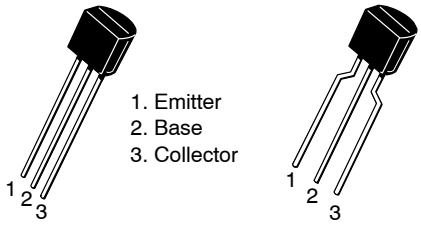
NPN Epitaxial Silicon Transistor

KSD471A



TO−92 3
CASE 135AN

TO−92 3 LF
CASE 135AR

Features

- Audio Frequency Power Amplifier
- Complementary to KSB1151
- Collector Current: I_C = 1 A
- Collector Power Dissipation: P_C = 800 mW
- Suffix "−C" means Center Collector (1. Emitter 2. Collector 3. Base)

MARKING DIAGRAM

A = Assembly Code
D471AY = Device Code
YWW = Data Code

ORDERING INFORMATION

See detailed ordering and shipping information on page 3 of this data sheet.

NOTE: Some of the devices on this data sheet have been **DISCONTINUED**. Please refer to the table on page 3.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector−Base Voltage	40	V
V_{CEO}	Collector−Emitter Voltage	30	V
V_{EBO}	Emitter−Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	800	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.

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

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
BV_{CBO}	Collector−Base Breakdown Voltage	I_C = 100 μA, I_E = 0	40	–	–	V
BV_{CEO}	Collector−Emitter Breakdown Voltage	I_C = 10 mA, I_B = 0	30	–	–	V
BV_{EBO}	Emitter−Base Breakdown Voltage	I_E = 100 μA, I_C = 0	5	–	–	V
I_{CBO}	Collector Cut−off Current	V_{CB} = 30 V, I_E = 0	–	–	0.1	μA
h_{FE}	DC Current Gain	V_{CE} = 1 V, I_C = 100 mA	120	–	240	–
V_{CE}(sat)	Collector−Emitter Saturation Voltage	I_C = 1 A, I_B = 0.1 A	–	–	0.5	V
V_{BE}(sat)	Base−Emitter Saturation Voltage	I_C = 1 A, I_B = 0.1 A	–	–	1.2	V
f_T	Current Gain BandWidth Product	V_{CE} = 6 V, I_C = 10 mA	–	130	–	MHz
C_{ob}	Output Capacitance	V_{CB} = 6 V, I_E = 0, f = 1 MHz	–	16	–	pF

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.

