PNP Epitaxial Silicon Transistor

KSP55

1. Emitter
2. Base
3. Collector

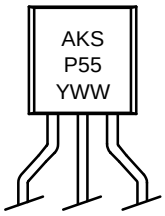
Bent Lead
Tape & Reel
Ammo Packing

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

Features

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

MARKING DIAGRAM



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

ABSOLUTE MAXIMUM RATINGS (T_A = 25°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	°C
T_{STG}	Storage Temperature	−55 to 150	°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.

ORDERING INFORMATION

Device	Package	Packing Method
KSP55TA	TO−92 3L	Ammo

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Test Condition	Min	Max	Unit
BV_{CEO}	Collector−Emitter Breakdown Voltage (Note 1)	I_C = −1 mA, I_B = 0	−60	−	V
BV_{EBO}	Emitter−Base Breakdown Voltage	I_E = −100 mA, I_C = 0	−4	−	V
I_{CBO}	Collector Cut−Off Current	V_{CB} = −60 V, I_E = 0	−	−0.1	μA
I_{CEO}	Collector Cut−Off Current	V_{CE} = −60 V, I_B = 0	−	−0.1	μA
h_{FE}	DC Current Gain	V_{CE} = −1 V, I_C = −10 mA	50	−	
		V_{CE} = −1 V, I_C = −100 mA	50	−	
V_{CE}(sat)	Collector−Emitter Saturation Voltage	I_C = −100 mA, I_B = −10 mA	−	−0.25	V
V_{BE}(on)	Base−Emitter On Voltage	V_{CE} = −1 V, I_C = −100 mA	−	−1.2	V
f_T	Current Gain Bandwidth Product	V_{CE} = −2 V, I_C = −10 mA, f = 100 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 ≤ 300 μs, duty cycle ≤ 2%.

TYPICAL PERFORMANCE CHARACTERISTICS

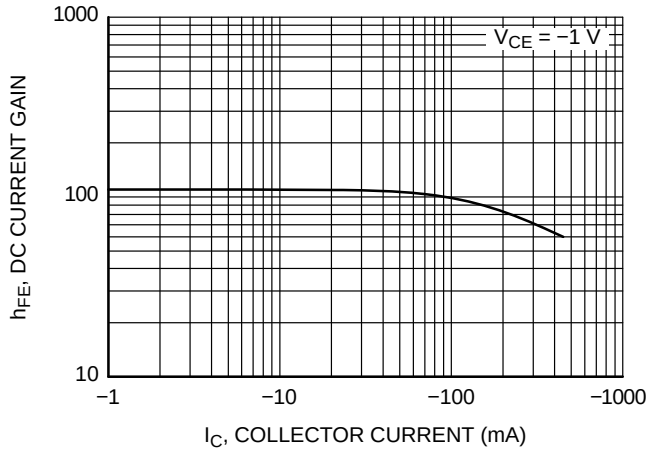


Figure 1. DC Current Gain

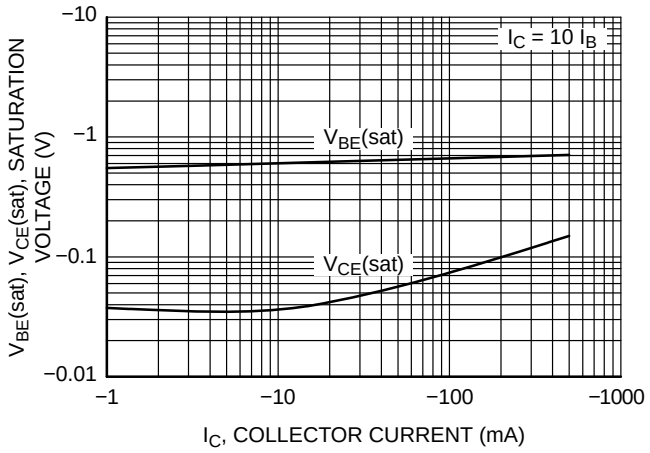


Figure 2. Collector−Emitter Saturation Voltage and Base−Emitter Saturation Voltage

