

NPN Epitaxial Silicon Transistor

KSD471A

Features

- Audio Frequency Power Amplifier
- Complementary to KSB1151
- Collector Current: $I_C = 1\text{ A}$
- Collector Power Dissipation: $P_C = 800\text{ mW}$
- Suffix “-C” means Center Collector (1. Emitter 2. Collector 3. Base)

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

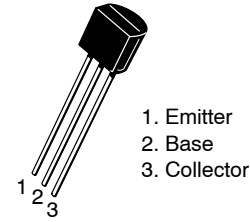
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	800	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 to +150	$^\circ\text{C}$

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.

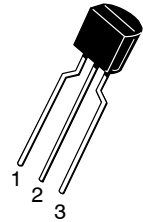
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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

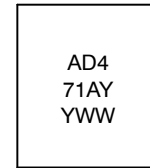


TO-92 3
CASE 135AN



TO-92 3 LF
CASE 135AR

MARKING DIAGRAM

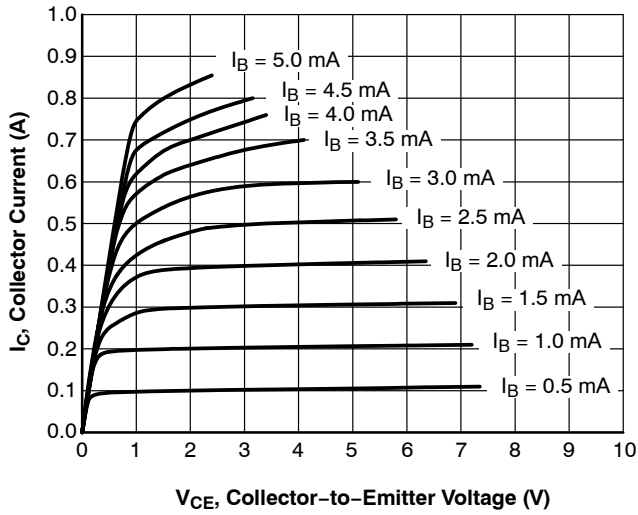


A = Assembly Code
D471AY = Device Code
YWW = Data Code

ORDERING INFORMATION

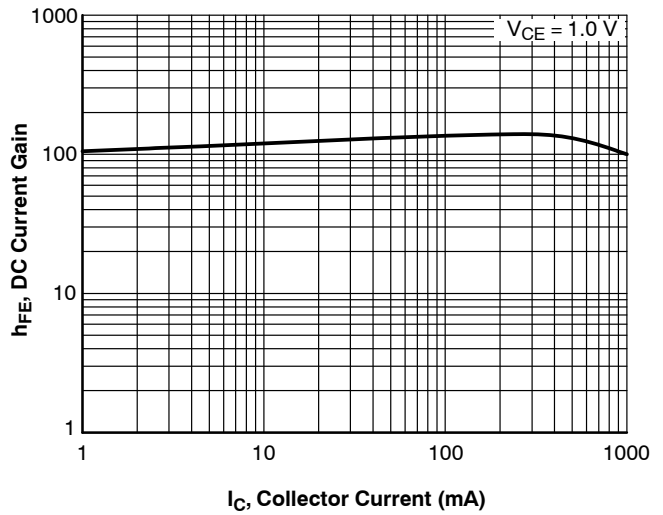
See detailed ordering and shipping information on page 3 of this data sheet.

TYPICAL CHARACTERISTICS



V_{CE} , Collector-to-Emitter Voltage (V)

Figure 1. Static Characteristic



I_C , Collector Current (mA)

