# KSA733YBU Datasheet


| | |
|---|---|
| DiGi Electronics Part Number | KSA733YBU-DG |
| Manufacturer | onsemi |
| Manufacturer Product Number | KSA733YBU |
| Description | TRANS PNP 50V 0.15A TO92-3 |
| Detailed Description | Bipolar (BJT) Transistor PNP 50 V 150 mA 180MHz 2 50 mW Through Hole TO-92-3 |

https://www.DiGi-Electronics.com

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RFQ Email: Info@DiGi-Electronics.com

## Purchase and inquiry

| Manufacturer Product Number: | Manufacturer: |
| --- | --- |
| KSA733YBU | onsemi |
| Series: | Product Status: |
| - | Obsolete |
| Transistor Type: | Current - Collector (Ic) (Max): |
| PNP | 150 mA |
| Voltage - Collector Emitter Breakdown (Max): | Vce Saturation (Max) @ Ib, Ic: |
| 50 V | 300mV @ 10mA, 100mA |
| Current - Collector Cutoff (Max): | DC Current Gain (hFE) (Min) @ Ic, Vce: |
| 100nA (ICBO) | 120 @ 1mA, 6V |
| Power - Max: | Frequency - Transition: |
| 250 mW | 180MHz |
| Operating Temperature: | Mounting Type: |
| 150°C (TJ) | Through Hole |
| Package / Case: | Supplier Device Package: |
| TO-226-3, TO-92-3 (TO-226AA) | TO-92-3 |
| Base Product Number: | |
| KSA733 | |

## Environmental & Export classification

| Moisture Sensitivity Level (MSL): | REACH Status: |
| --- | --- |
| 1 (Unlimited) | REACH Unaffected |
| ECCN: | HTSUS: |
| EAR99 | 8541.21.0075 |


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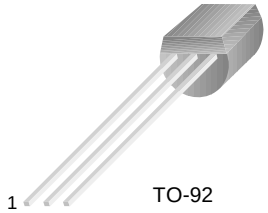
# KSA733

## Low Frequency Amplifier

- Collector-Base Voltage : $V_{CBO}$= -60V
- Complement to KSC945
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)




TO-92

1. Emitter 2. Base 3. Collector

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -60 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -50 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5 | V |
| $I_C$ | Collector Current | -150 | mA |
| $P_C$ | Collector Power Dissipation | 250 | mW |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | -55 ~ 150 | °C |

### Electrical Characteristics $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $BV_{CBO}$ | Collector-Base Breakdown Voltage | $I_C$= -100μA, $I_E$=0 | -60 | | | V |
| $BV_{CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -10mA. $I_B$=0 | -50 | | | V |
| $BV_{EBO}$ | Emitter-Base Breakdown Voltage | $I_E$ = -10μA. $I_C$=0 | - 5 | | | V |
| $I_{CBO}$ | Collector Cut-off Current | $V_{CB}$= --60V, $I_E$=0 | | | -100 | nA |
| $I_{EBO}$ | Emitter Cut-off Current | $V_{EB}$= -5V, $I_C$=0 | | | -100 | nA |
| $h_{FE}$ | DC Current Gain | $V_{CE}$= -6V, $I_C$= -1mA | 40 | | 700 | |
| $V_{CE}$ (sat) | Collector-Emitter Saturation Voltage | $I_C$= -100mA, $I_B$= -10mA | | -0.18 | -0.3 | V |
| $V_{BE}$ (on) | Base-Emitter On Voltage | $V_{CE}$= -6V, $I_C$= -1mA | -0.50 | -0.62 | -0.80 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$= -6V, $I_C$= -10mA | 50 | 180 | | MHz |
| $C_{ob}$ | Output Capacitance | $V_{CB}$= -10V, $I_E$ = 0, f=1MHz | | 2.8 | | pF |
| NF | Noise Figure | $V_{CE}$= -6V, $I_C$= -0.3mA<br>f=1MHz, Rs=10kΩ | | 6.0 | 20 | dB |

### $h_{FE}$ Classification

| Classification | R | O | Y | G | L |
|---|---|---|---|---|---|
| $h_{FE}$ | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 | 200 ~ 400 | 350 ~ 700 |