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TYPICAL CHARACTERISTICS

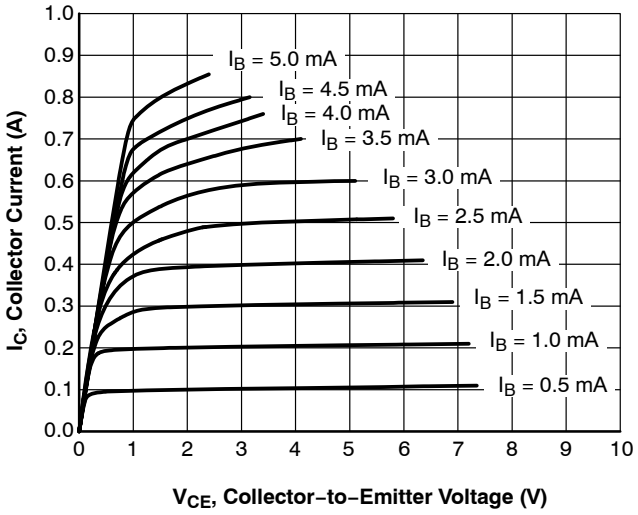


Figure 1. Static Characteristic

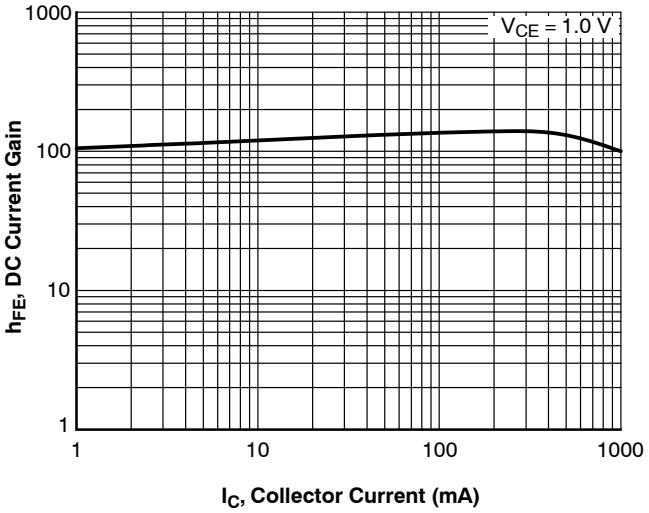


Figure 2. DC Current Gain

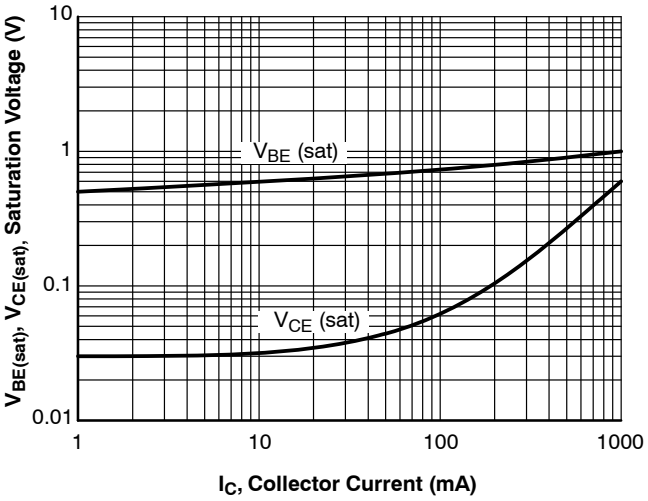


Figure 3. Base−Emitter Saturation Voltage Collector−Emitter Saturation Voltage

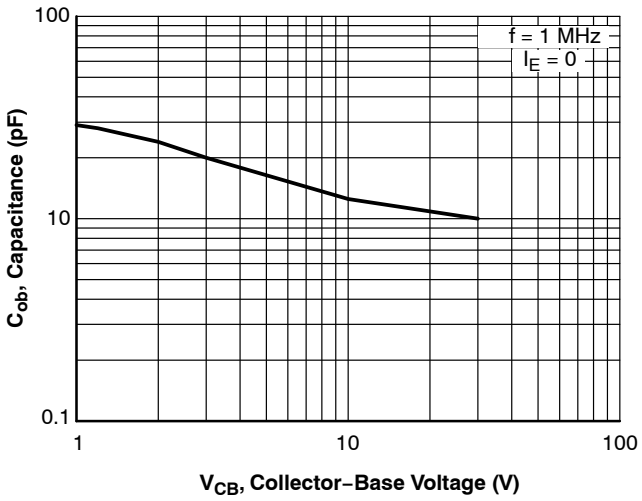


Figure 4. Collector Output Capacitance

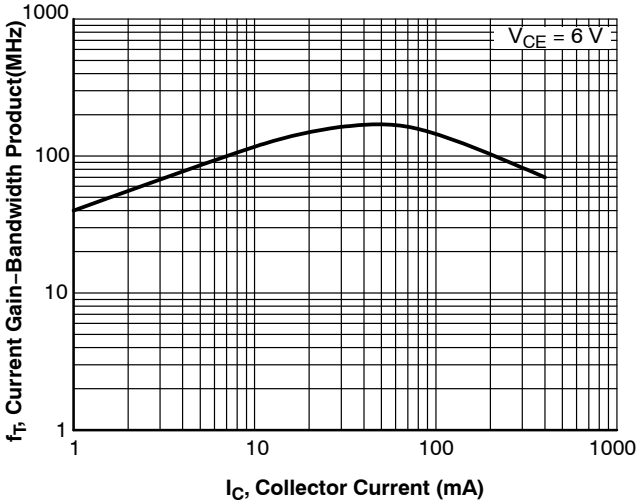


Figure 5. Current Gain Bandwidth Product

