

NPN Epitaxial Silicon Transistor

KSD882

Recommended Applications

- Audio Frequency Power Amplifier

Features

- Low Speed Switching
- Complement to KSB772

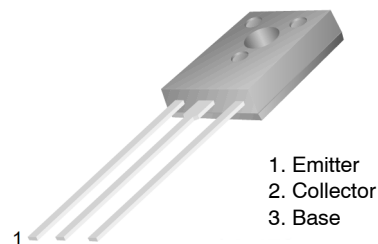
ABSOLUTE MAXIMUM RATINGS

($T_A = 25^\circ\text{C}$ unless otherwise noted) (Note 1)

Symbol	Parameter	Ratings	Units
BV_{CBO}	Collector–Base Voltage	40	V
BV_{CEO}	Collector–Emitter Voltage	30	V
BV_{EBO}	Emitter–Base Voltage	5	V
I_C	Collector Current (DC)	3	A
I_{CP}	Collector Current (Pulse) (Note 2)	7	A
I_B	Base Current	0.6	A
P_D	Total Device Dissipation, $T_C = 25^\circ\text{C}$ $T_A = 25^\circ\text{C}$	10 1	W
T_J, T_{STG}	Junction and Storage Temperature	$-55 \sim +150$	$^\circ\text{C}$

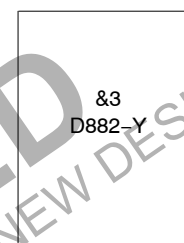
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
2. $PW \leq 10$ ms, Duty Cycle $\leq 50\%$.



TO-126-3LD
CASE 340AS

MARKING DIAGRAM



&3
D882
Y
= 3-Digit Date Code
= Specific Device Code
= hFE Grade

ORDERING INFORMATION

Device	Package	Shipping
KSD882YS	TO-126-3 (Pb-Free)	2000 Units / Bulk Bag
KSD882YSTU	TO-126-3 (Pb-Free)	1920 Units / Tube

KSD882

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

Symbol	Characteristic	Test Condition	Min	Typ.	Max	Unit
BV _{CBO}	Collector–Base Breakdown Voltage	I _C = 500 μA, I _E = 0	40	–	–	V
BV _{CEO}	Collector–Emitter Breakdown Voltage	I _C = 5 mA, I _B = 0	30	–	–	V
BV _{EBO}	Emitter–Base Breakdown Voltage	I _E = 500 μA, I _C = 0	5	–	–	V
I _{CBO}	Collector Cut-off Current	V _{CB} = 30 V, I _E = 0	–	–	1	μA
I _{EBO}	Emitter Cut-off Current	V _{EB} = 3 V, I _C = 0	–	–	1	μA
h _{FE1} h _{FE2}	DC Current Gain (Note 3)	V _{CE} = 2 V, I _C = 20 mA V _{CE} = 2 V, I _C = 1 A	30 60	150 160	400	
V _{CE(sat)}	Collector–Emitter Saturation Voltage (Note 3)	I _C = 2 A, I _B = 0.2 A	–	0.3	0.5	V
V _{BE(sat)}	Base–Emitter Saturation Voltage (Note 3)	I _C = 2 A, I _B = 0.2 A	–	1.0	2.0	V
f _T	Current Gain Bandwidth Product	V _{CE} = 5 V, I _E = 0.1 A	–	90	–	MHz
C _{ob}	Output Capacitance	V _{CB} = 10 V, I _E = 0, f = 1 MHz	–	45	–	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.

