

PNP Epitaxial Silicon Transistor

KSP55

Features

- Collector–Emitter Voltage: $V_{CEO} = \text{KSP55: } -60 \text{ V}$
- Collector Dissipation: $P_C (\text{Max.}) = 625 \text{ mW}$
- Complement to KSP05/06
- This is a Pb–Free Device



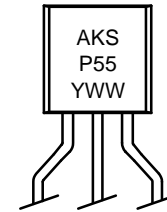
TO–92 3 4.83x4.76 LEADFORMED CASE 135AR

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$, unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector–Base Voltage	–60	V
V_{CEO}	Collector–Emitter Voltage	–60	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 to 150	$^\circ\text{C}$

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

MARKING DIAGRAM



KSP55 = Specific Device Code
A = Assembly Site
WW = Work Week Number
Y = Year of Production

ORDERING INFORMATION

Device	Package	Packing Method
KSP55TA	TO–92 3L	Ammo

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Condition	Min	Max	Unit
BV_{CEO}	Collector–Emitter Breakdown Voltage (Note 1)	$I_C = -1 \text{ mA}, I_B = 0$	–60	–	V
BV_{EBO}	Emitter–Base Breakdown Voltage	$I_E = -100 \text{ mA}, I_C = 0$	–4	–	V
I_{CBO}	Collector Cut–Off Current	$V_{CB} = -60 \text{ V}, I_E = 0$	–	–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	$V_{CE} = -2 \text{ V}, I_C = -10 \text{ mA}, f = 100 \text{ MHz}$	105	–	MHz

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. Pulse test: pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2\%$.

TYPICAL PERFORMANCE CHARACTERISTICS

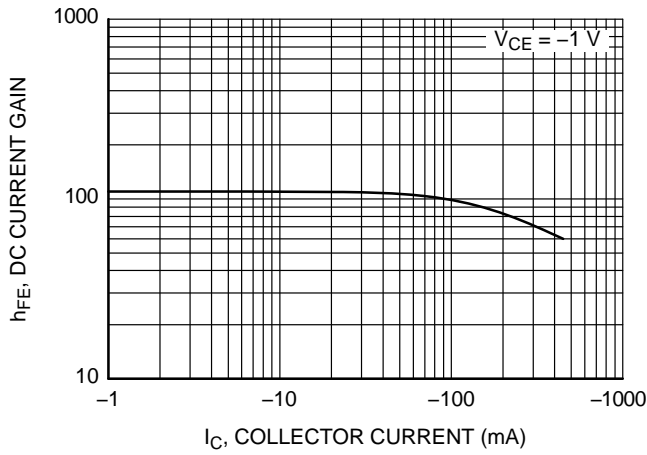


Figure 1. DC Current Gain

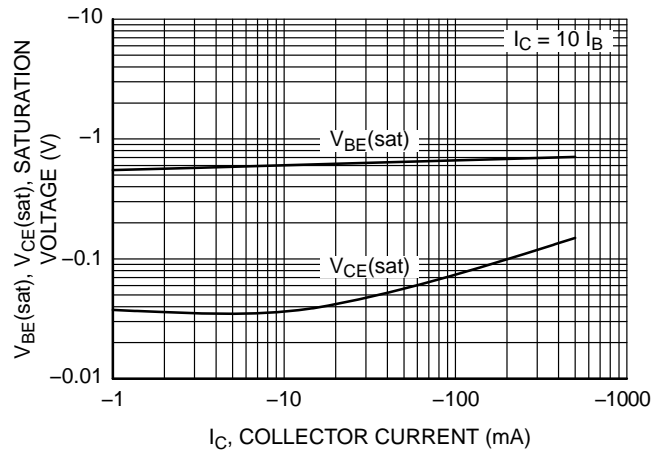


Figure 2. Collector-Emitter Saturation Voltage and Base-Emitter Saturation Voltage

