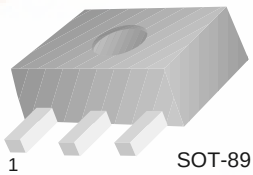
FAIRCHILD SEMICONDUCTOR®

KSC2883

Low Frequency Power Amplifier

- 3W Output Application
- Collector Dissipation : P_C=1~2W in Mounted on Ceramic Board
- Complement to KSA1203



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SOT-89

1. Base 2. Collector 3. Emitter

NPN Epitaxial Silicon Transistor

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	1.5	A
I_B	Base Current	0.3	A
P_C P_C*	Collector Power Dissipation	500 1,000	mW mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

* Mounted on Ceramic Board (250mm^{2}x0.8mm)

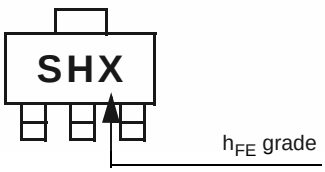
Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=10μA, 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}=30V, I_E=0			100	nA
I_{EBO}	Emitter Cut-off Current	V_{BE}=5V, I_C=0			100	nA
h_{FE}	DC Current Gain	V_{CE}=2V, I_C=500mA	100		320	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=1.5A, I_B=30mA			2.0	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}=2V, I_C=500mA			1.0	V
f_T	Current Gain Bandwidth Product	V_{CE}=2V, I_C=500mA		120		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz		40		pF