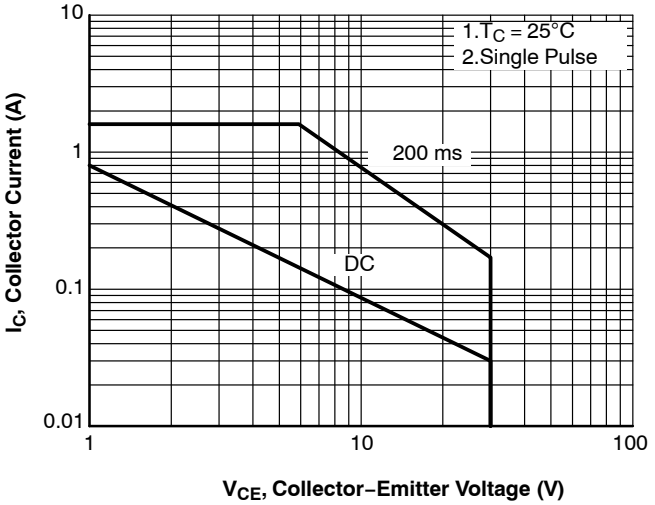


Figure 6. Safe Operating Area

ORDERING INFORMATION

Device	Package	Shipping
KSD471ACYTA	TO−92−3 (Pb−Free)	10000 BLKBG
KSD471AYTA	TO−92−3LF (Pb−Free)	2000 FNFLD

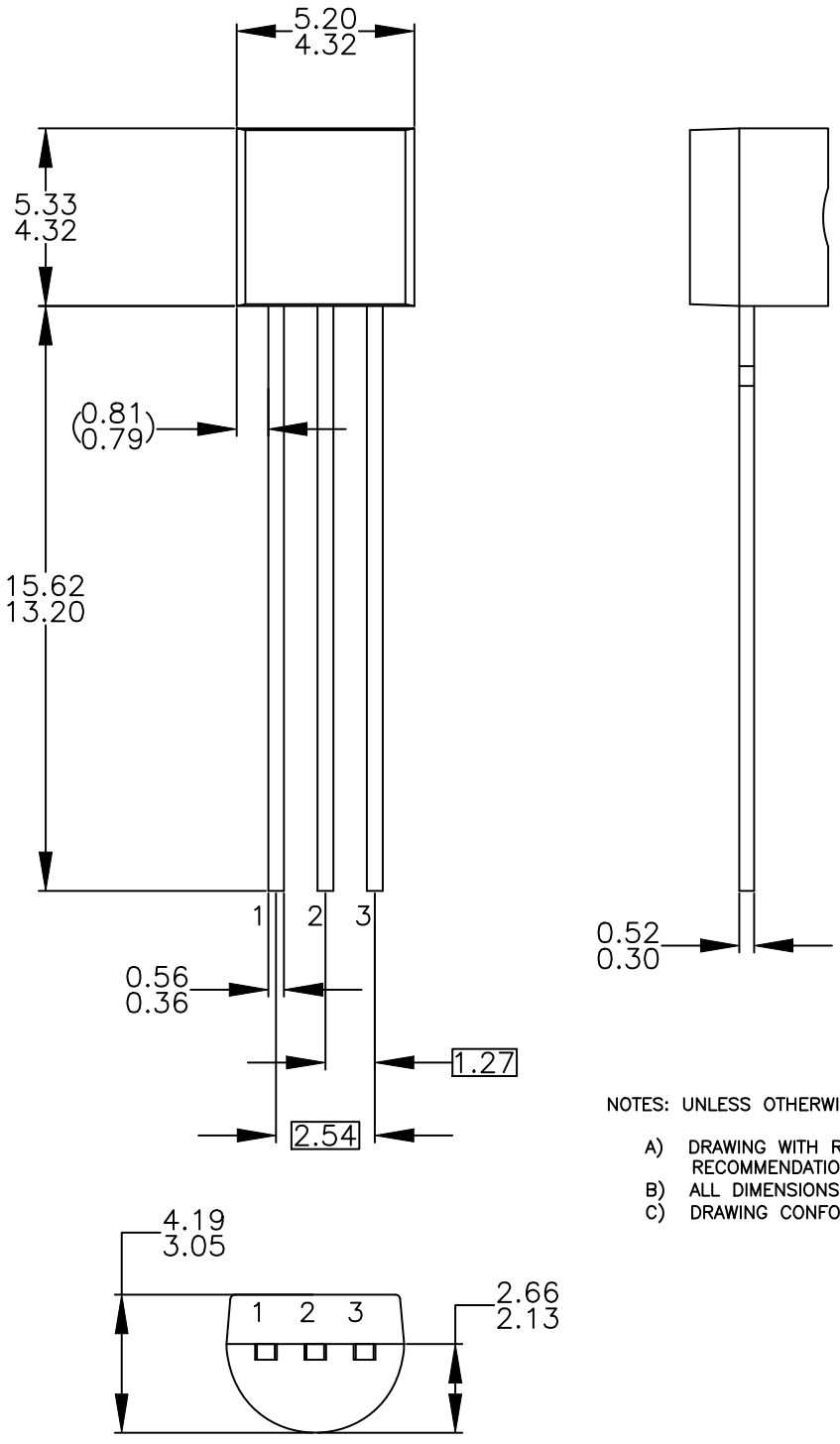
DISCONTINUED (Note 1)

KSD471ACYBU	TO−92−3LF (Pb−Free)	2000 FNFLD

1. **DISCONTINUED:** This device is not recommended for new design. Please contact your **onsemi** representative for information. The most current information on this device may be available on www.onsemi.com.

