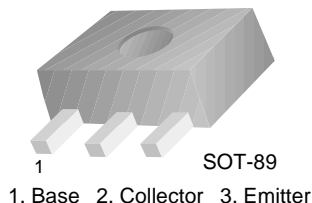


# KSA1203

KSA1203

## Low Frequency Power Amplifier

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



## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ 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
$P_C$	Collector Power Dissipation	500	mW
$P_C^*$		1,000	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

\* Mounted on Ceramic Board (250mm $^2$   $\times$  0.8mm)

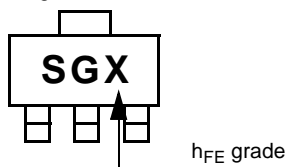
### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$ , $I_B = 0$	-30			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}$ , $I_C = 0$	-5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -30\text{V}$ , $I_E = 0$			-100	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{BE} = -5\text{V}$ , $I_C = 0$			-100	nA
$h_{FE}$	DC Current Gain	$V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$	100		320	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -1.5\text{A}$ , $I_B = -30\text{mA}$			-2.0	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$			-1.0	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$		120		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$			50	pF

### $h_{FE}$ Classification

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

Marking



# Typical Characteristics

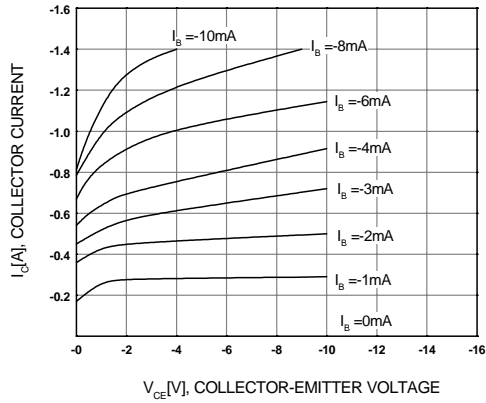


Figure 1. Static Characteristic

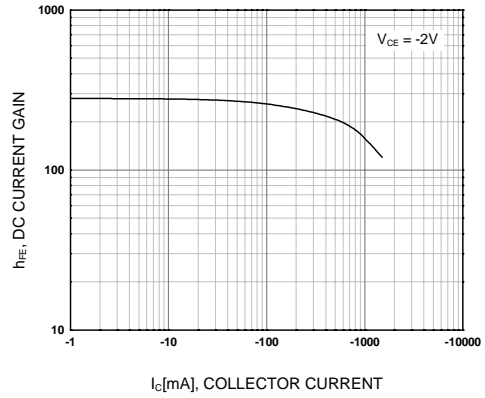


Figure 2. DC current Gain

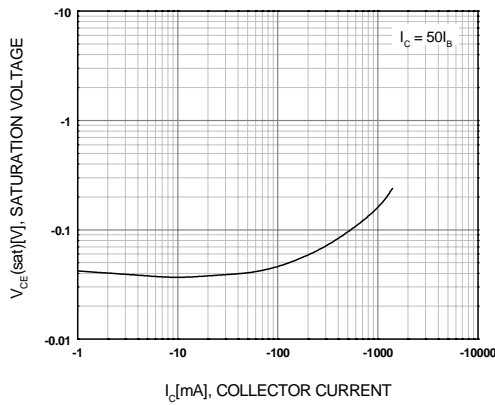


Figure 3. Collector-Emitter Saturation Voltage

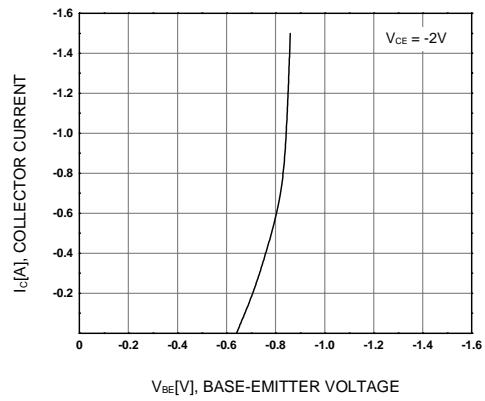


Figure 4. Base-Emitter On Voltage

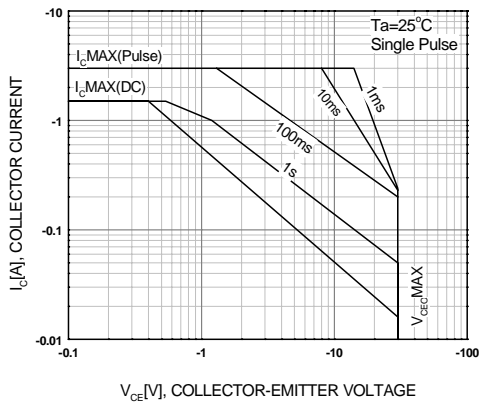


Figure 5. Safe Operating Area

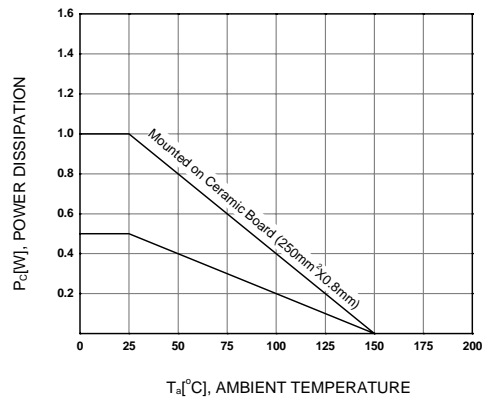
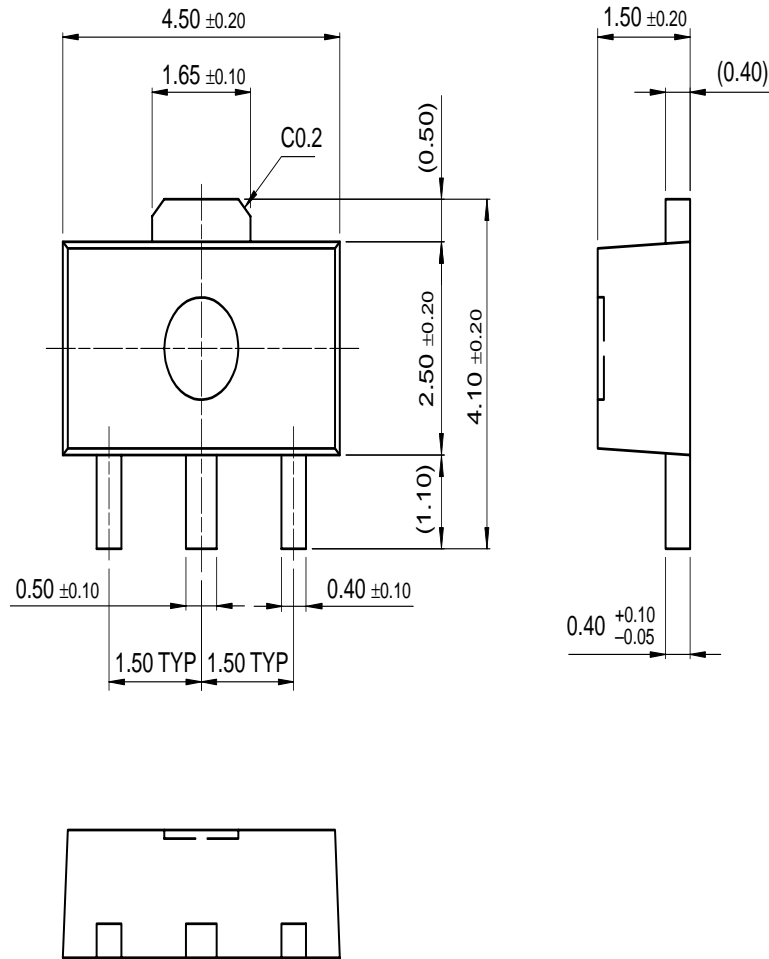


Figure 6. Power Derating

# Package Dimensions

## SOT-89



Dimensions in Millimeters

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Bottomless <sup>™</sup>	FPS <sup>™</sup>	MICROCOUPLER <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
CoolFET <sup>™</sup>	FRFET <sup>™</sup>	MicroFET <sup>™</sup>	QFET <sup>®</sup>	SuperSOT <sup>™</sup> -8
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