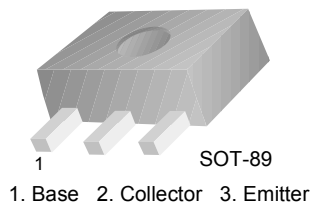


# KSA1203

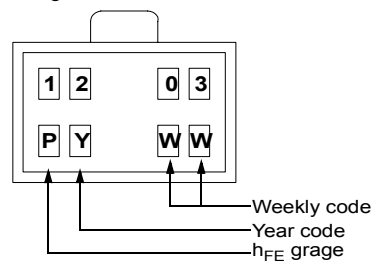
## PNP Epitaxial Silicon Transistor

### Low Frequency Power Amplifier

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



Marking



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

\* Mounted on Ceramic Board (250mm<sup>2</sup> × 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	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1.5\text{A}$ , $I_B = -30\text{mA}$			-2.0	V
$V_{BE(on)}$	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<sub>FE</sub> Classification**

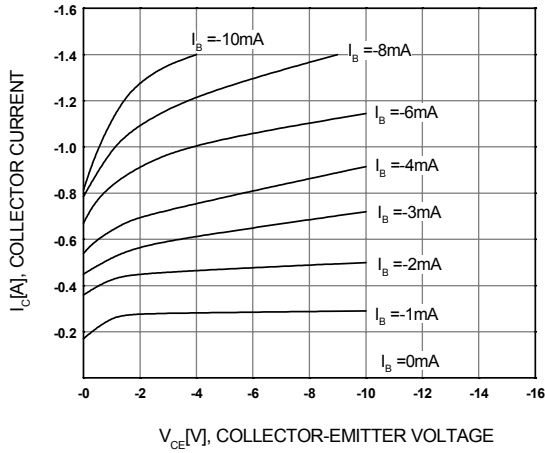
Classification	O	Y
h <sub>FE</sub>	100 ~ 200	160 ~ 320

**Package Marking and Ordering Information**

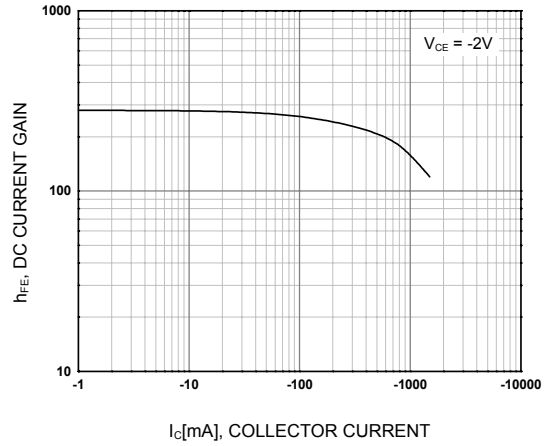
Device Marking	Device	Package	Reel Size	Tape Width	Quantity
1203	KSA1203	SOT-89	13"	--	4,000