TO−92 3 4.825x4.76
CASE 135AN
ISSUE O

DATE 31 JUL 2016



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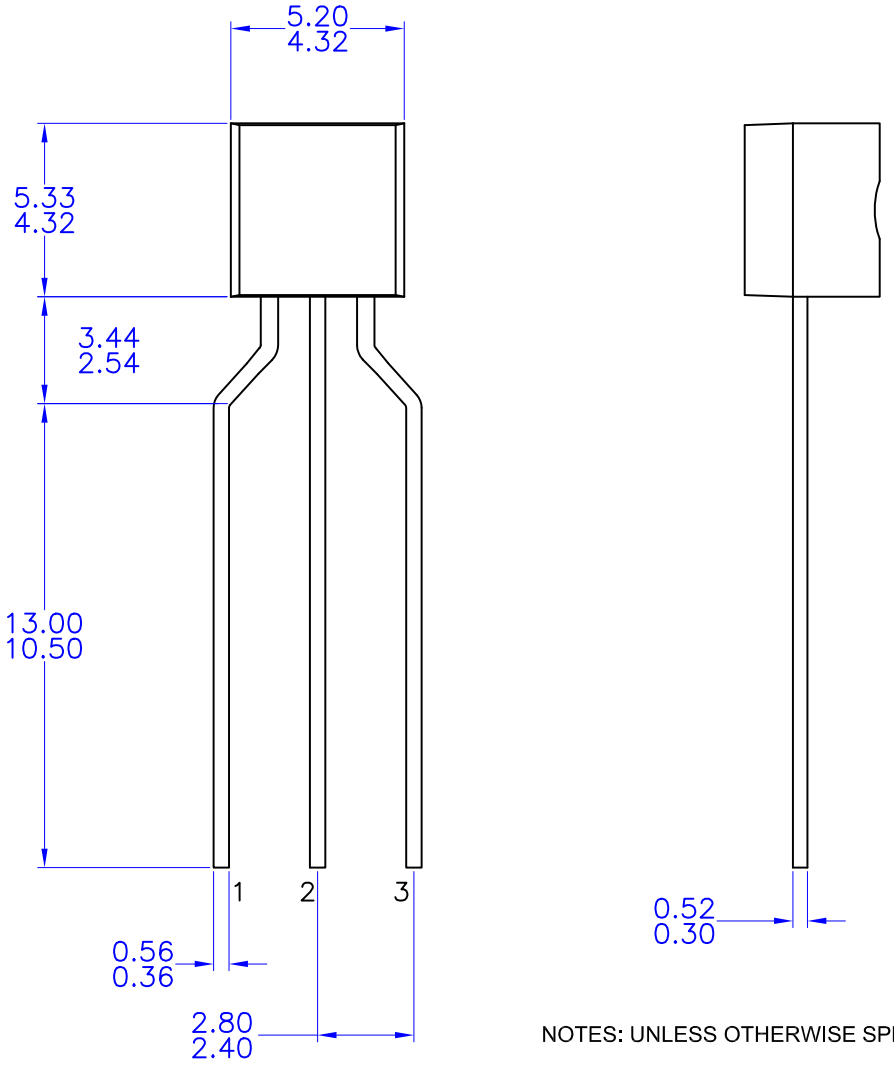
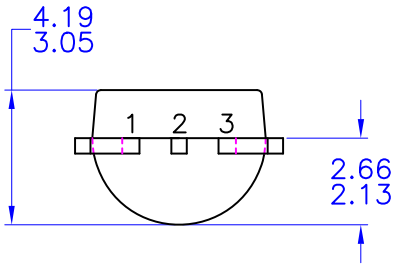
TO−92 3 4.83x4.76 LEADFORMED
CASE 135AR
ISSUE O

DATE 30 SEP 2016





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