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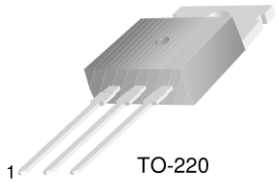
FAIRCHILD

September 2011

KSC2073
NPN Epitaxial Silicon Transistor

Features

- TV Vertical Deflection Output
- Complement to KSA940
- Collector-Base Voltage : V_{CBO} = 150V



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	150	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1.5	A
P_C	Collector Dissipation (T_C = 25°C)	25	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 to 150	°C

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	150			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10mA, I_B = 0	150			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 500μA, I_C = 0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 120V, I_E = 0			10	μA
h_{FE}	DC Current Gain	V_{CE} = 10V, I_C = 0.5A	40	75	140	
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 = 0.5A		4		MHz
C_{ob}	Output Capacitance	V_{CB} =10V, I_E = 0, f = 1MHz		50		pF

h_{FE} Classification

Classification	H1	H2
h_{FE}	40 ~ 80	60 ~ 125

Typical Performance Characteristics

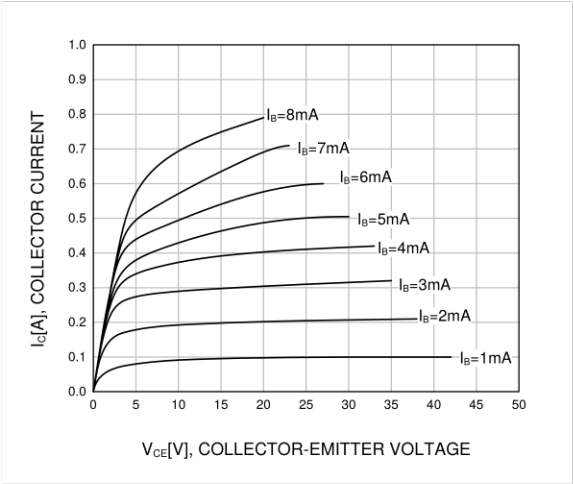


Figure 1. Static Characteristic

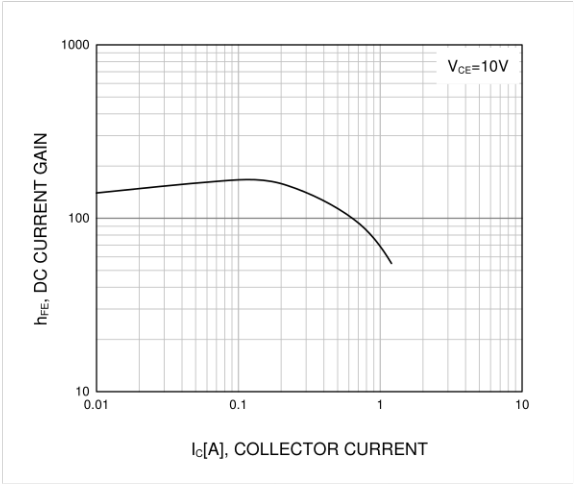


Figure 2. DC current Gain

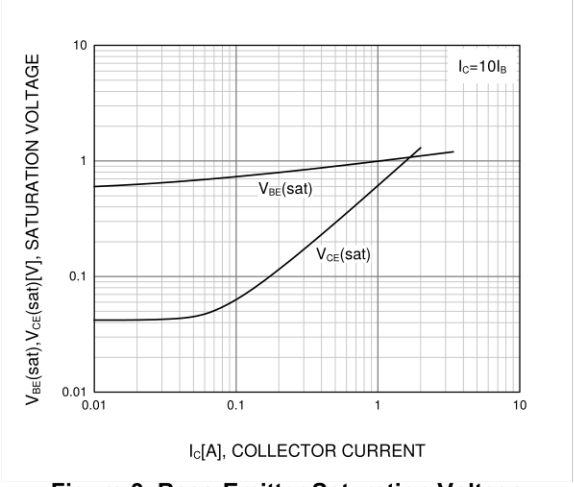


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

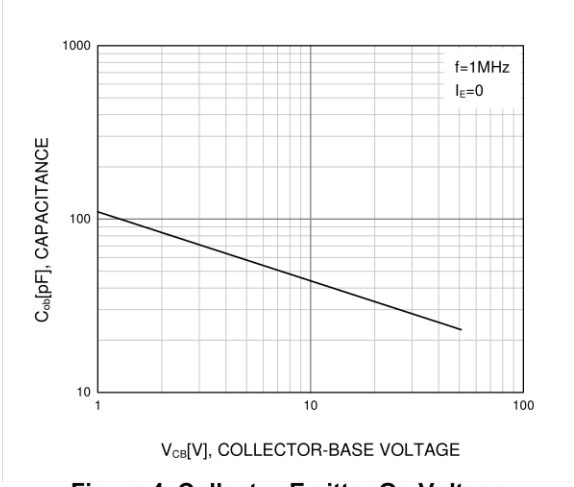


Figure 4. Collector-Emitter On Voltage

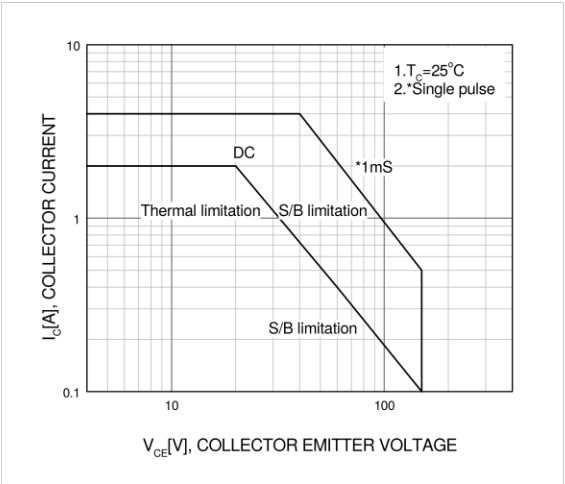


Figure 5. Safe Operating Area

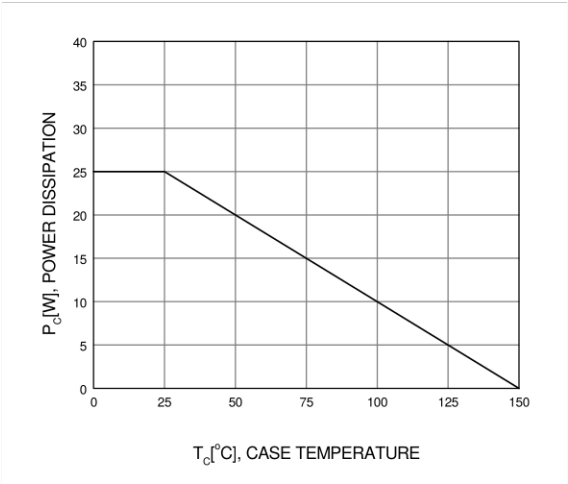
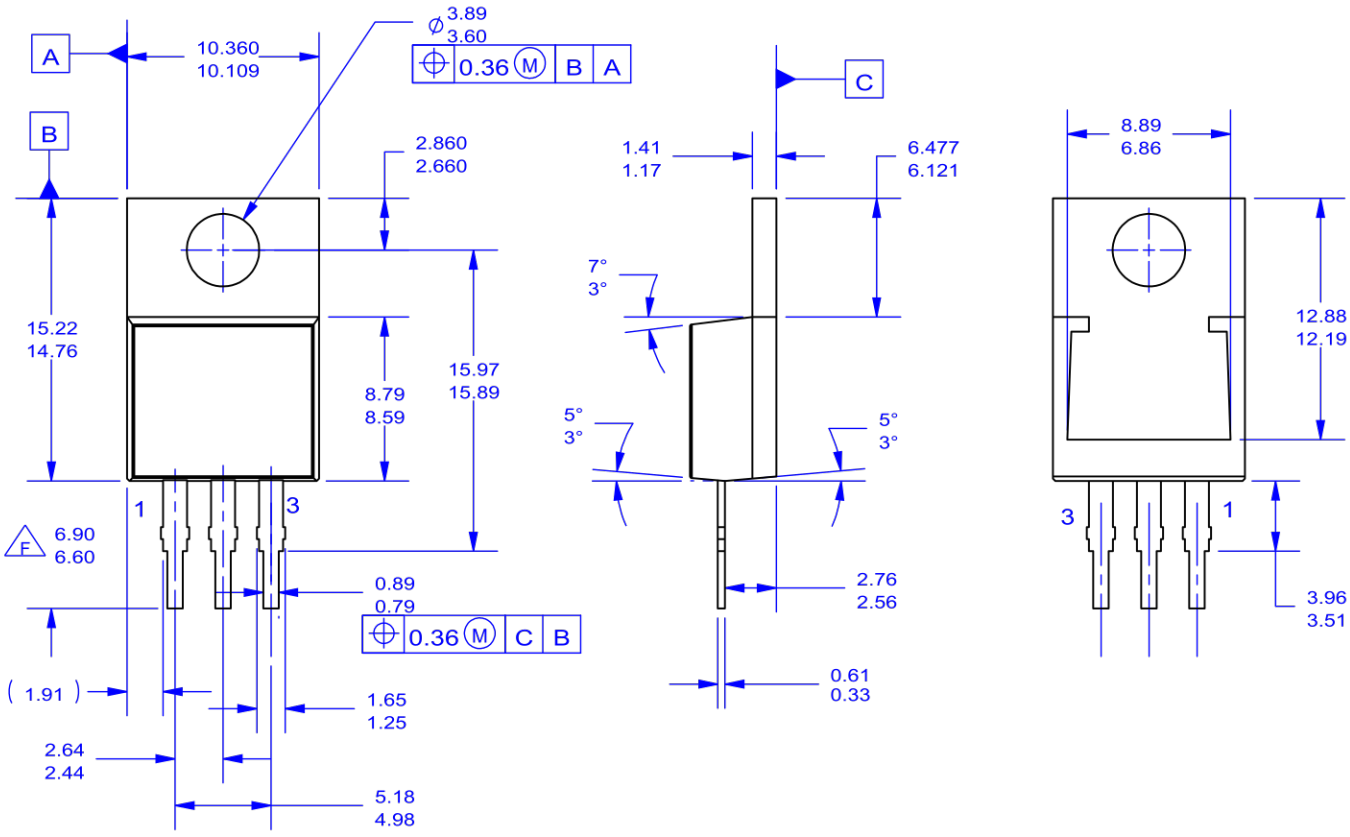
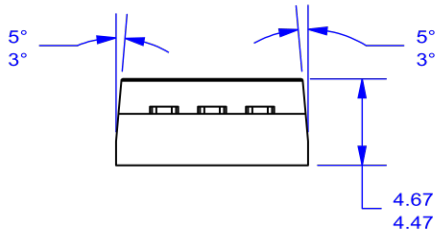


