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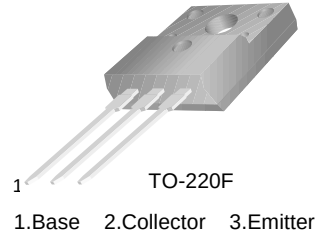


KSC3296

KSC3296

Power Amplifier Applications

- Complement to KSA1304



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^{\circ}\text{C}$ 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(DC)	1.5	A
I_B	Base Current	0.5	A
P_C	Collector Dissipation ($T_C=25^{\circ}\text{C}$)	20	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^{\circ}\text{C}$

Electrical Characteristics $T_C=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = 120\text{V}, I_E = 0$			10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			10	μA
h_{FE}	DC Current Gain	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	40	75	140	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 500\text{mA}, I_B = 50\text{mA}$			1.5	V
$V_{BE(on)}$	Base-Emitter ON Voltage	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	0.65	0.75	0.85	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$		4		MHz
C_{ob}	Output Capacitance	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		35		pF

Typical Characteristics

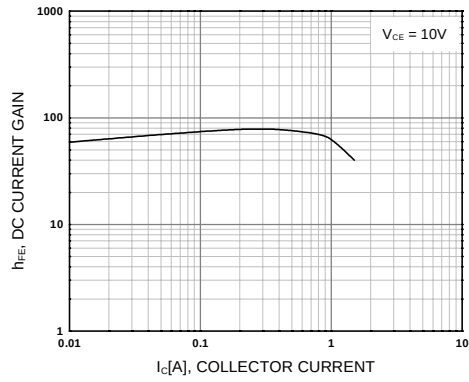


Figure 1. DC current Gain

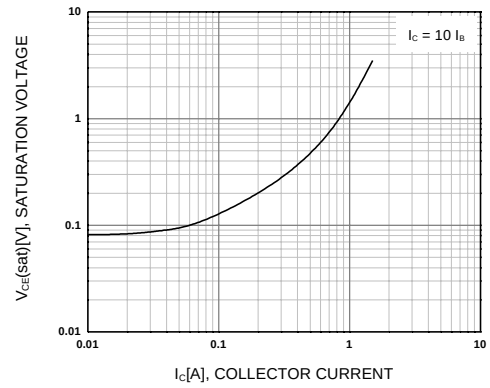


Figure 2. Collector-Emitter Saturation Voltage

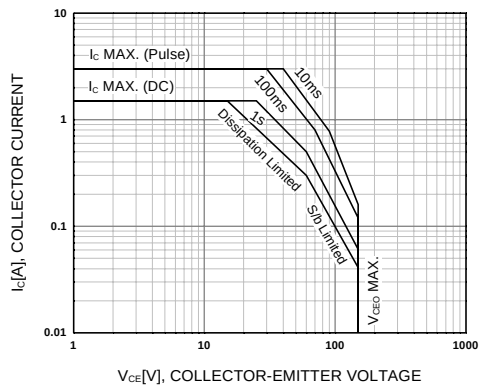


Figure 3. Safe Operating Area

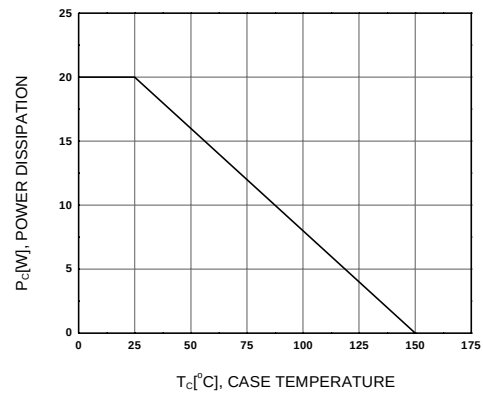
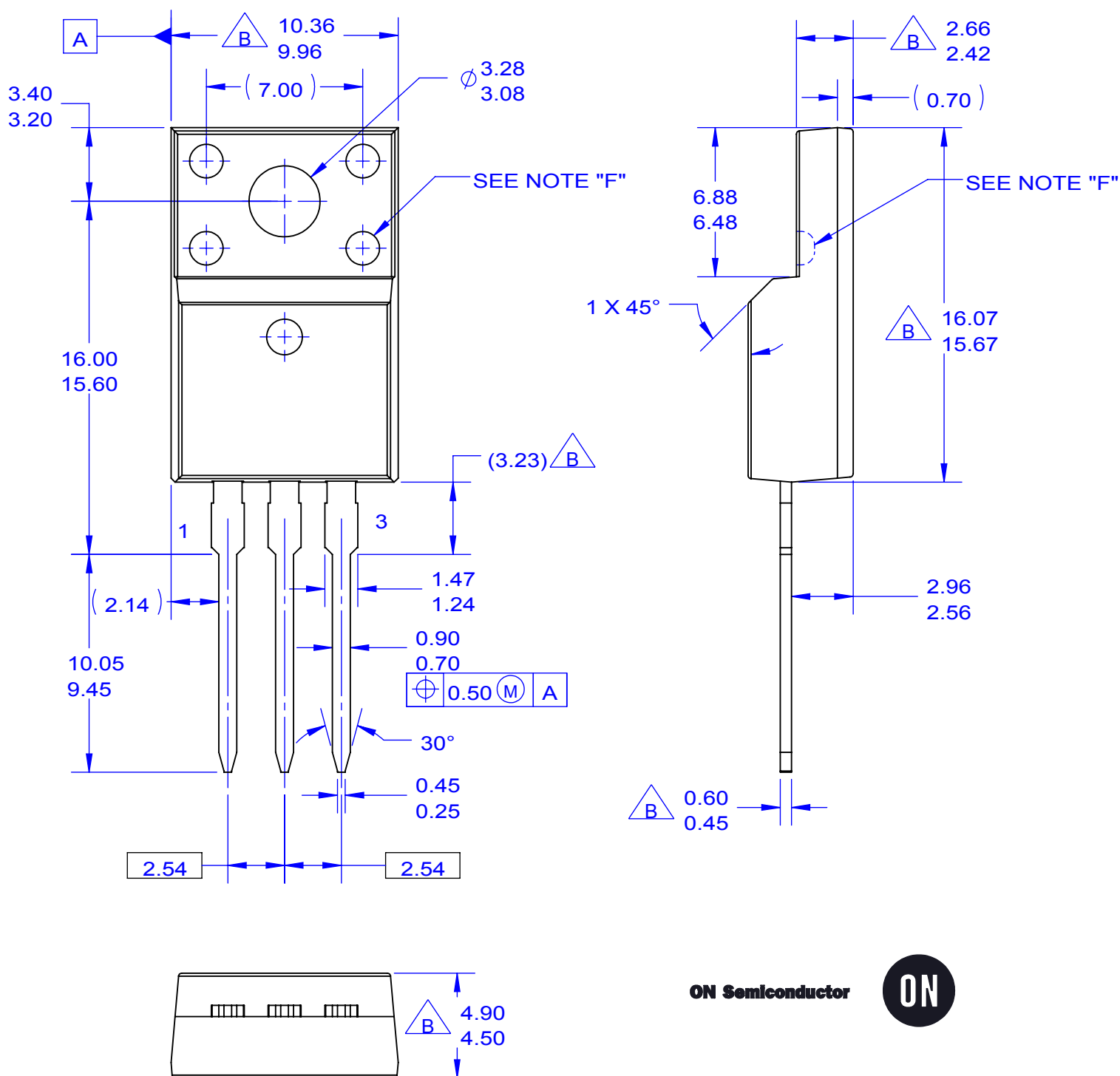


Figure 4. Power Derating



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NOTES:

- A. EXCEPT WHERE NOTED CONFORMS TO EIAJ SC91A.
- B. DOES NOT COMPLY EIAJ STD. VALUE.
- C. ALL DIMENSIONS ARE IN MILLIMETERS.
- D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- E. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
- F. OPTION 1 - WITH SUPPORT PIN HOLE.
OPTION 2 - NO SUPPORT PIN HOLE.
- G. DRAWING FILE NAME: TO220M03REV5

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