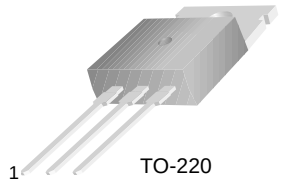
# KSA940

## Vertical Deflection Output Power Amplifier

- Complement to KSC2073




TO-220

1.Base 2.Collector 3.Emitter

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C$=25°C unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | - 150 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | - 150 | V |
| $V_{EBO}$ | Emitter-Base Voltage | - 5 | V |
| $I_C$ | Collector Current | - 1.5 | A |
| $I_B$ | Base Current | - 0.5 | A |
| $P_C$ | Collector Dissipation ($T_a$=25°C) | 1.5 | W |
| $P_C$ | Collector Dissipation ($T_C$=25°C) | 25 | W |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | - 55 ~ 150 | °C |

### Electrical Characteristics $T_C$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $I_{CBO}$ | Collector Cut-off Current | $V_{CB}$ = - 120V, $I_E$ = 0 | | | - 10 | μA |
| $I_{EBO}$ | Emitter Cut-off Current | $V_{EB}$ = - 5V, $I_C$ = 0 | | | - 10 | μA |
| $h_{FE}$ | DC Current Gain | $V_{CE}$ = - 10V, $I_C$ = - 500mA | 40 | 75 | 140 | |
| $V_{CE}$ (sat) | Collector-Emitter Saturation Voltage | $I_C$ = - 500mA, $I_B$ = - 50mA | | | - 1.5 | V |
| $V_{BE}$(on) | Base-Emitter ON Voltage | $V_{CE}$ = - 10V, $I_C$ = - 500mA | - 0.65 | - 0.75 | - 0.85 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$ = - 10V, $I_C$ = - 500mA | | 4 | | MHz |
| $C_{ob}$ | Output Capacitance | $V_{CB}$ = - 10V, $I_E$ = 0<br>f = 1MHz | | 55 | | pF |

