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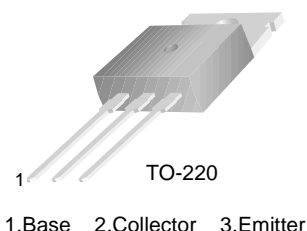


KSB596

KSB596

Power Amplifier Applications

- Complement to KSD526



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	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 ($T_C=25^{\circ}\text{C}$)	30	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^{\circ}\text{C}$

Electrical Characteristics $T_C=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = - 50\text{mA}$, $I_B = 0$	- 80			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = - 10\text{mA}$, $I_C = 0$	- 5			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = - 80\text{V}$, $I_E = 0$			- 70	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = - 5\text{V}$, $I_C = 0$			- 100	μA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = - 5\text{V}$, $I_C = - 0.5\text{A}$ $V_{CE} = - 5\text{V}$, $I_C = - 3\text{A}$	40 15		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = - 3\text{A}$, $I_B = - 0.3\text{A}$		- 1	- 1.7	V
$V_{BE(on)}$	Base-Emitter ON Voltage	$V_{CE} = - 5\text{V}$, $I_C = - 3\text{A}$		- 1	- 1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE} = - 5\text{V}$, $I_C = - 0.5\text{A}$	3			MHz
C_{ob}	Output Capacitance	$V_{CB} = - 10\text{V}$, $I_E = 0$ $f = 1\text{MHz}$		130		pF