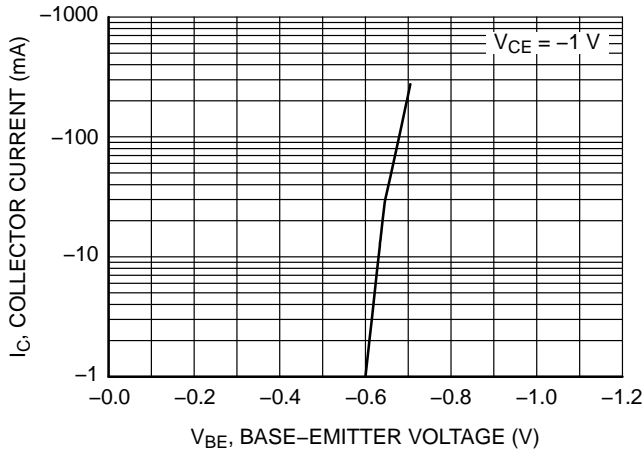


Figure 3. Base-Emitter On Voltage

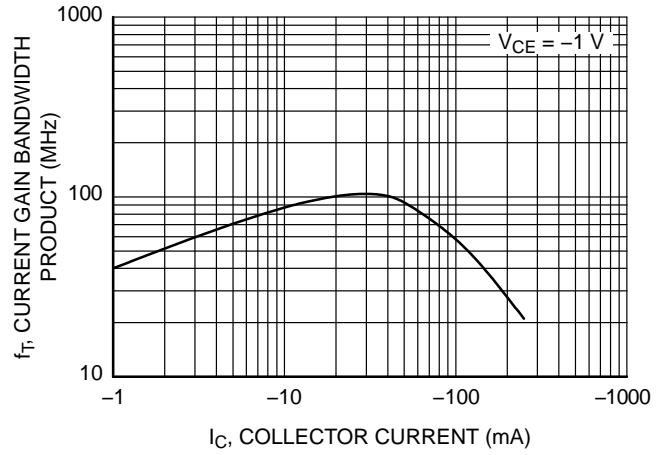
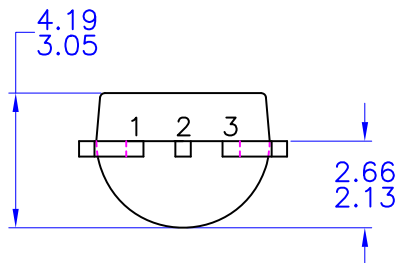
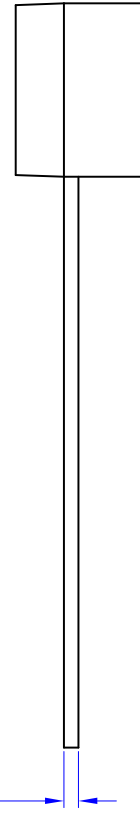
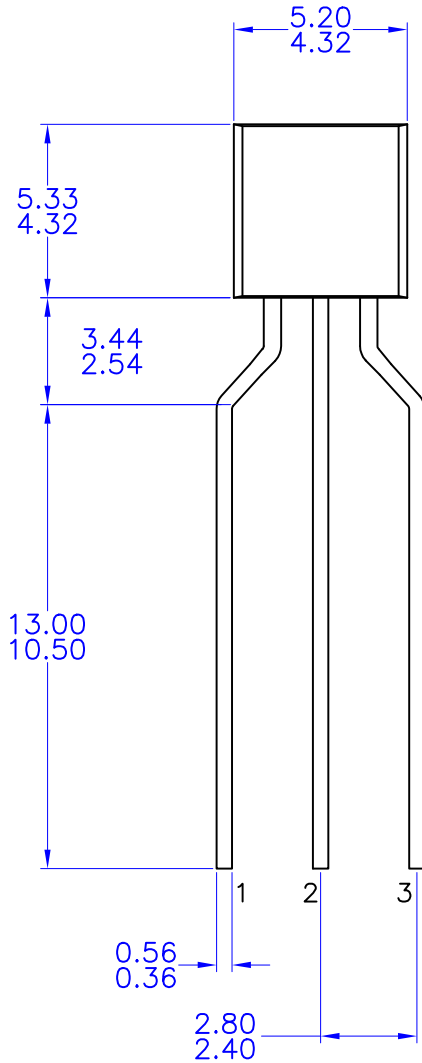


Figure 4. Current Gain Bandwidth Product

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NOTES: UNLESS OTHERWISE SPECIFIED

- A) DRAWING WITH REFERENCE TO JEDEC TO-92 RECOMMENDATIONS.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DRAWING CONFORMS TO ASME Y14.5M-1994

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