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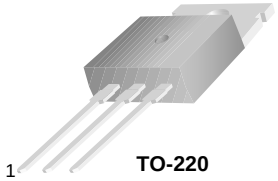
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes 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.

August 2009

KSA473
PNP Epitaxial Silicon Transistor

Features

- Low Frequency Power Amplifier, Power Regulator
- Collector Current : I_C= -3A
- Collector Dissipation : P_C = 10W (T_C=25°C)
- Complement to KSC1173



TO-220

1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 30	V
V_{CEO}	Collector-Emitter Voltage	- 30	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current	- 3	A
P_C	Collector Dissipation (T_C=25°C)	10	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 to + 150	°C

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

Electrical Characteristics T_A = 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	- 30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = - 10mA, I_B = 0	- 30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = - 1mA, I_C = 0	- 5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = - 20V, I_E = 0			- 1.0	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 5V, I_C = 0			- 1.0	μA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE} = - 2V, I_C = - 0.5A V_{CE} = - 2V, I_C = - 2.5A	70 25		240	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = - 2A, I_B = - 0.2A		- 0.3	- 0.8	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = - 2V, I_C = - 0.5A		- 0.75	- 1.0	V
f_T	Current Gain Bandwidth Product	V_{CE}= - 2V, I_C = - 0.5A		100		MHz
C_{ob}	Output Capacitance	V_{CB} = - 10V, I_E = 0, f = 1MHz		40		pF

h_{FE} Classification

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

Typical Performance Characteristics

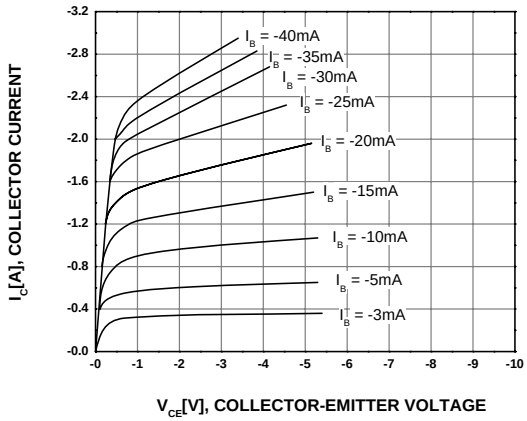


Figure 1. Static Characteristic

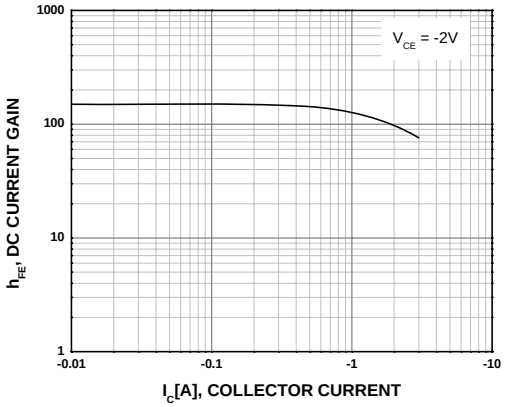


Figure 2. DC current Gain

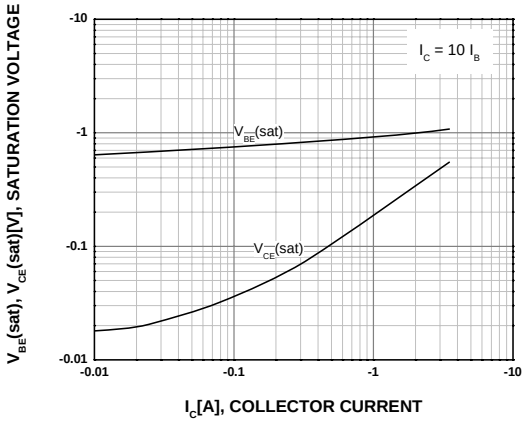


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

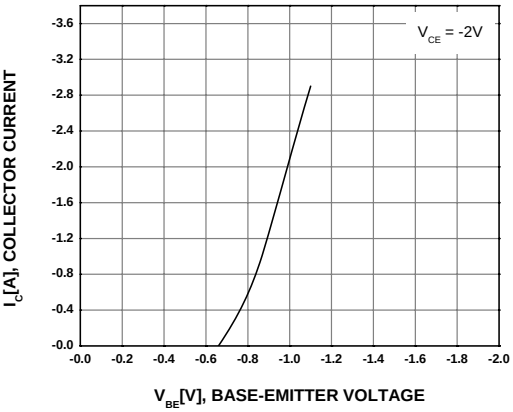


Figure 4. Base-Emitter On Voltage

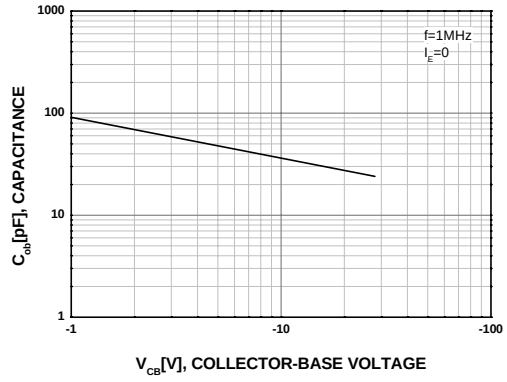


Figure 5. Collector Output Capacitance

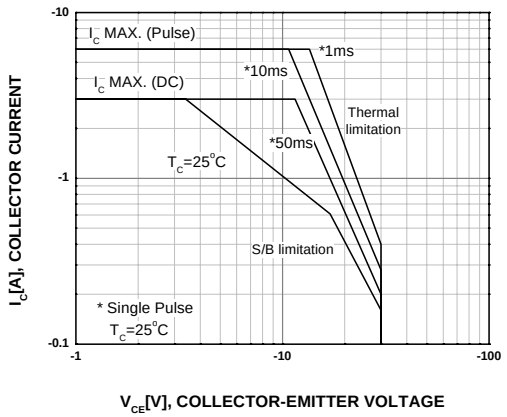


Figure 6. Safe Operating Area

Typical Performance Characteristics (Continued)