Figure 2. DC Current Gain

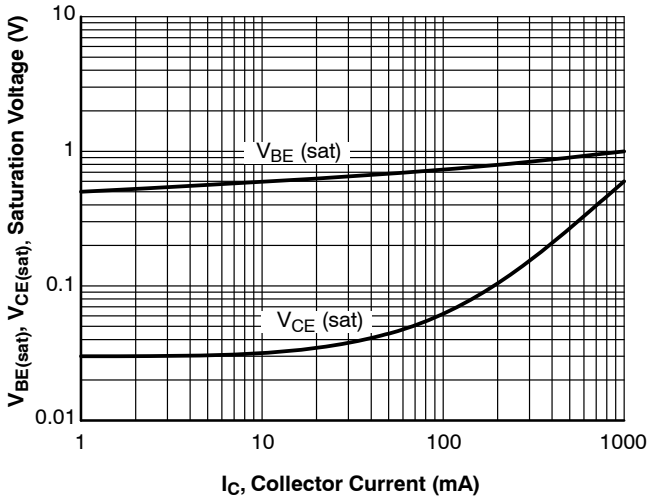


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

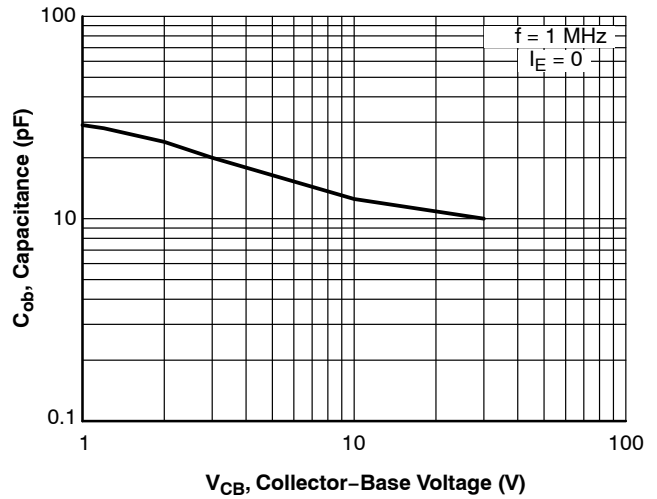


Figure 4. Collector Output Capacitance

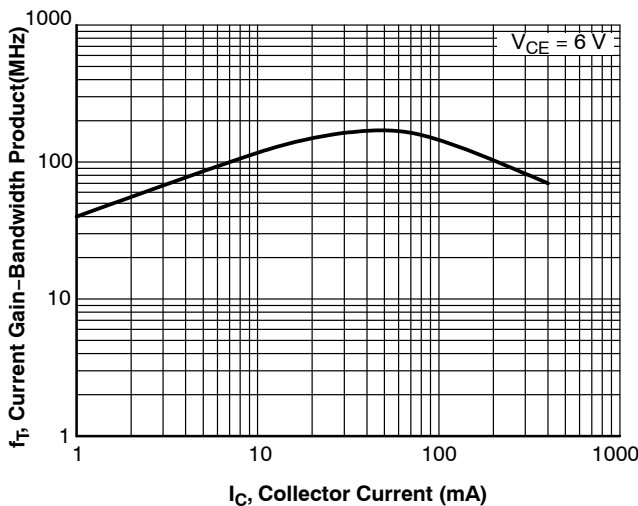


Figure 5. Current Gain Bandwidth Product

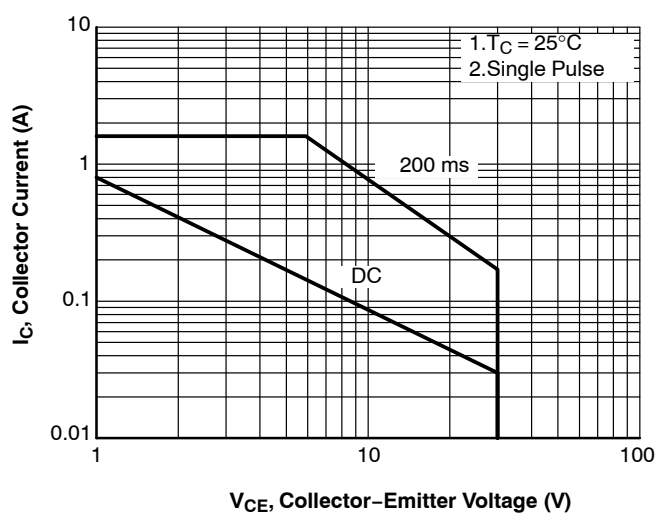


Figure 6. Safe Operating Area

KSD471A

