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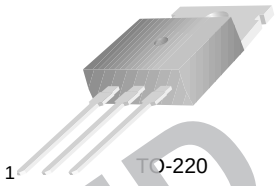
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

# KSB546

## TV Vertical Deflection Output

- Collector-Base Voltage : $V_{CBO}$ = -200V
- Collector Current : $I_C$ = -2A
- Collector Dissipation : $P_C$= 25W ($T_C$=25°C)
- Complement to KSD401



TO-220

1.Base 2.Collector 3.Emitter

## PNP Epitaxial Silicon Transistor

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

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | - 200 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | - 150 | V |
| $V_{EBO}$ | Emitter-Base Voltage | - 5 | V |
| $I_C$ | Collector Current(DC) | - 2 | A |
| $P_C$ | 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 |
|---|---|---|---|---|---|---|
| $BV_{CBO}$ | Collector-Base Breakdown Voltage | $I_C$ = -500μA, $I_E$ = 0 | - 200 | | | V |
| $BV_{CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$ = - 10mA, $I_B$ = 0 | - 150 | | | V |
| $BV_{EBO}$ | Emitter-Base Breakdown Voltage | $I_E$ = - 500uA, $I_C$ = 0 | - 5 | | | V |
| $I_{CBO}$ | Collector Cut-off Current | $V_{CB}$ = - 150V, $I_E$ = 0 | | | - 50 | μA |
| $h_{FE}$ | DC Current Gain | $V_{CE}$ = - 10V, $I_E$ = - 0.4A | 40 | | 240 | |
| $V_{CE}$(sat) | Collector-Emitter Saturation Voltage | $I_C$ = - 500mA, $I_B$ = - 50mA | | | - 1 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$ = - 10V, $I_C$ = - 0.4A | | 5 | | MHz |