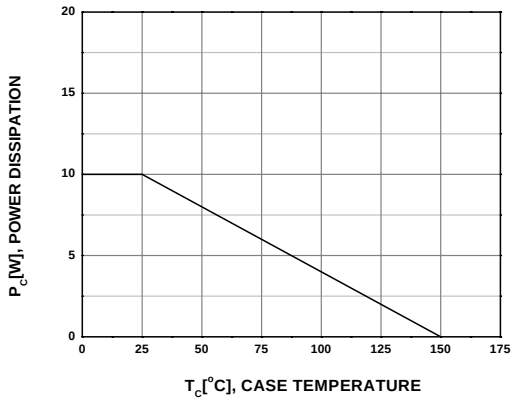
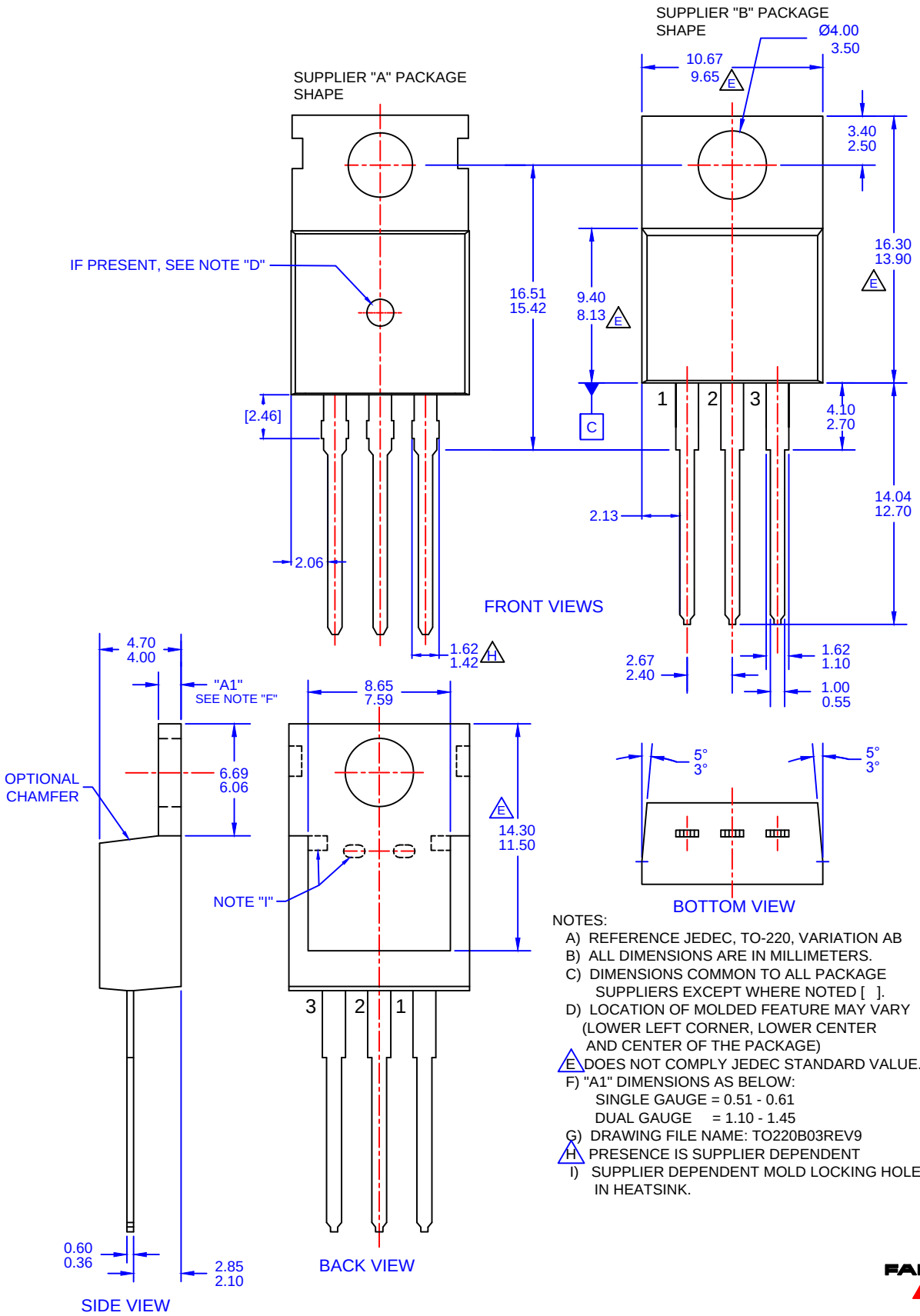


Figure 7. Power Derating



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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