

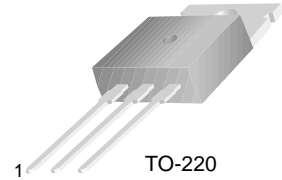


# KSA614

KSA614

## Low Frequency Power Amplifier Power Regulator

- Collector-Base Voltage :  $V_{CBO} = -80V$
- Collector Dissipation :  $P_C = 25W$  ( $T_C = 25^\circ C$ )



1.Base 2.Collector 3.Emitter

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C = 25^\circ C$ unless otherwise noted

| Symbol    | Parameter                                    | Ratings    | Units      |
|-----------|--|------------|------------|
| $V_{CBO}$ | Collector- Base Voltage                      | - 80       | V          |
| $V_{CEO}$ | Collector- Emitter Voltage                   | - 55       | V          |
| $V_{EBO}$ | Emitter- Base Voltage                        | - 5        | V          |
| $I_C$     | Collector Current                            | - 3        | A          |
| $P_C$     | Collector Dissipation ( $T_C = 25^\circ C$ ) | 25         | W          |
| $T_J$     | Junction Temperature                         | 150        | $^\circ C$ |
| $T_{STG}$ | Storage Temperature                          | - 55 ~ 150 | $^\circ C$ |

### Electrical Characteristics $T_C = 25^\circ C$ unless otherwise noted

| Symbol        | Parameter                            | Test Condition                | Min. | Typ.   | Max.  | Units   |
|---------------|--------------------------------------|-------------------------------|------|--------|-------|---------|
| $BV_{CBO}$    | Collector-Base Breakdown Voltage     | $I_C = - 500\mu A, I_E = 0$   | - 80 |        |       | V       |
| $BV_{CEO}$    | Collector-Emitter Breakdown Voltage  | $I_C = - 10mA, I_B = 0$       | - 55 |        |       | V       |
| $BV_{EBO}$    | Emitter-Base Breakdown Voltage       | $I_E = - 500\mu A, I_C = 0$   | - 5  |        |       | V       |
| $I_{CBO}$     | Collector Cut-off Current            | $V_{CB} = - 50V, I_E = 0$     |      |        | - 50  | $\mu A$ |
| $h_{FE}$      | DC Current Gain                      | $V_{CE} = - 5V, I_C = - 0.5A$ | 40   |        | 240   |         |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = - 1A, I_B = - 0.1A$    |      | - 0.15 | - 0.5 | V       |

### $h_{FE}$ Classification

| Classification | R       | O        | Y         |
|----------------|---------|----------|-----------|
| $h_{FE}$       | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 |