h_{FE} Classification

Classification	O	Y
h_{FE}	100 ~ 200	160 ~ 320

Marking



Typical Characteristics

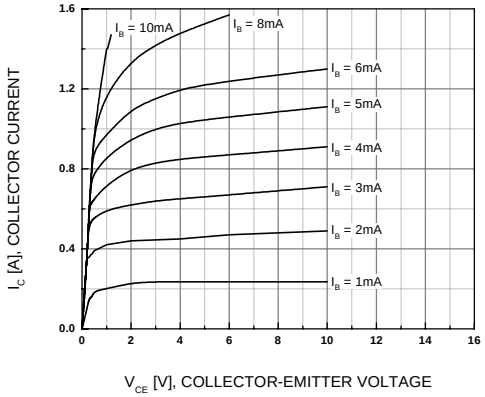


Figure 1. Static Characteristics

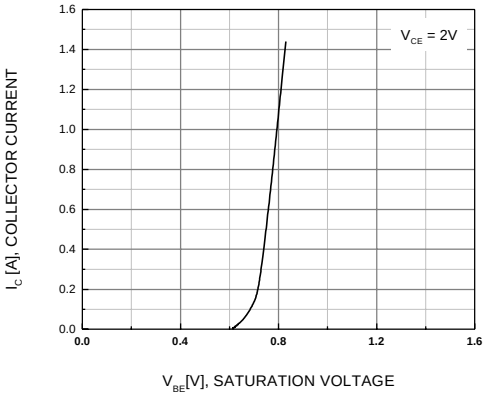


Figure 2. Base-Emitter On Voltage

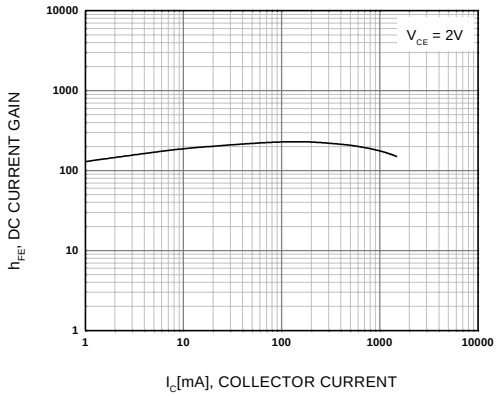


Figure 3. DC Current Gain

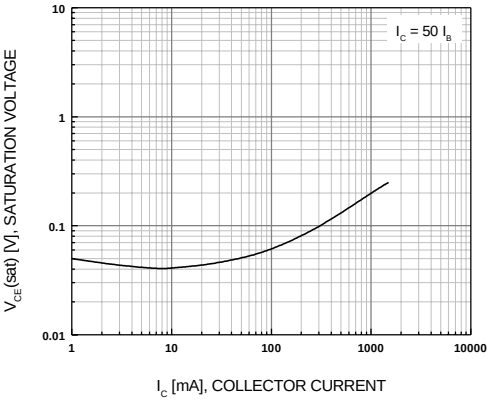


Figure 4. Collector-Emitter Saturation Voltage

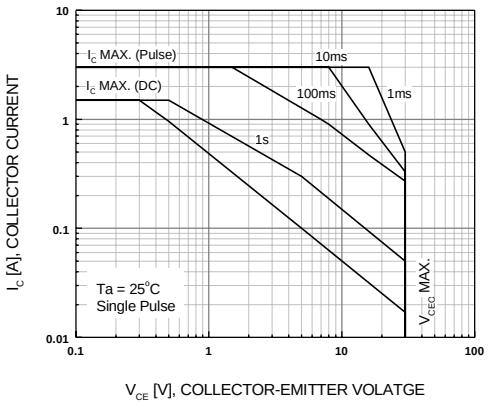


Figure 5. Safe Operating Area

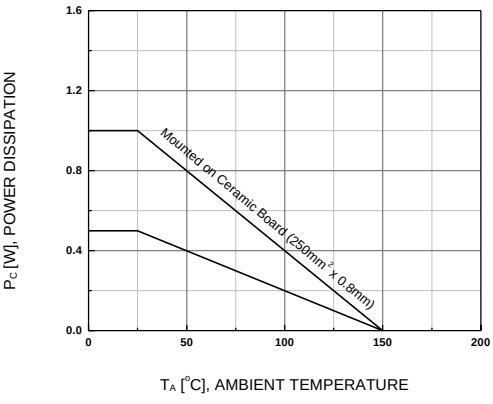


Figure 6. Power Derating

Typical Characteristics (Continued)

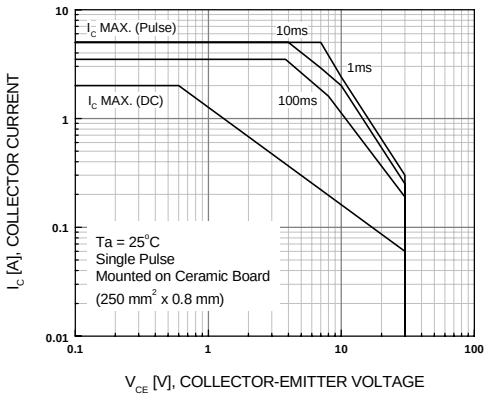


Figure 7. Safe Operating Area

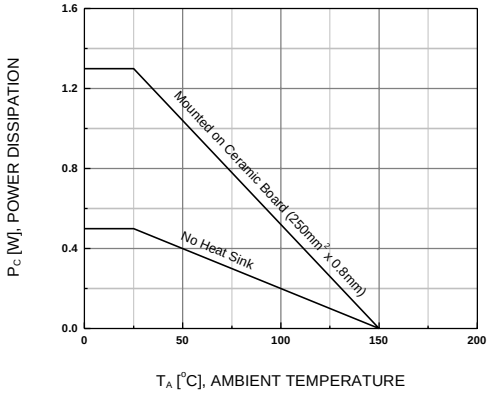
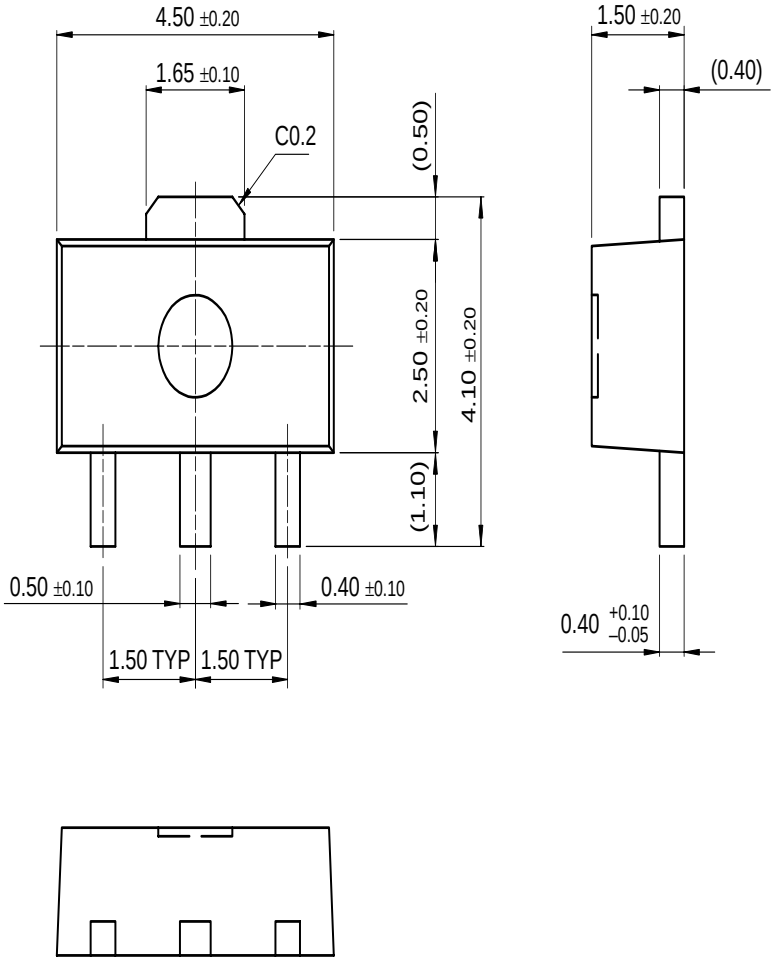


Figure 8. Power Derating

Package Dimensions

SOT-89



Dimensions in Millimeters

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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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PRODUCT STATUS DEFINITIONS

Definition of Terms

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