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# Typical Characteristics

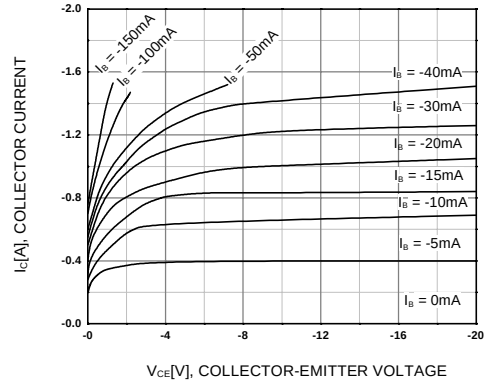


**Figure 1. Static Characteristic**

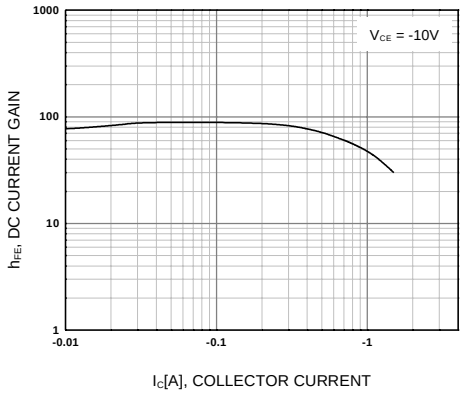


**Figure 2. DC current Gain**

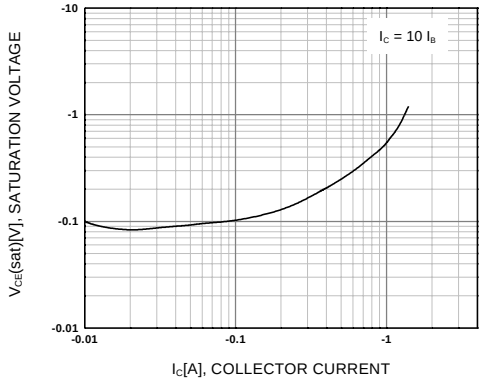


**Figure 3. Collector-Emitter Saturation Voltage**

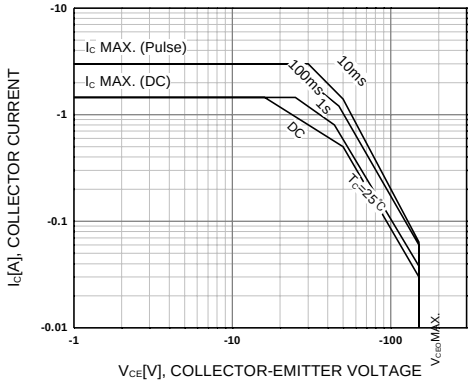


**Figure 4. Safe Operating Area**

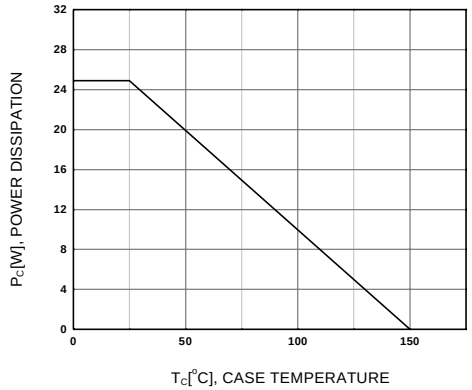


**Figure 5. Power Derating**

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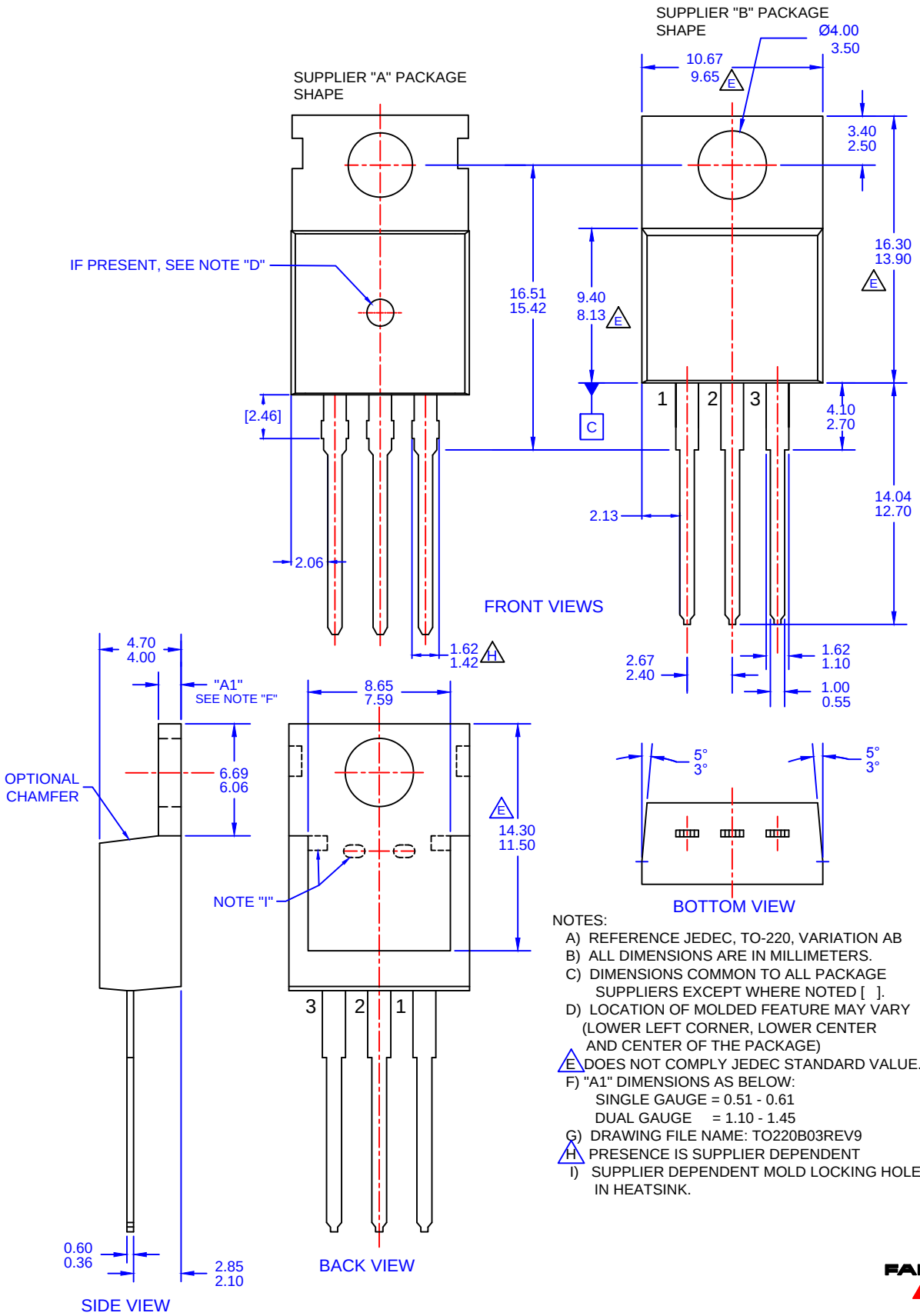


NOTES:

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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