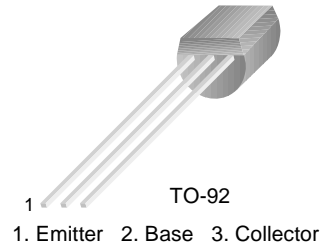


## KSP55/56

### Amplifier Transistor

- Collector-Emitter Voltage:  $V_{CEO}$ =KSP55: 60V  
KSP56: 80V
- Collector Power Dissipation:  $P_C$  (max) =625mW
- Complement to KSP05/06



### PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage		
	: KSP55	-60	V
	: KSP56	-80	V
$V_{CEO}$	Collector-Emitter Voltage		
	: KSP55	-60	V
	: KSP56	-80	V
$V_{CE0}$	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
$BV_{CEO}$	* Collector-Emitter Breakdown Voltage				
	: KSP55	$I_C = -1\text{mA}, I_B = 0$	-60		V
	: KSP56		-80		
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -100\mu\text{A}, I_C = 0$	-4		V
$I_{CBO}$	Collector Cut-off Current				
	: KSP55	$V_{CB} = -60\text{V}, I_E = 0$		-0.1	$\mu\text{A}$
	: KSP56	$V_{CB} = -80\text{V}, I_E = 0$		-0.1	$\mu\text{A}$
$I_{CEO}$	Collector Cut-off Current	$V_{CE} = -60\text{V}, I_B = 0$		-0.1	$\mu\text{A}$
$h_{FE}$	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	$V_{CE} = -2\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	50		MHz

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

# Typical Characteristics

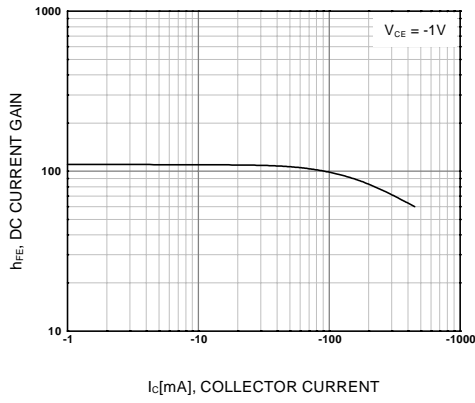


Figure 1. DC current Gain

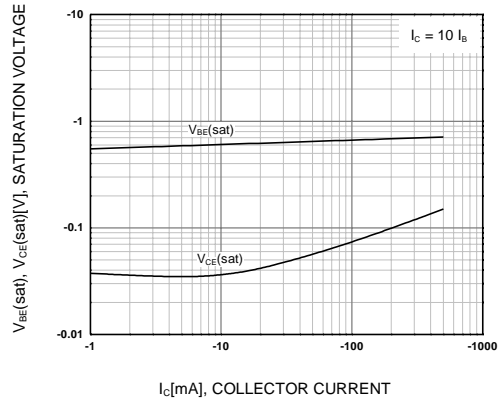


Figure 2. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

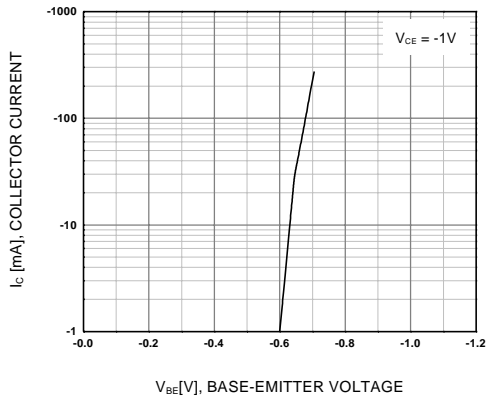


Figure 3. Base-Emitter On Voltage

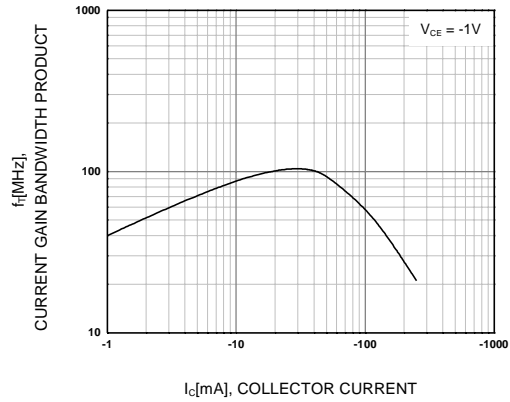


Figure 4. Current Gain Bandwidth Product

# Package Dimensions

KSP55/56

## TO-92



Dimensions in Millimeters

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