3. Pulse Test: PW ≤ 350 μs, Duty Cycle ≤ 2% Pulsed.

h_{FE} CLASSIFICATION

Classification	R	O	Y	G
h _{FE2}	60 ~ 120	100 ~ 200	160 ~ 320	200 ~ 400

TYPICAL CHARACTERISTICS

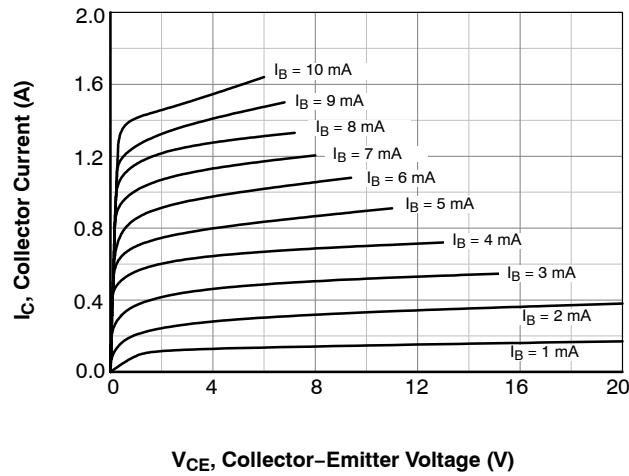


Figure 1. Static Characteristic

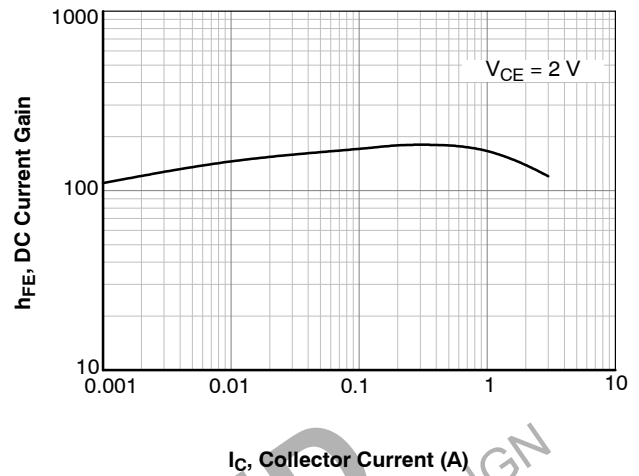


Figure 2. DC Current Gain

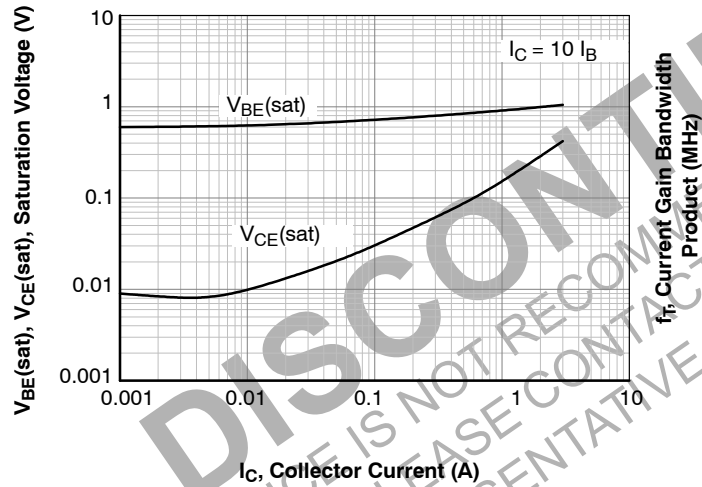
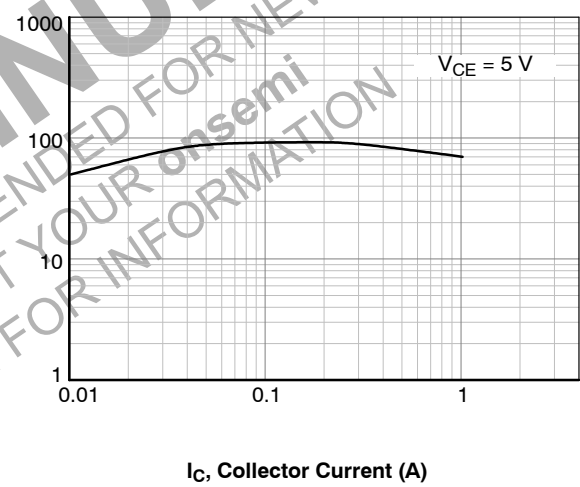
Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Figure 4. Current Gain Bandwidth Product