## Typical Performance Characteristics

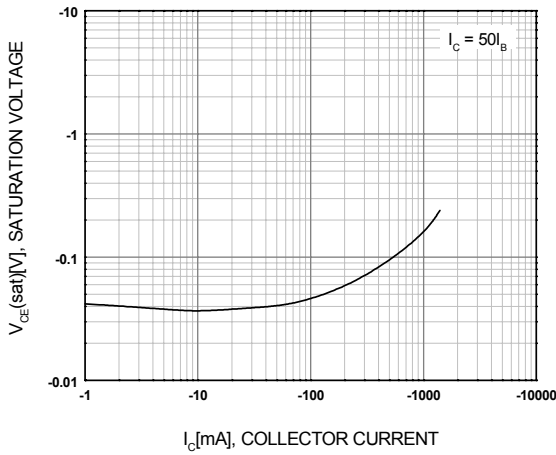
**Figure 1. Static Characteristic**



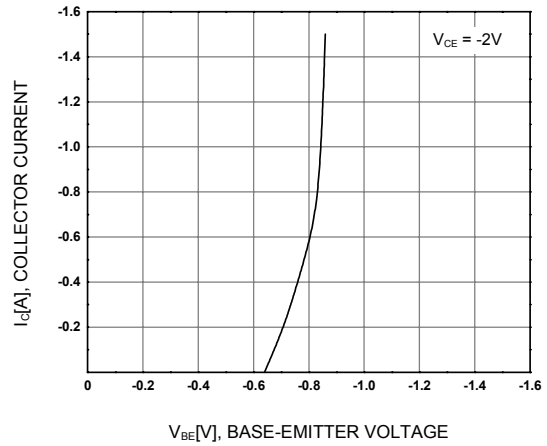
**Figure 2. DC Current Gain**



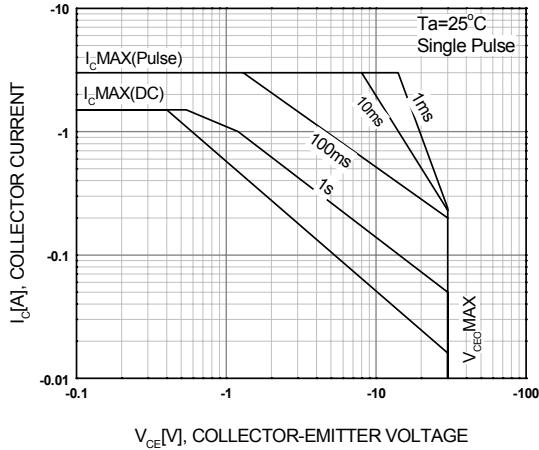
**Figure 3. Collector-Emitter Saturation Voltage**



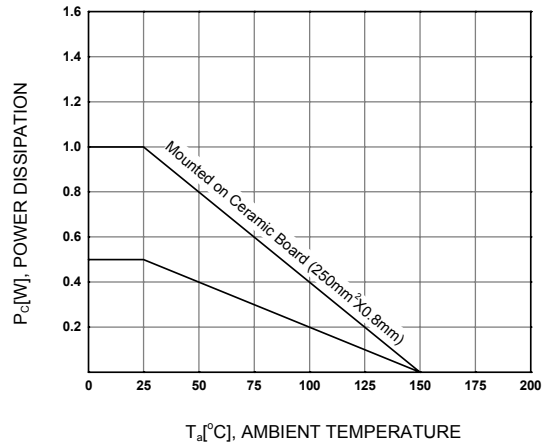
**Figure 4. Base-Emitter On Voltage**



**Figure 5. Safe Operating Area**

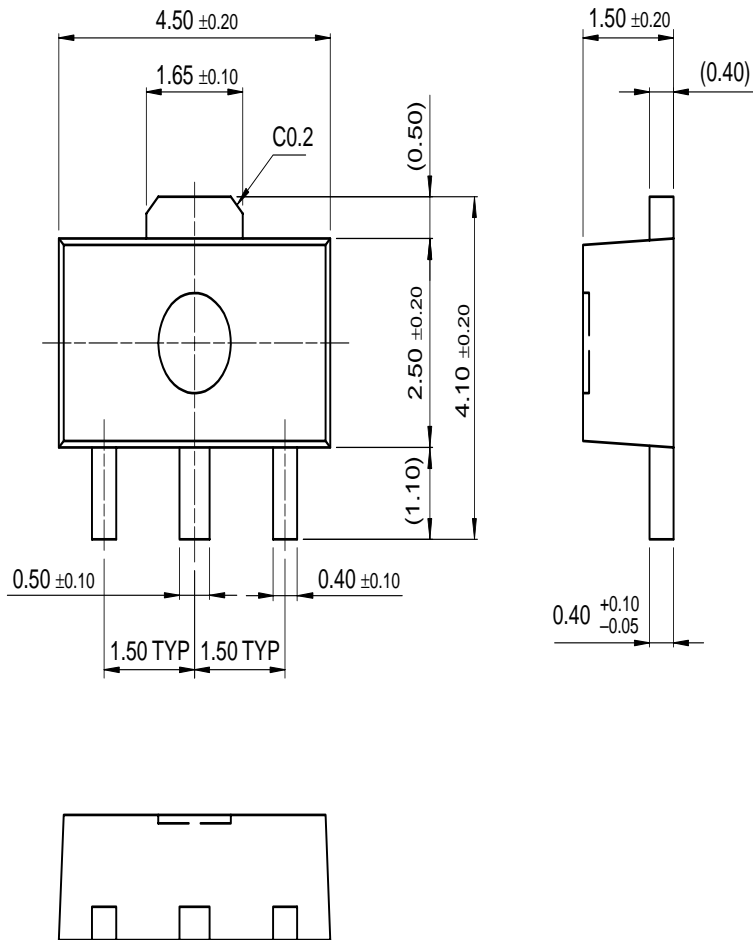


**Figure 6. Power Derating**



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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EcoSPARK™	I <sup>2</sup> C™	MSXPro™	RapidConnect™	UniFET™
E <sup>2</sup> CMOS™	i-Lo™	OCX™	μSerDes™	VCX™
EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	Wire™
FACT™	IntelliMAX™	OPTOLOGIC®	SMART START™	
FACT Quiet Series™		OPTOPLANAR™	SPM™	
Across the board. Around the world.™		PACMAN™	Stealth™	
The Power Franchise®		POP™	SuperFET™	
Programmable Active Droop™		Power247™	SuperSOT™-3	
		PowerEdge™	SuperSOT™-6	

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