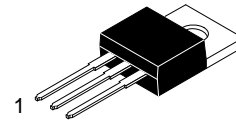


PNP Epitaxial Silicon Transistor

KSB596



1. Base
2. Collector
3. Emitter

TO-220-3LD
CASE 340AT

Features

- Complement to KSD526
- This is a Pb-Free Device

Applications

- Power Amplifier Applications

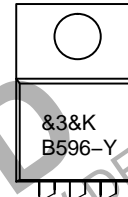
ABSOLUTE MAXIMUM RATINGS* (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Ratings	Units
V _{CBO}	Collector-Base Voltage	-80	V
V _{CEO}	Collector-Emitter Voltage	-80	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current (DC)	-4	A
I _B	Base Current	-0.4	A
P _C	Collector Dissipation (T _C = 25°C)	30	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 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.

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

MARKING DIAGRAM



- &3 = Date Code
- &K = Lot Traceability Code
- B596-Y = Specific Device Code

ORDERING INFORMATION

Device	Package	Shipping
KSB596YTU	TO-220-3LD (Pb-Free)	1000 Units / Tube

KSB596

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

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
BV _{CEO}	Collector–Emitter Breakdown Voltage	I _C = -50 mA, I _B = 0	-80			V
BV _{EBO}	Emitter–Base Breakdown Voltage	I _E = -10 mA, I _C = 0	-5			V
I _{CBO}	Collector Cut-off Current	V _{CB} = -80 V, I _E = 0			-70	μA
I _{EBO}	Emitter Cut-off Current	V _{EB} = -5 V, I _C = 0			-100	μA
h _{FE1} h _{FE2}	DC Current Gain	V _{CE} = -5 V, I _C = -0.5 A V _{CE} = -5 V, I _C = -3 A	40 15		240	
V _{CE(sat)}	Collector–Emitter Saturation Voltage	I _C = -3 A, I _B = -0.3 A		-1	-1.7	V
V _{BE(on)}	Base–Emitter On Voltage	V _{CE} = -5 V, I _C = -3 A		-1	-1.5	V
f _T	Current Gain Bandwidth Product	V _{CE} = -5 V, I _C = -0.5 A	3			MHz
C _{cb}	Collector Output Capacitance	V _{CB} = -10 V, I _E = 0, f = 1 MHz		130		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.

h_{FE} CLASSIFICATION

Classification	R	O	Y
h _{FE}	40 ~ 80	70 ~ 140	120 ~ 240

DISCONTINUED

THIS DEVICE IS NOT RECOMMENDED FOR NEW DESIGN
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TYPICAL CHARACTERISTICS