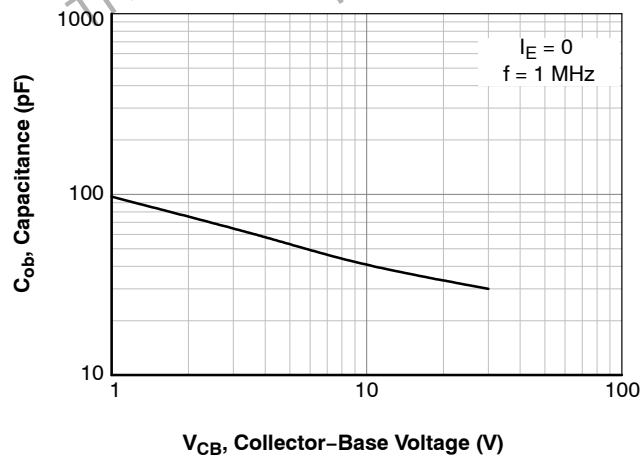


Figure 5. Collector Output Capacitance

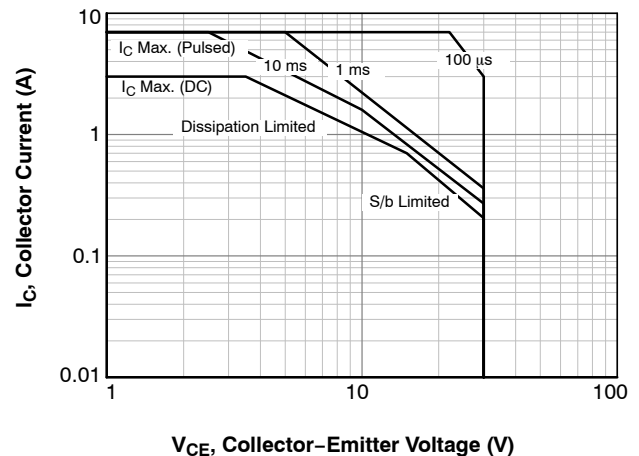


Figure 6. Safe Operating Areas

TYPICAL CHARACTERISTICS (continued)

