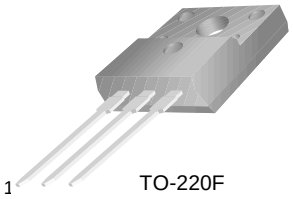
KSB1015

Low Frequency Power Amplifier

- Low Collector Emitter Saturation Voltage
- Complement to KSD1406



TO-220F

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	- 60	V
V_{CEO}	Collector-Emitter Voltage	- 60	V
V_{EBO}	Emitter-Base Voltage	- 7	V
I_C	Collector Current(DC)	- 3	A
I_B	Base Current	- 0.5	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_{CEO}	Collector-Emitter Breakdown Voltage	I_C = - 50mA, I_B = 0	- 60			V
I_{CBO}	Collector Cut-off Current	V_{CB} = - 60V, I_E = 0			- 100	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 7V, I_C = 0			- 100	µA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE} = - 5V, I_C = - 0.5A V_{CE} = - 5V, I_C = - 3A	60 20		200	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = - 3A, I_B = - 0.3A		- 0.5	- 1	V
V_{BE}(on)	Base-Emitter ON Voltage	V_{CE} = - 5V, I_C = - 0.5A		- 0.7	- 1	V
f_T	Current Gain Bandwidth Product	V_{CE} = - 5V, I_C = - 0.5A		9		MHz
C_{ob}	Output Capacitance	V_{CB} = - 10V, f = 1MHz		150		pF
t_{ON}	Turn ON Time	V_{CC} = - 30V, I_C = - 1A I_{B1} = -I_{B2} = -0.2A R_L = 30Ω		0.4		µs
t_{STG}	Storage Time			1.7		µs
t_F	Fall Time			0.5		µs