Figure 6. Power Derating



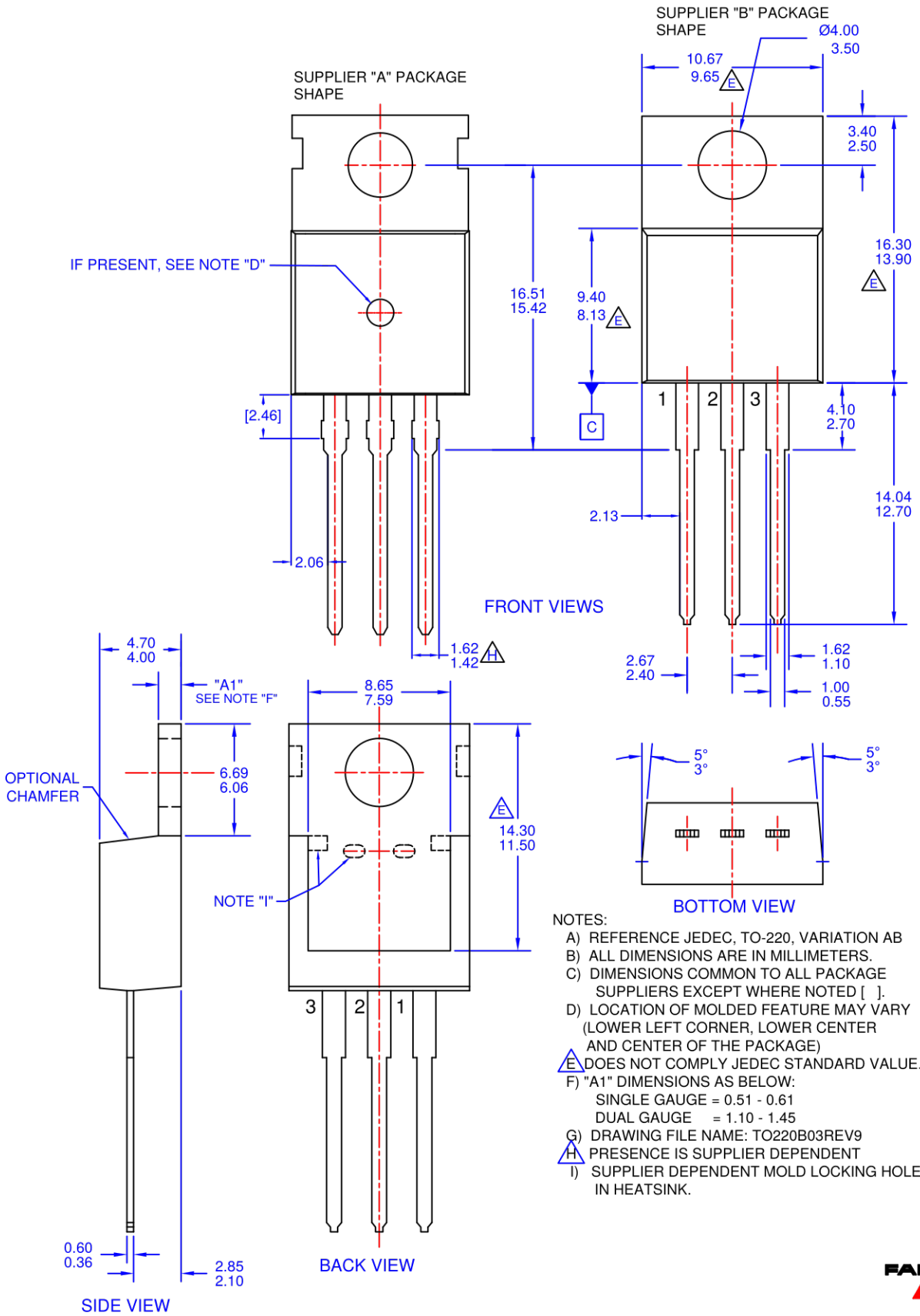


NOTES:

A. PACKAGE REFERENCE: JEDEC TO220 VARIATION AB
B. ALL DIMENSIONS ARE IN MILLIMETERS.
C. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
E. FAIRCHILD SEMICONDUCTOR.

F DOES NOT COMPLY JEDEC STD VALUE.

G. DRAWING FILE NAME: TO220U03REV1



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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