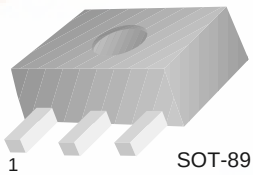
FAIRCHILD SEMICONDUCTOR®

KSA1203

Low Frequency Power Amplifier

- 3W Output application
- Collector Power Dissipation P_C=1~2W : Mounted on Ceramic Board
- Complement to KSC2883



1 SOT-89

1. Base 2. Collector 3. Emitter

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Ratings	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 (250mm2 × 0.8mm)

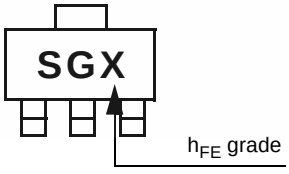
Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -10mA, 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			50	pF

h_{FE} Classification

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

Marking



Typical Characteristics

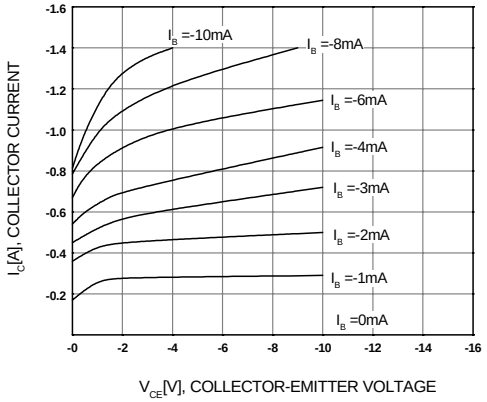


Figure 1. Static Characteristic

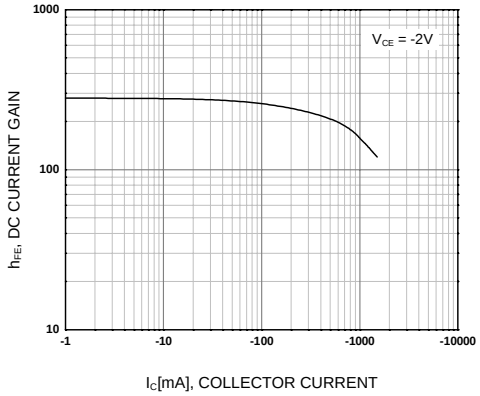


Figure 2. DC current Gain

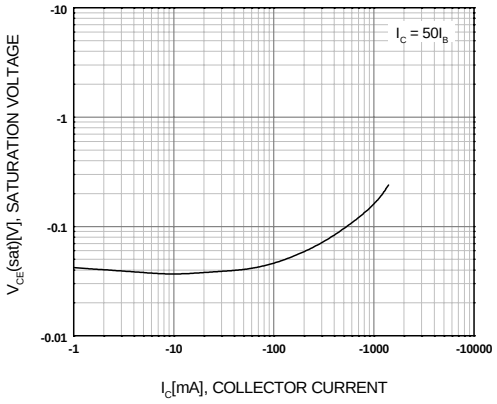


Figure 3. Collector-Emitter Saturation Voltage

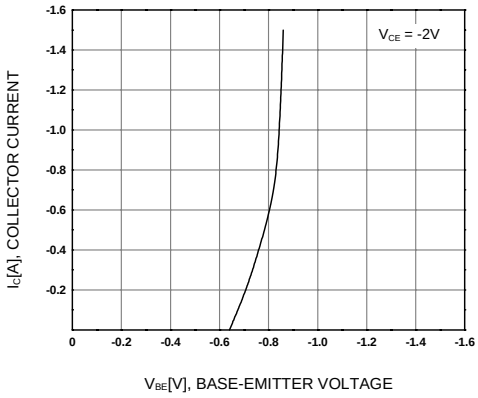


