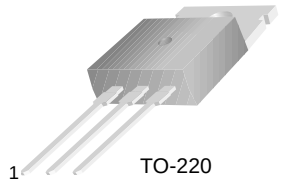
FAIRCHILD
SEMICONDUCTOR TM

KSC1173

Low Frequency Power Amplifier
Power Regulator

- Collector Current : I_C=3A
- Collector Dissipation : P_C=10W (T_C=25°C)
- Complement to KSA473



TO-220

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
BV_{CBO}	Collector-Base Voltage	30	V
BV_{CEO}	Collector-Emitter Voltage	30	V
BV_{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 ~ 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	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			
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 Base Width Product	V_{CE} = 2V, I_C = 0.5A		100		MHz
C_{ob}	Output Capacitance	V_{CB} = 10V, I_E =0, f = 1MHz		35		pF

h_{FE} Classification

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

Typical Characteristics

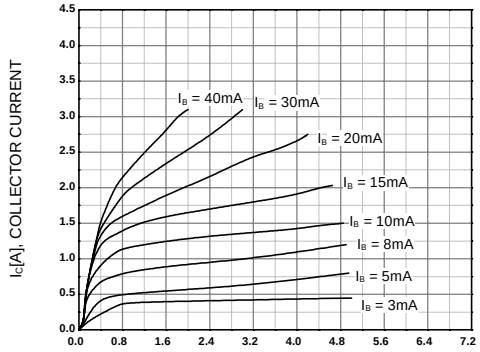


Figure 1. Static Characteristic

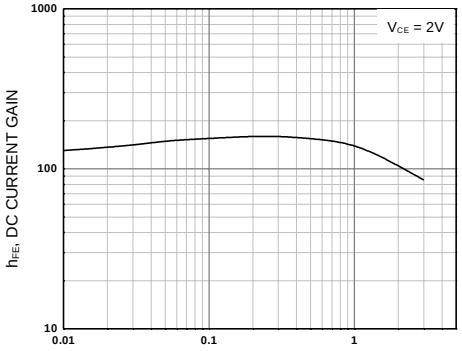


Figure 2. DC current Gain

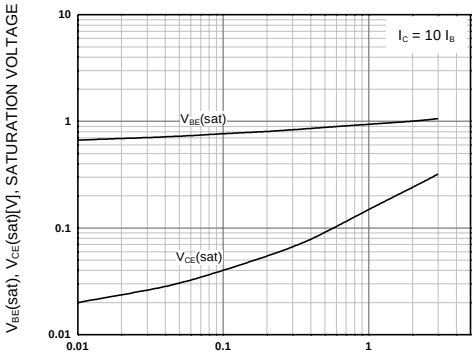


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

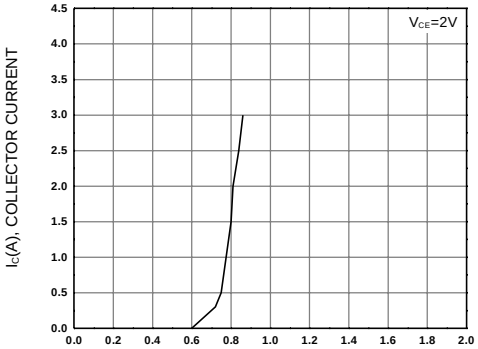


Figure 4. Base-Emitter On Voltage

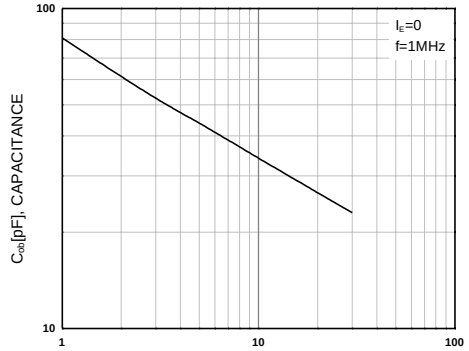


Figure 5. Collector Output Capacitance

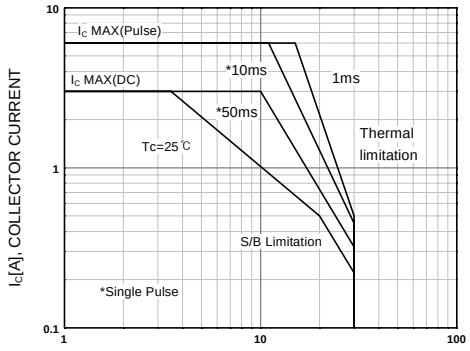


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

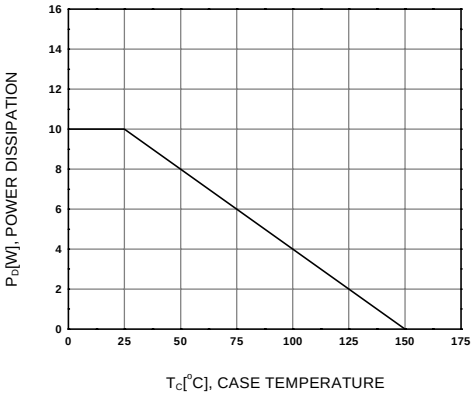
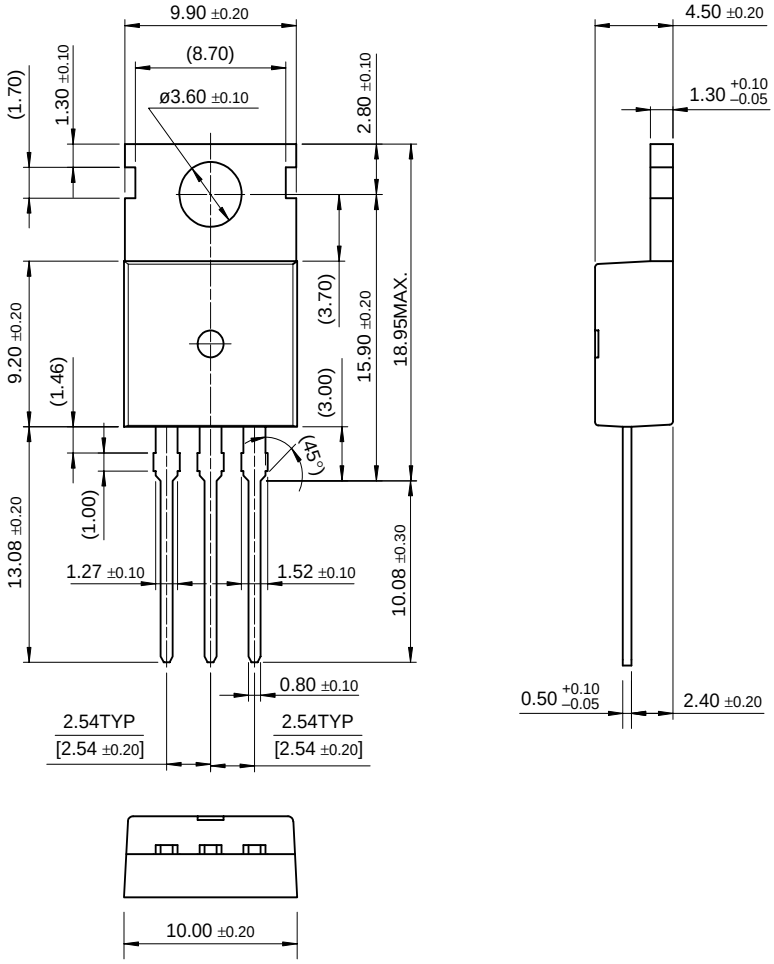


Figure 7. Power Derating

Package Demensions

TO-220



Dimensions in Millimeters

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