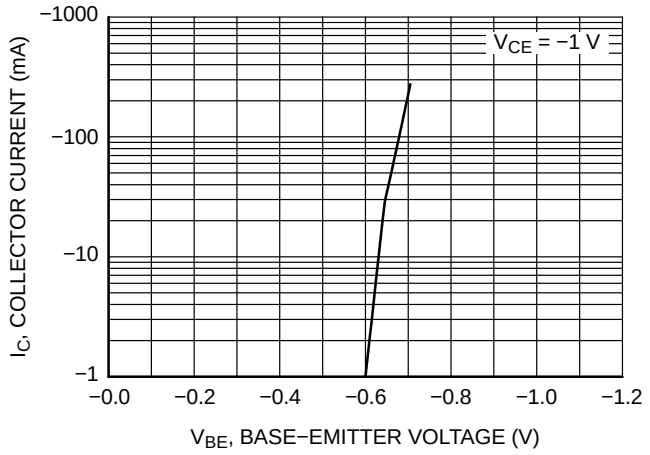


Figure 3. Base−Emitter On Voltage

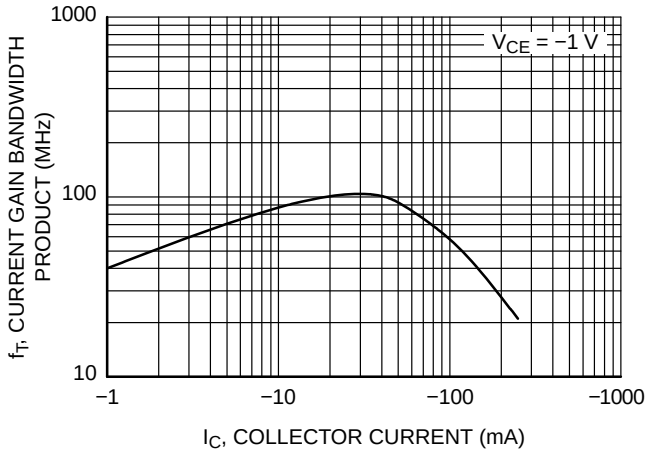


Figure 4. Current Gain Bandwidth Product

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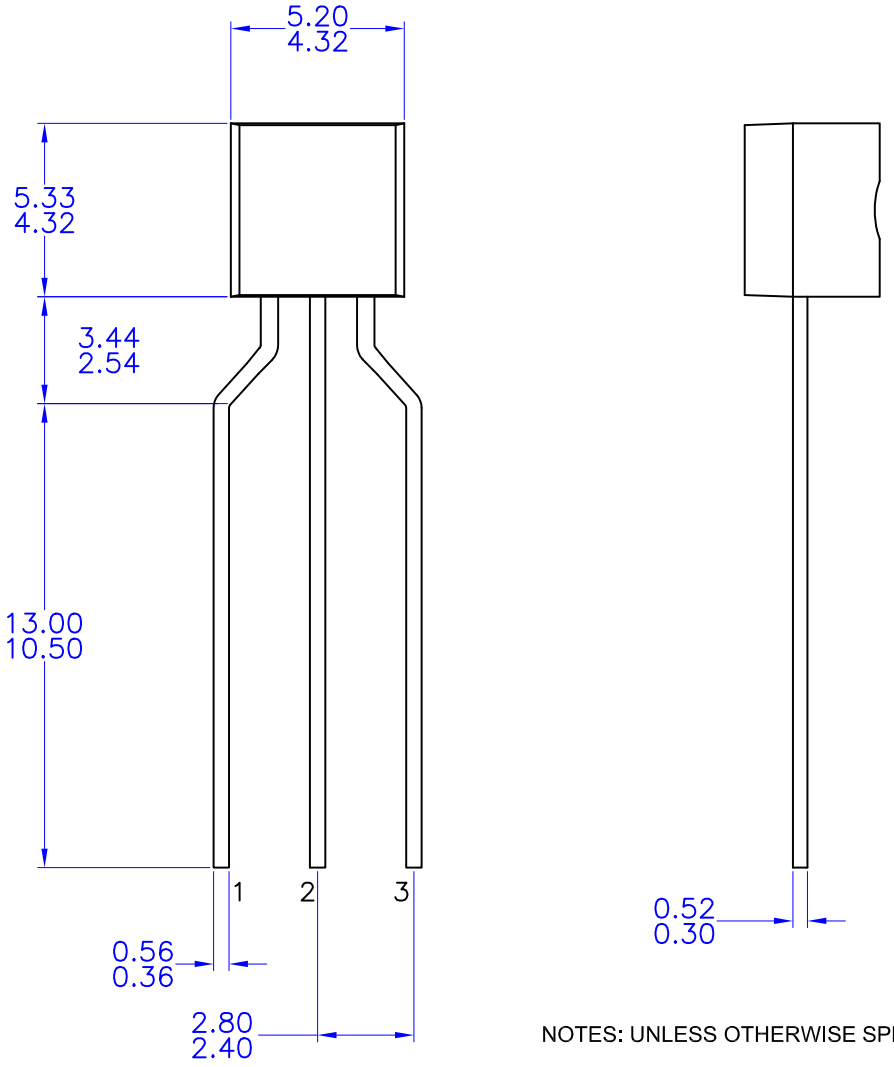

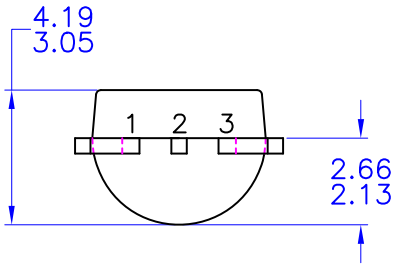

NOTES: UNLESS OTHERWISE SPECIFIED

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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