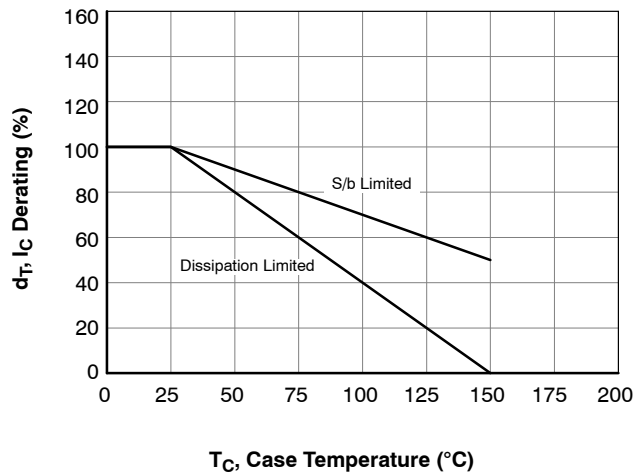


Figure 7. Derating Curve of Safe Operating Areas

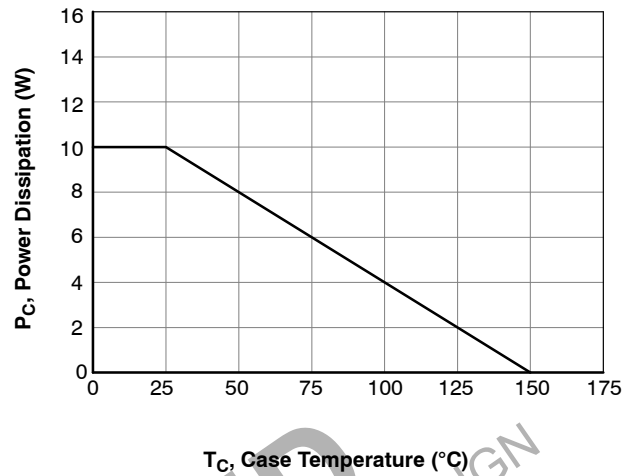
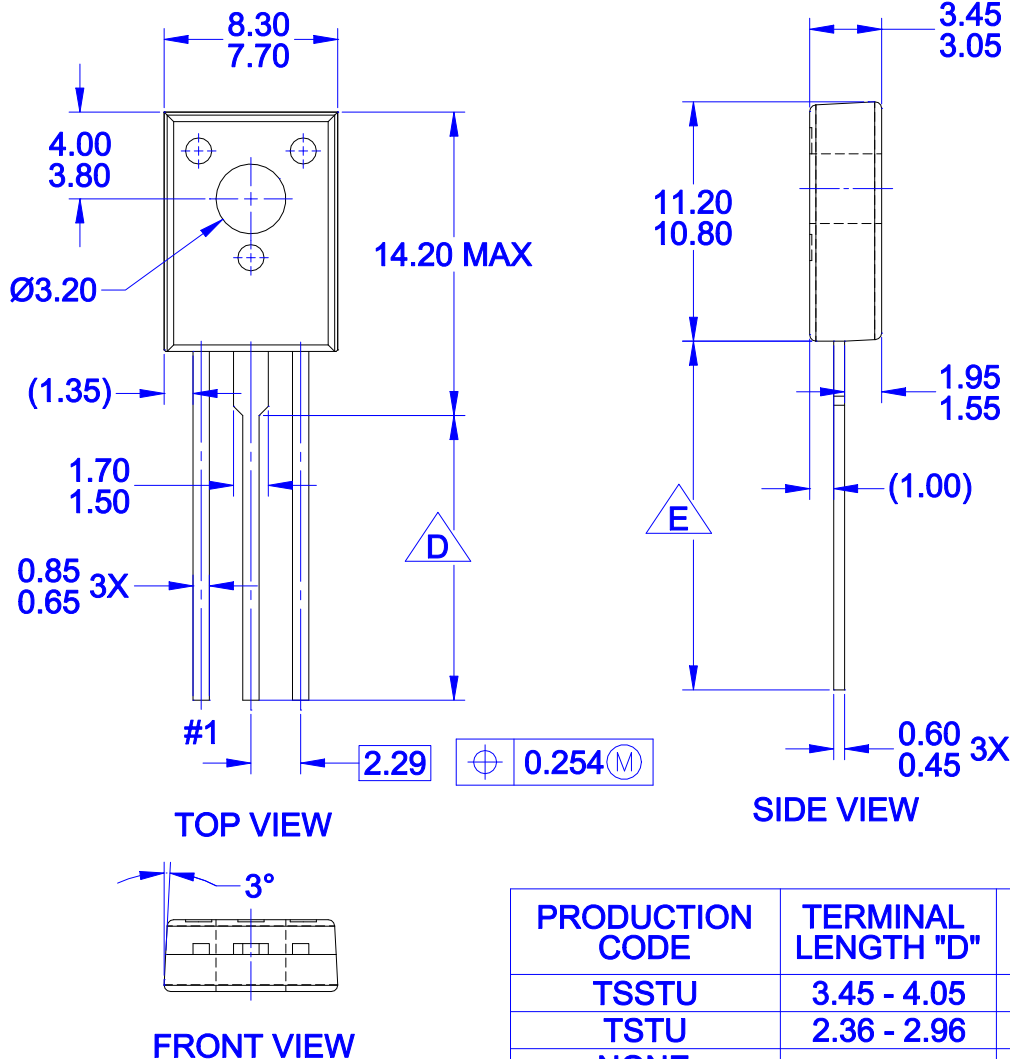


Figure 8. Power Derating

DISCONTINUED
 THIS DEVICE IS NOT RECOMMENDED FOR NEW DESIGN
 PLEASE CONTACT YOUR onsemi
 REPRESENTATIVE FOR INFORMATION

TO-126-3LD
CASE 340AS
ISSUE O

DATE 30 SEP 2016



NOTES:

- A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS

- D** FOR TERMINAL LENGTH "D", REFER TO TABLE
- E** FOR TERMINAL LENGTH "E", REFER TO TABLE

PRODUCTION CODE	TERMINAL LENGTH "D"	TERMINAL LENGTH "E"
TSSTU	3.45 - 4.05	6.45 - 7.45
TSTU	2.36 - 2.96	5.36 - 6.36
NONE (STD LENGTH)	12.76 - 13.36	15.76 - 16.76

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