# Typical Characteristics

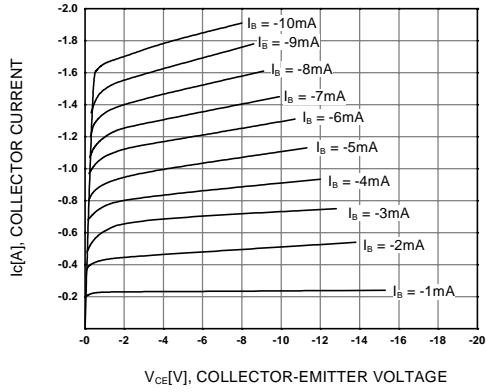


Figure 1. Static Characteristic

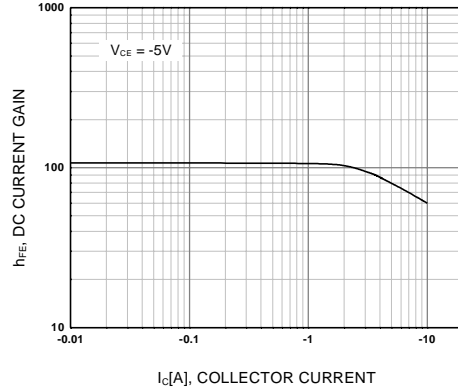


Figure 2. DC current Gain

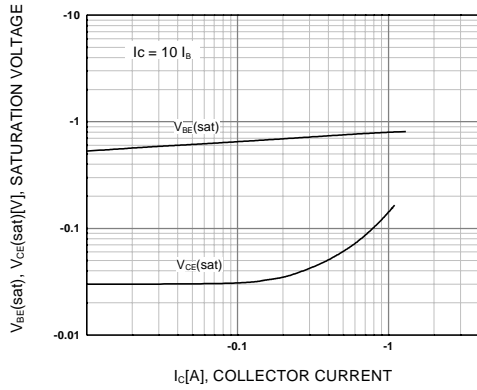


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

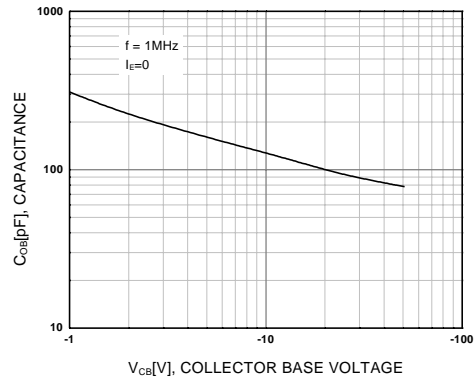


Figure 4. Collector Output Capacitance

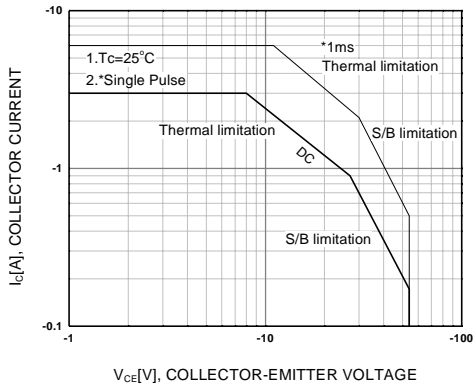


Figure 5. Safe Operating Area

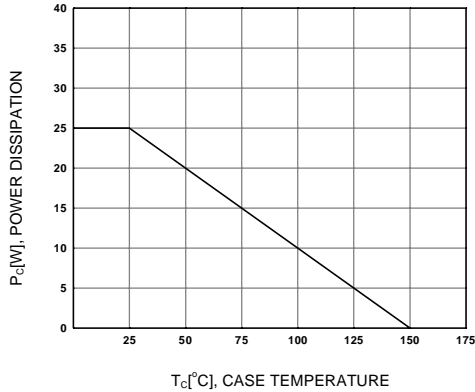
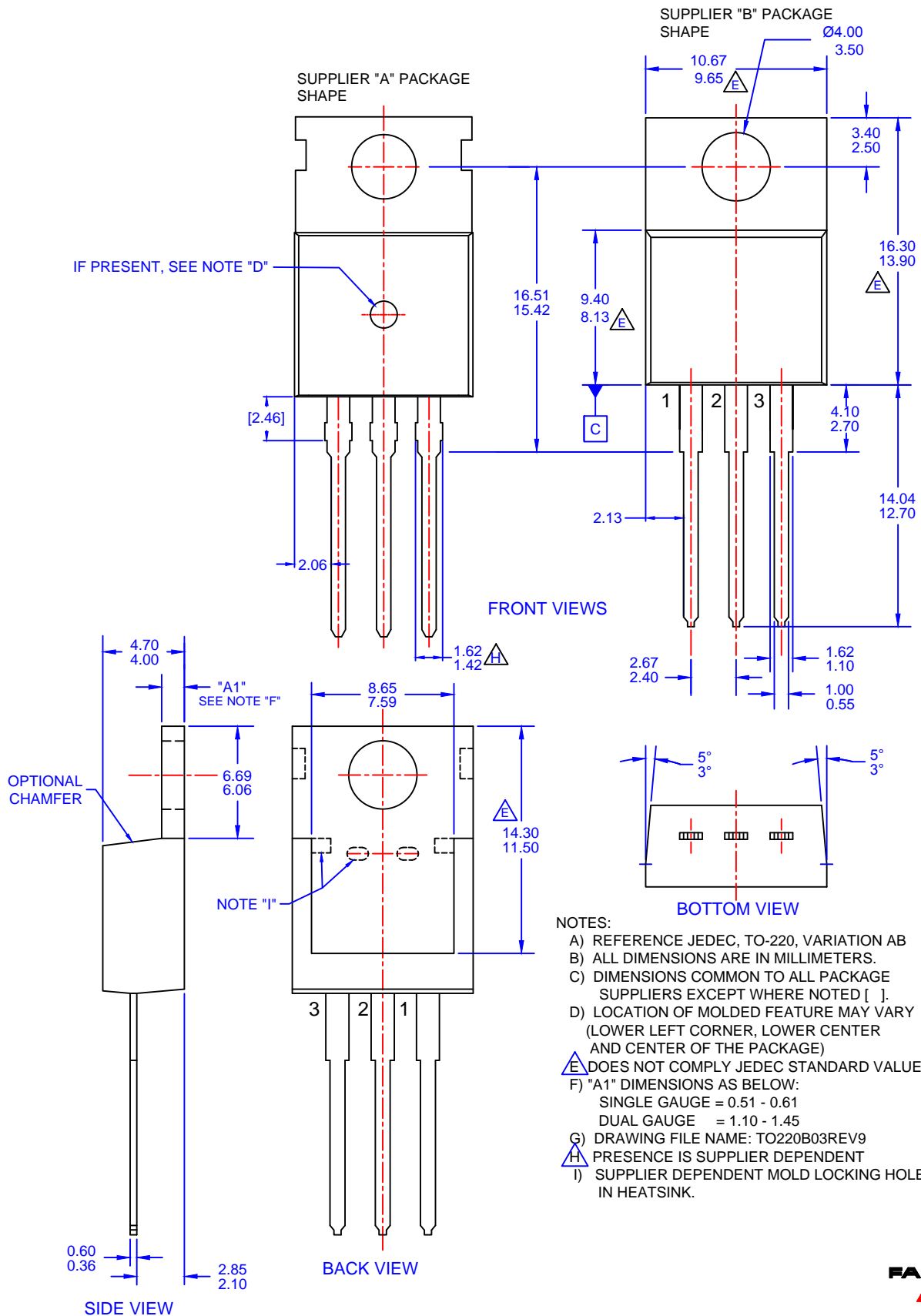


Figure 6. Power Derating



- 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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| FPS™                     | OptoHiT™                                       |                                       |                  |
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