# Typical Characteristics

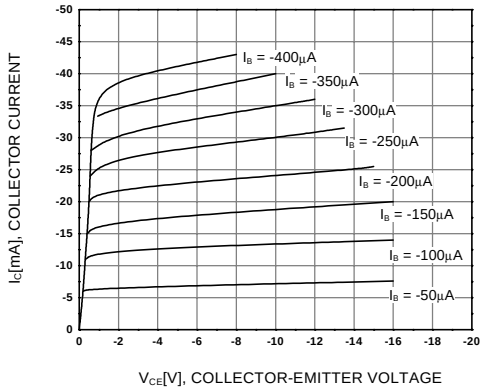



**Figure 1. Static Characteristic**

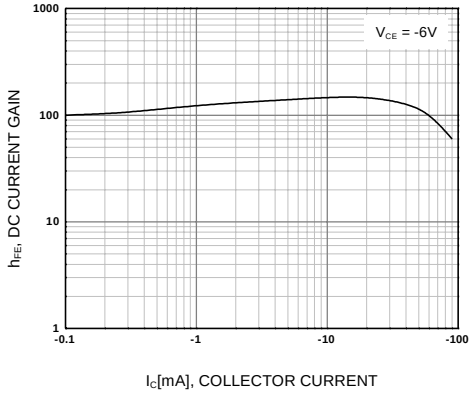



**Figure 2. DC current Gain**

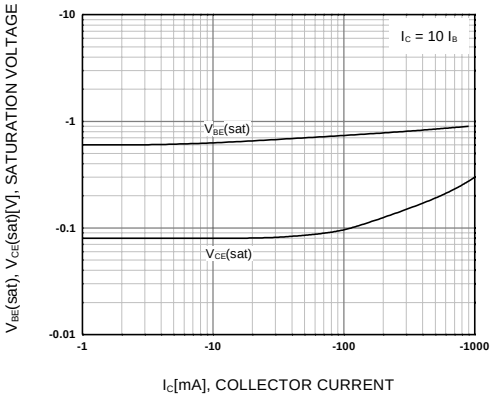



**Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage**

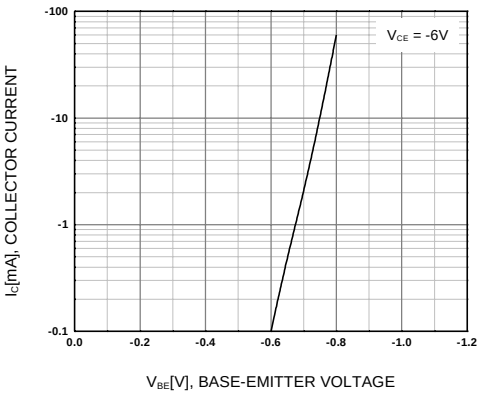



**Figure 4. Base-Emitter On Voltage**

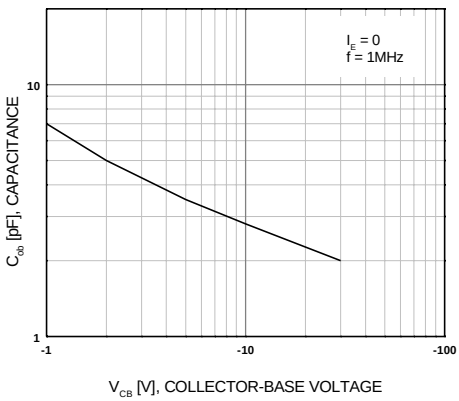