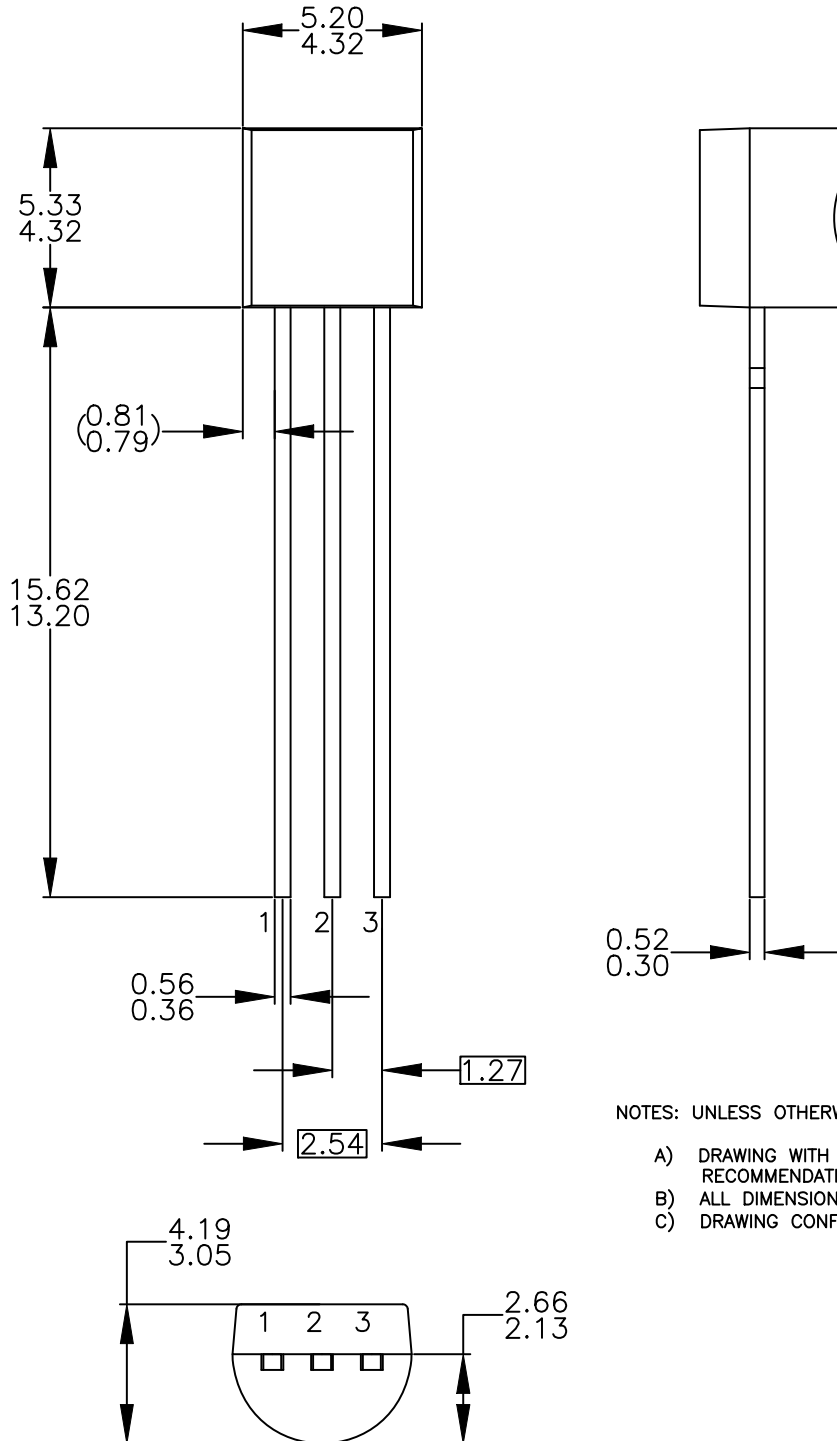
ORDERING INFORMATION

Device	Package	Shipping
KSD471ACYTA	TO-92-3 (Pb-Free)	10000 BLKBG
KSD471ACYBU	TO-92-3LF (Pb-Free)	2000 FNFLD
KSD471AYTA	TO-92-3LF (Pb-Free)	2000 FNFLD

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

TO-92 3 4.825x4.76
CASE 135AN
ISSUE O

DATE 31 JUL 2016



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