Figure 4. Base-Emitter On Voltage

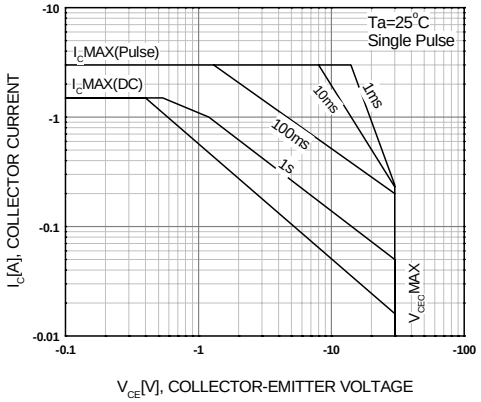


Figure 5. Safe Operating Area

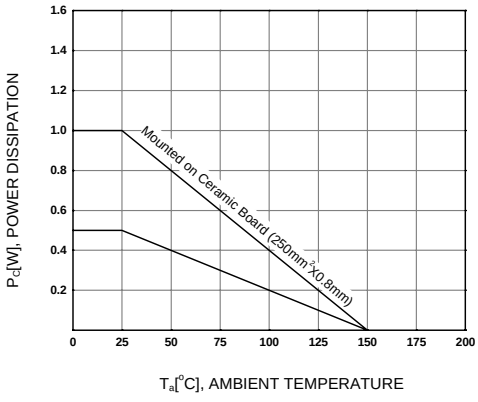
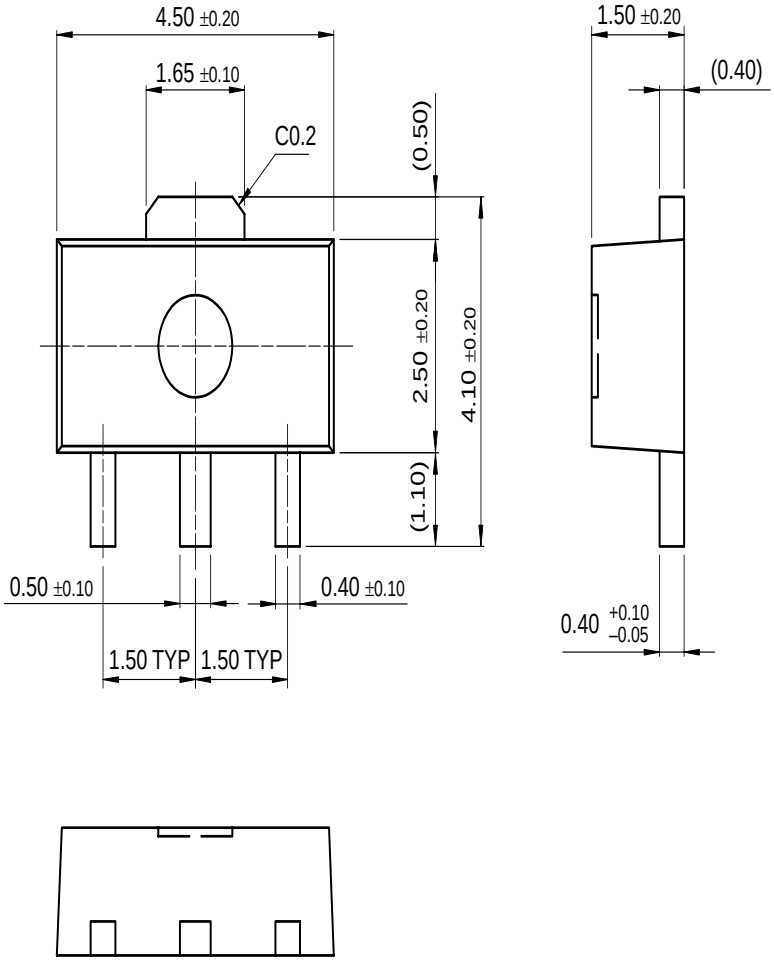


Figure 6. Power Derating

Package Dimensions

SOT-89



Dimensions in Millimeters

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CoolFET™	FRFET™	MicroFET™	QFET®	SuperSOT™-8
CROSSVOLT™	GlobalOptoisolator™	MicroPak™	QS™	SyncFET™
DOME™	GTO™	MICROWIRE™	QT Optoelectronics™	TinyLogic®
EcoSPARK™	HiSeC™	MSX™	Quiet Series™	TINYOPTO™
E^2CMOS™	I^2C™	MSXPro™	RapidConfigure™	TruTranslation™
EnSigna™	*i-Lo*™	OCX™	RapidConnect™	UHC™
FACT™	ImpliedDisconnect™	OCXPro™	µSerDes™	UltraFET®
FACT Quiet Series™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
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The Power Franchise®		PACMAN™	SPM™	
Programmable Active Droop™		POP™	Stealth™	

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