**Figure 5. Collector Output Capacitance**

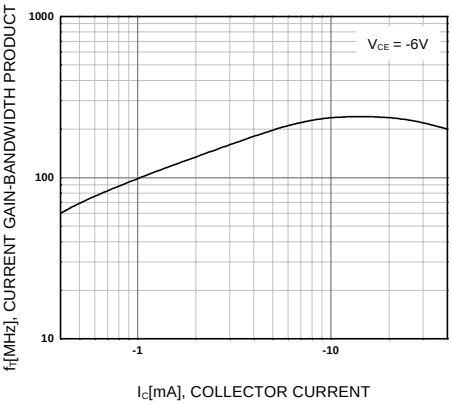
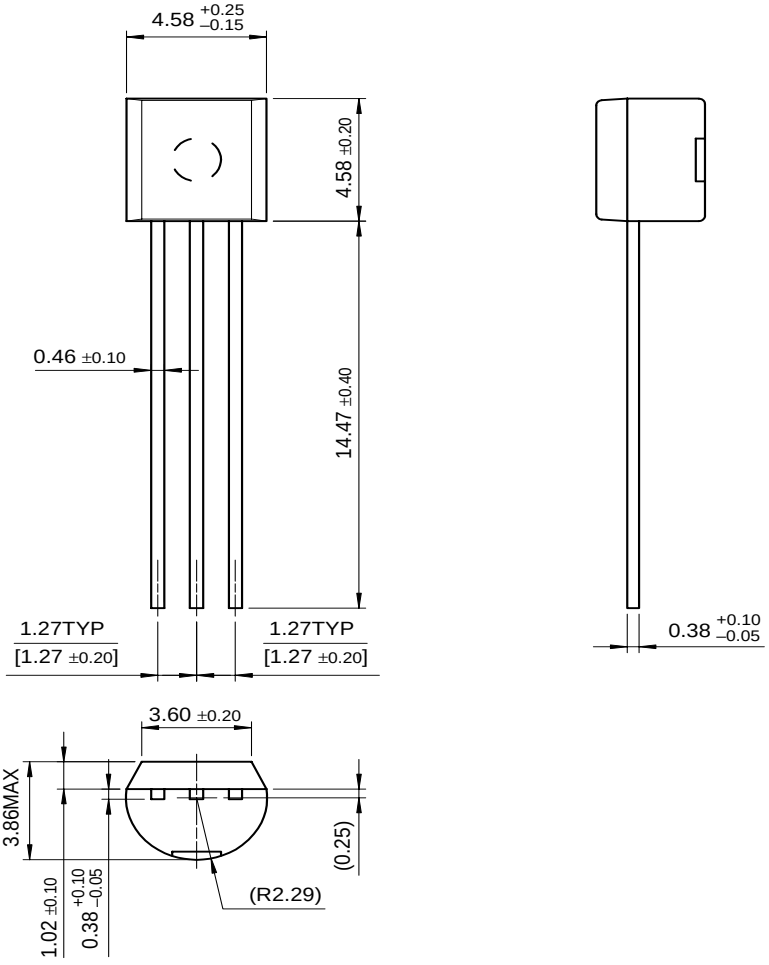



**Figure 6. Current Gain Bandwidth Product**

## Package Dimensions

TO-92




Dimensions in Millimeters

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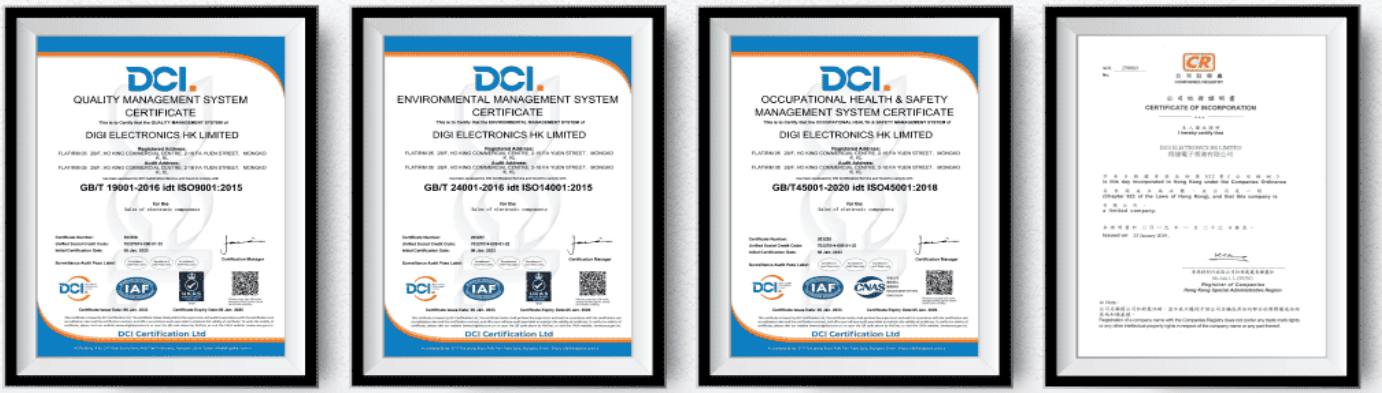



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