h_{FE} Classification

Classification	O	Y
h_{FE1}	60 ~ 120	100 ~ 200

Typical Characteristics

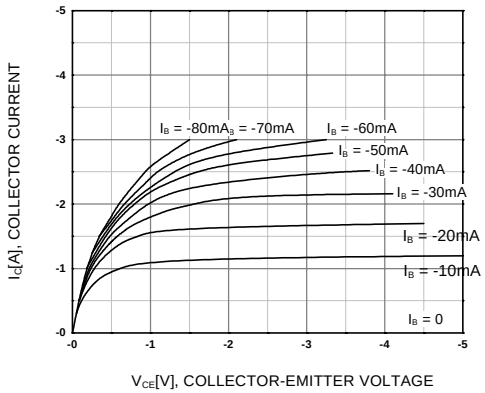


Figure 1. Static Characteristic

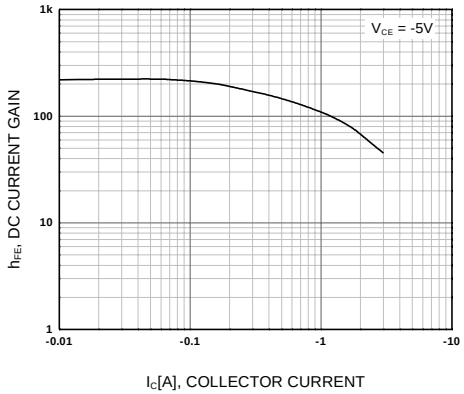


Figure 2. DC current Gain

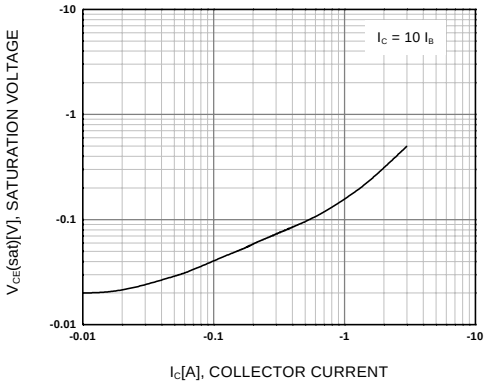


Figure 3. Collector-Emitter Saturation Voltage

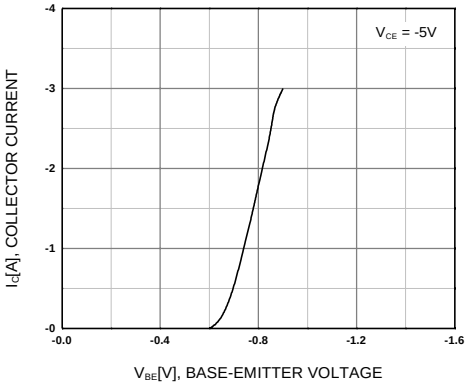


Figure 4. Base-Emitter On Voltage

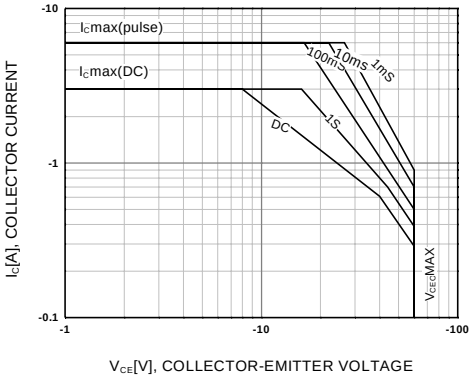


Figure 5. Safe Operating Area

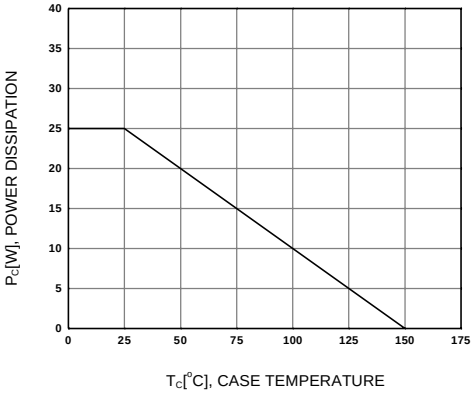
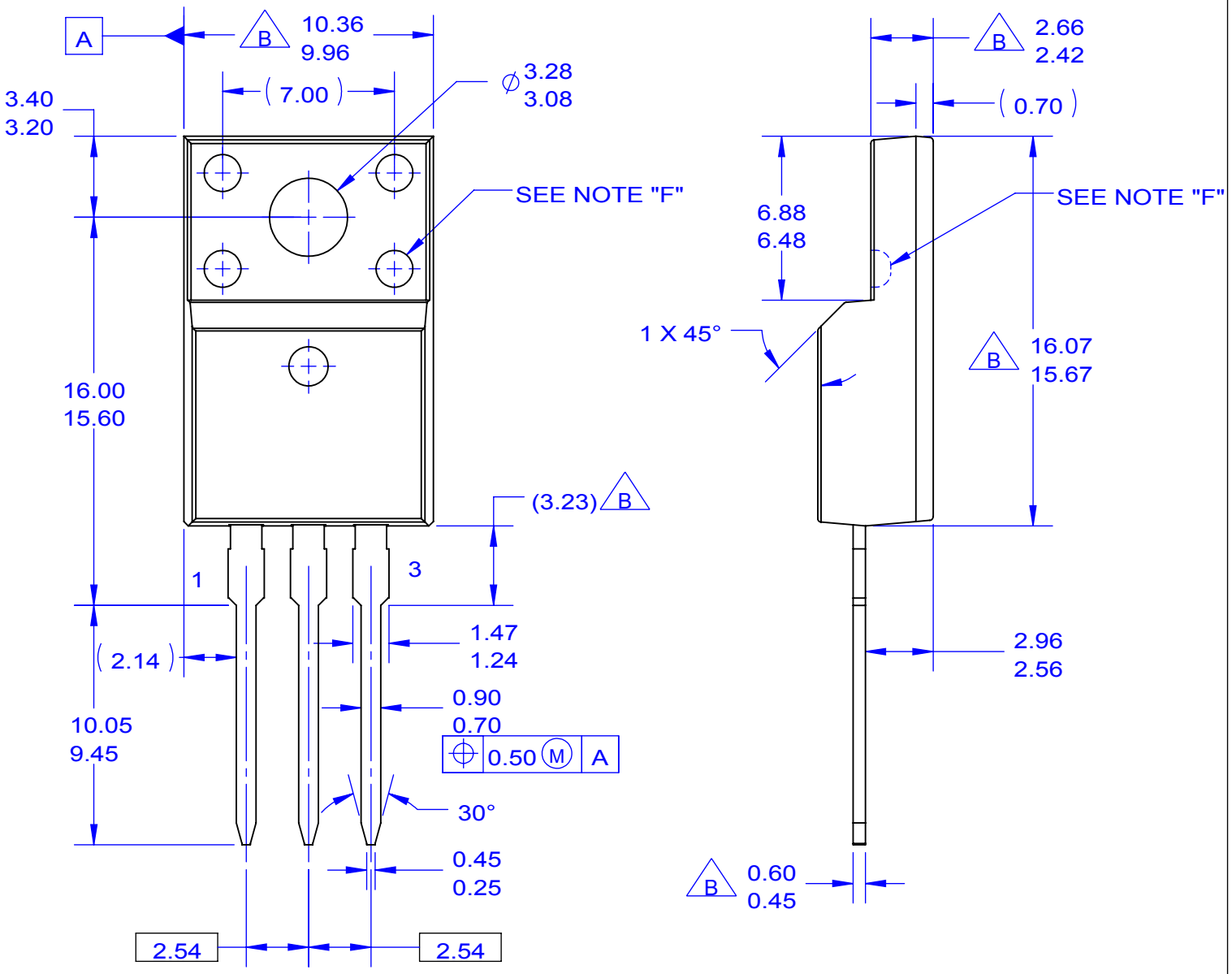
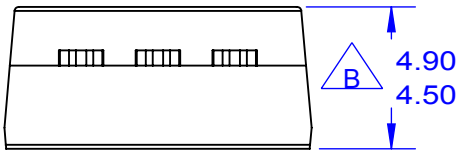


Figure 6. Power Derating





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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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