h_{FE} Classification

Classification	R	O	Y
h_{FE1}	40 ~ 80	70 ~ 140	120 ~ 240

Typical Characteristics

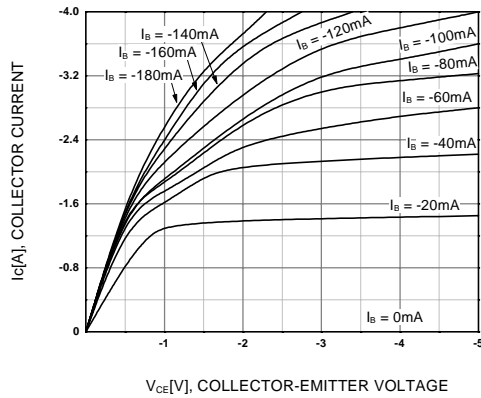


Figure 1. Static Characteristic

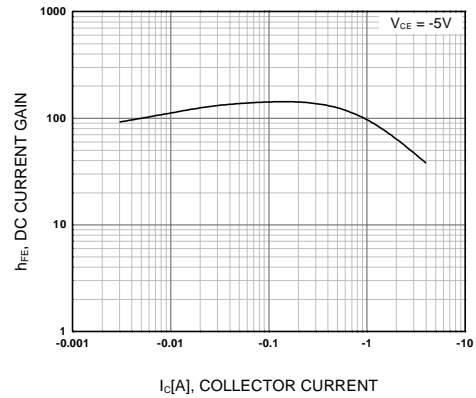


Figure 2. DC current Gain

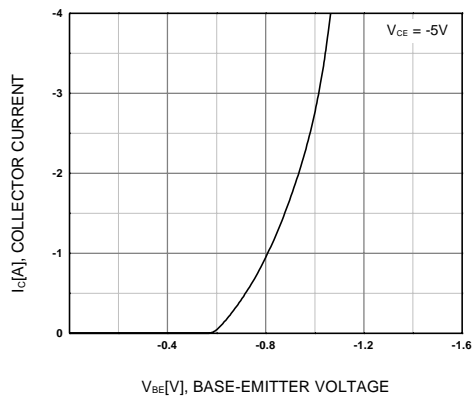


Figure 3. Base-Emitter Saturation Voltage

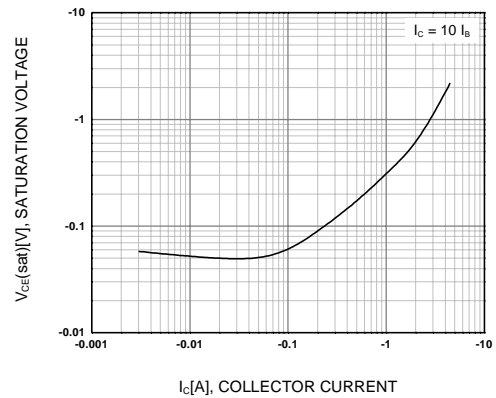


Figure 4. Collector-Emitter Saturation Voltage

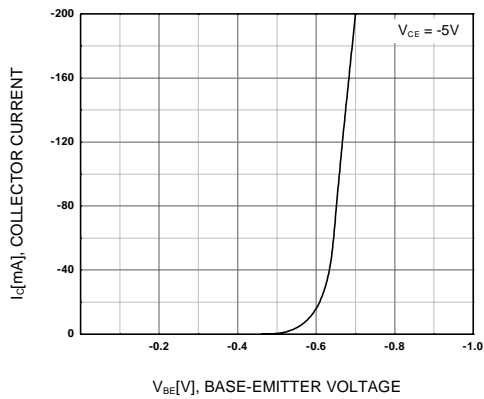


Figure 5. Base-Emitter On Voltage

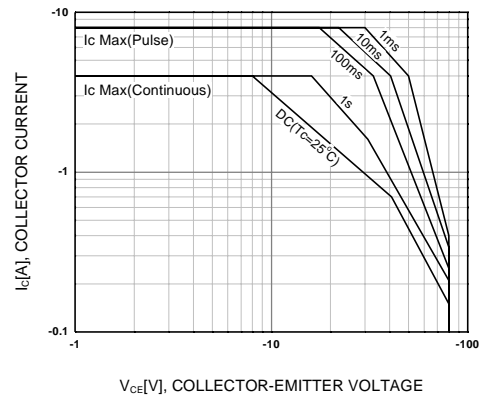


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

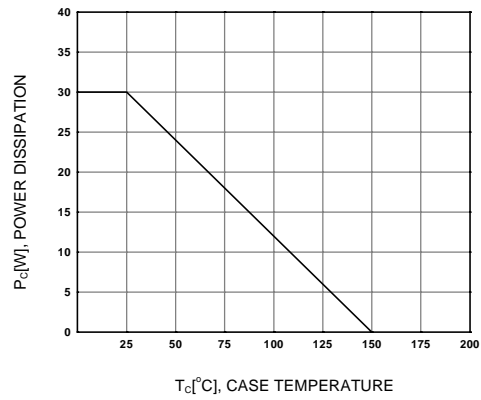
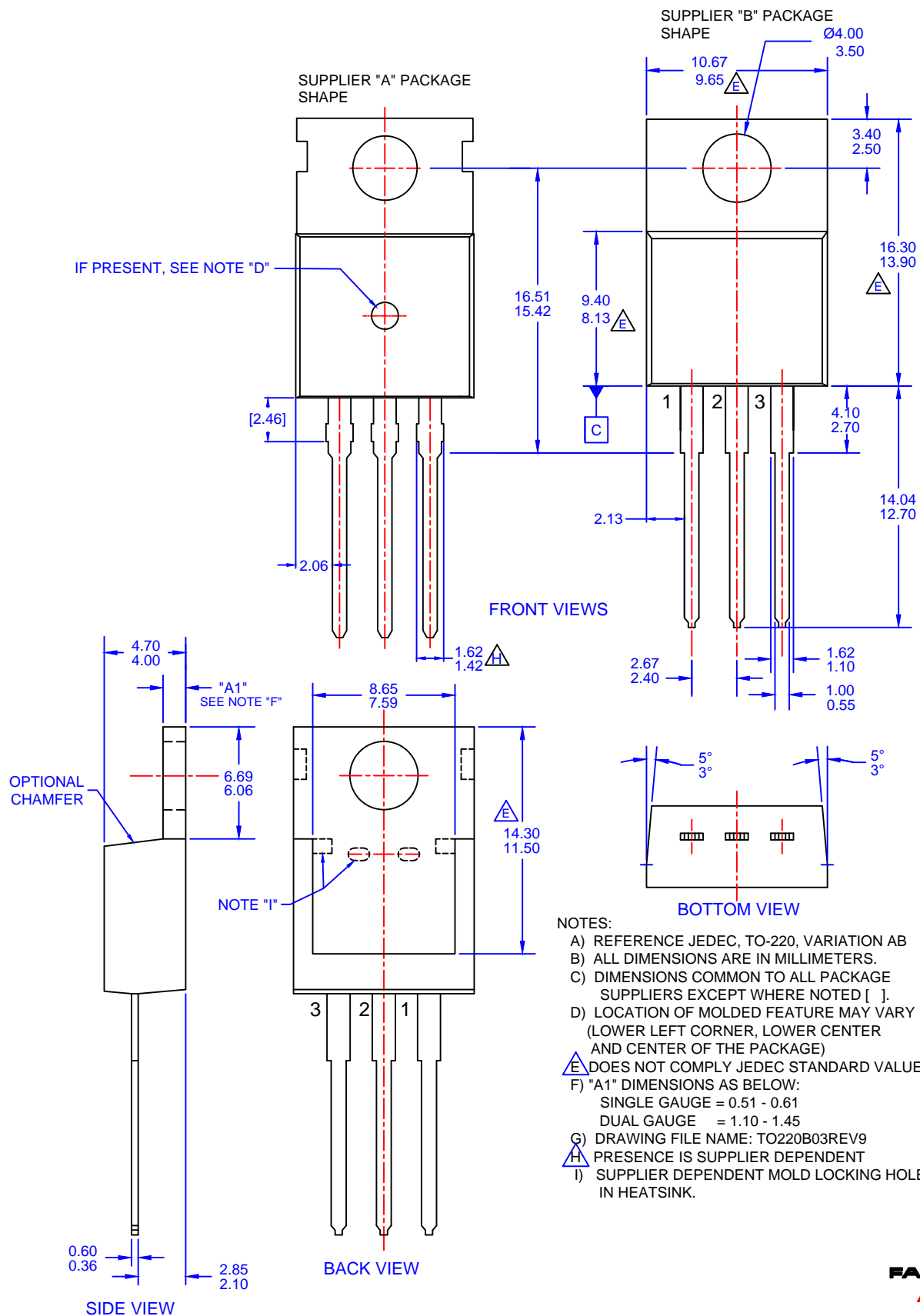


Figure 1. Power Derating



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) DRAWING FILE NAME: TO220B03REV9
- H) PRESENCE IS SUPPLIER DEPENDENT
- I) SUPPLIER DEPENDENT MOLD LOCKING HOLES IN HEATSINK.

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