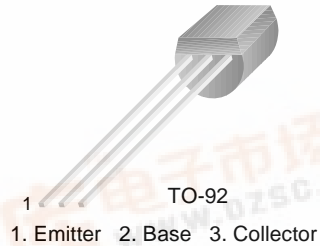


FAIRCHILD
SEMICONDUCTOR®

KSP55/56

Amplifier Transistor

- Collector-Emitter Voltage: V_{CE0} =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
		: KSP56	-80
V_{CEO}	Collector-Emitter Voltage	: KSP55	-60
		: KSP56	-80
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	$I_C = -1\text{mA}, I_B = 0$	-60		V
			-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	$V_{CB} = -60\text{V}, I_E = 0$ $V_{CB} = -80\text{V}, I_E = 0$		-0.1	μA
				-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	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$ $V_{CE} = -1\text{V}, I_C = -100\text{mA}$	50	50	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-0.25	V
$V_{BE(on)}$	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

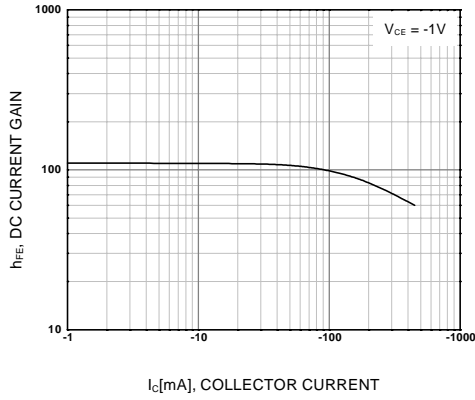


Figure 1. DC current Gain

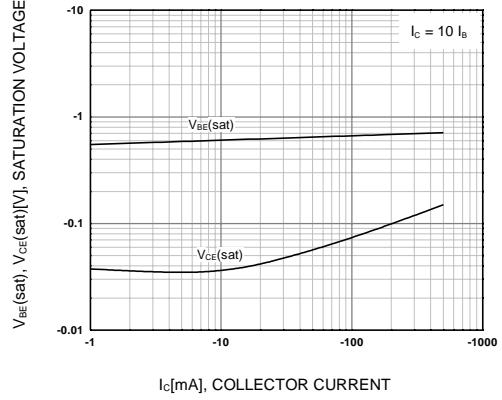


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

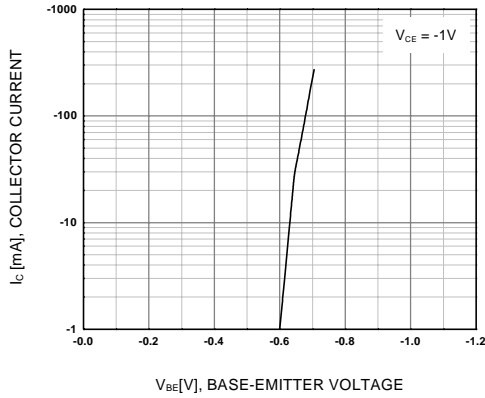


Figure 3. Base-Emitter On Voltage

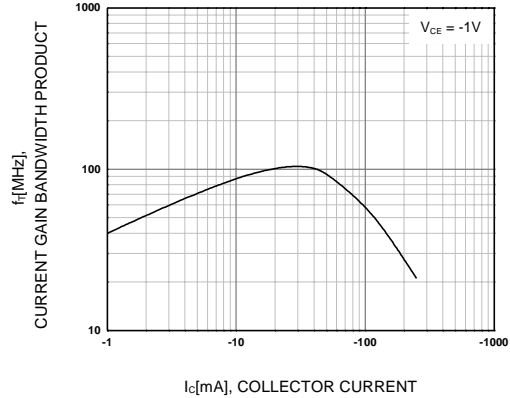
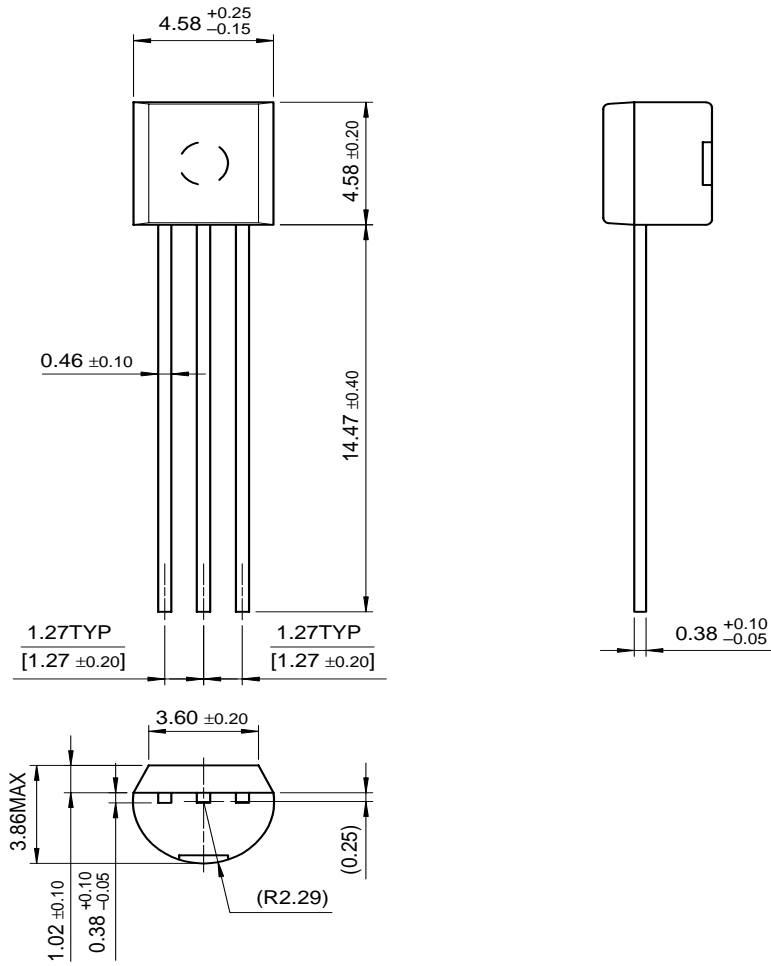


Figure 4. Current Gain Bandwidth Product

Package Dimensions

KSP55/56

TO-92



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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