### $h_{FE}$ Classification

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

# Typical Characteristics

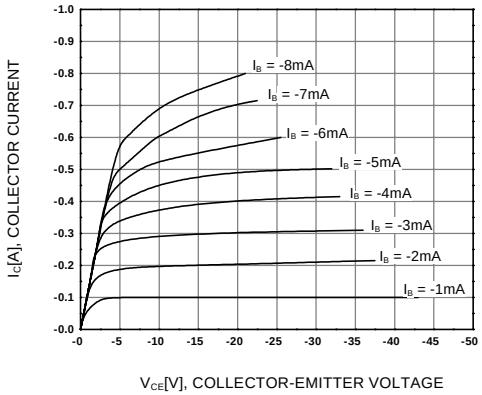



**Figure 1. Static Characteristic**

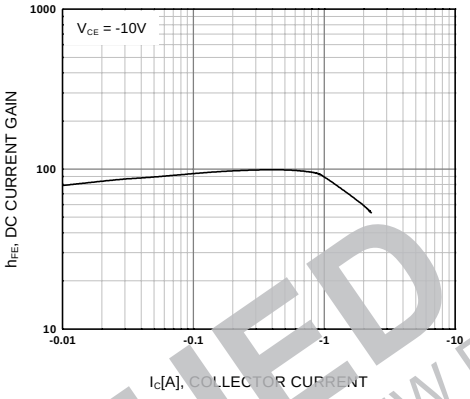



**Figure 2. DC current Gain**

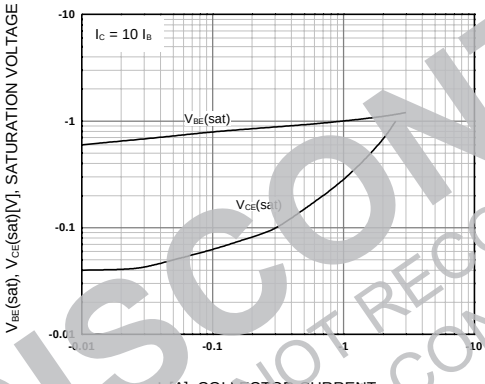



**Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage**

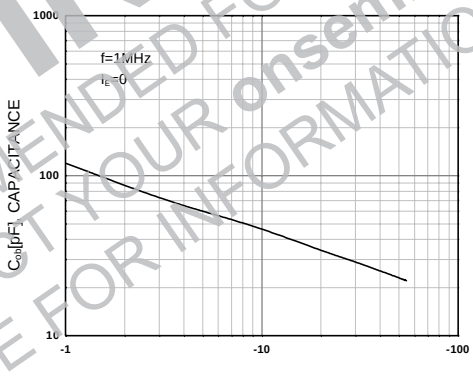



**Figure 4. Collector Output Capacitance**

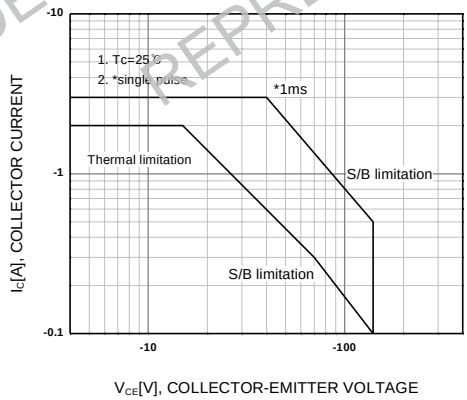



**Figure 5. Safe Operating Area**

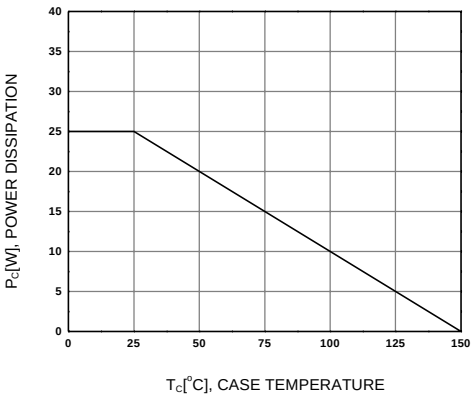
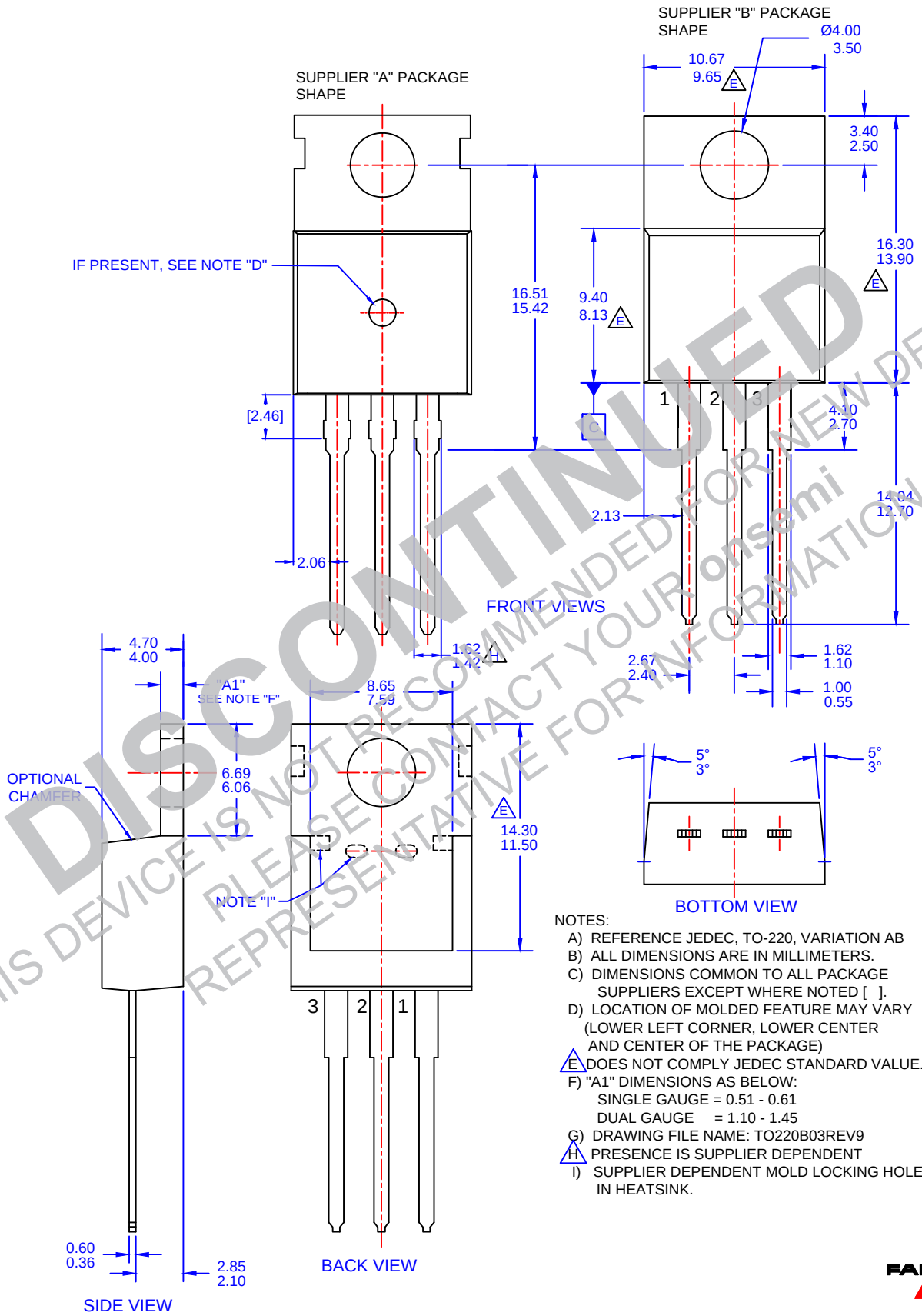



**Figure 6. Power Derating**




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.



FAIRCHILD

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