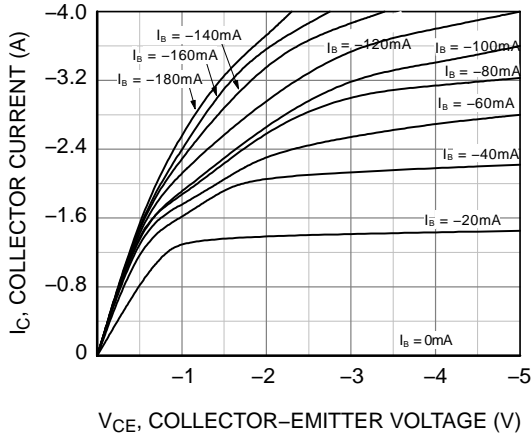


Figure 1. Static Characteristic

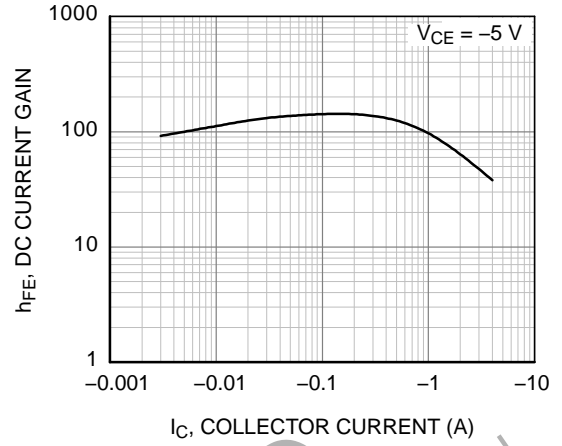


Figure 2. DC Current Gain

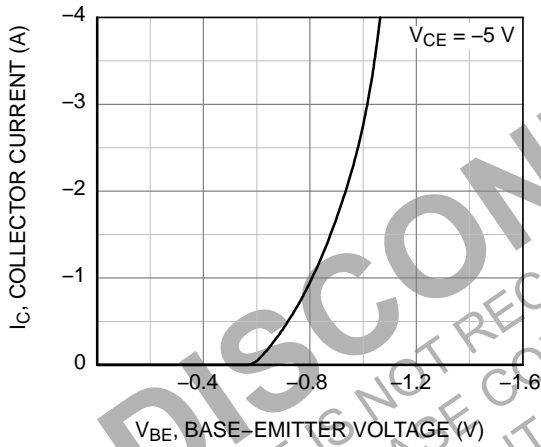


Figure 3. Base-Emitter Saturation Voltage

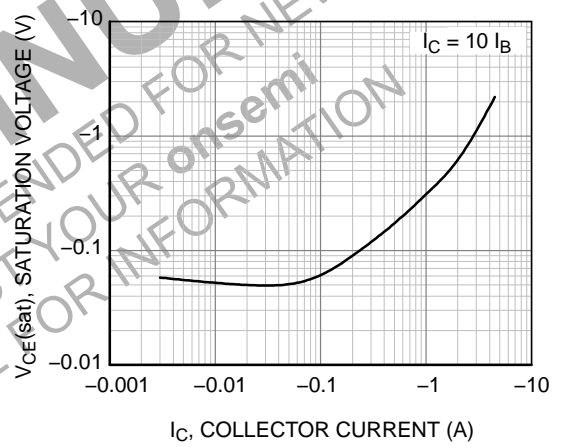


Figure 4. Collector-Emitter Saturation Voltage

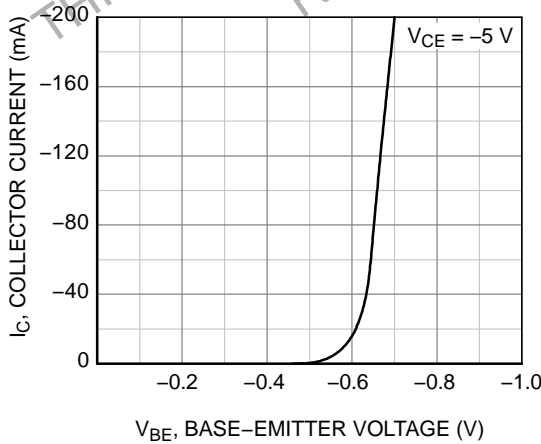


Figure 5. Base-Emitter On Voltage

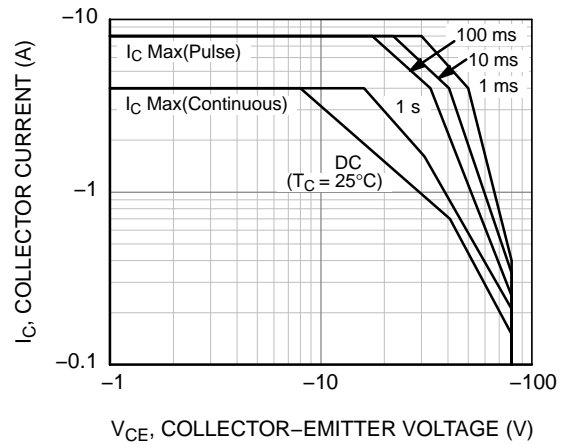


Figure 6. Safe Operating Area

TYPICAL CHARACTERISTICS (Continued)

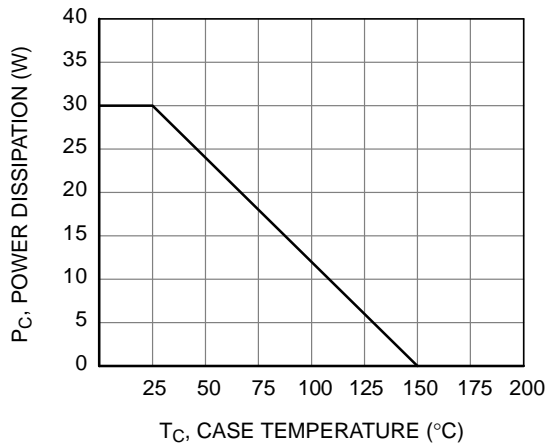


Figure 7. Power Derating

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MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS

ON Semiconductor®



Scale 1:1

TO-220-3LD CASE 340AT ISSUE A

DATE 03 OCT 2017



- NOTES:
- A) REFERENCE JEDEC, TO-220, VARIATION AB
 - B) ALL DIMENSIONS ARE IN MILLIMETERS.
 - C) DIMENSIONS COMMON TO ALL PACKAGE SUPPLIERS EXCEPT WHERE NOTED [].
 - D) LOCATION OF MOLDED FEATURE MAY VARY (LOWER LEFT CORNER, LOWER CENTER AND CENTER OF THE PACKAGE)
 - E) DOES NOT COMPLY JEDEC STANDARD VALUE.
 - F) "A1" DIMENSIONS AS BELOW:
 SINGLE GAUGE = 0.51 - 0.61
 DUAL GAUGE = 1.10 - 1.45
 - G) PRESENCE IS SUPPLIER DEPENDENT
 - H) SUPPLIER DEPENDENT MOLD LOCKING HOLES IN HEATSINK.

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