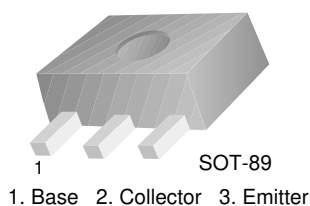


# KSC2883

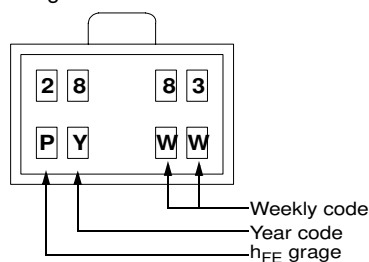
## NPN Epitaxial Silicon Transistor

### Low Frequency Power Amplifier

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



Marking



### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CB0}$	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	$^\circ\text{C}$

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired. 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	$I_C = 10\mu\text{A}, I_B = 0$	30			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 1\text{mA}, I_C = 0$	5			V
$I_{CB0}$	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	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		40		pF

\* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

**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
2883	KSC2883	SOT-89	13"	--	4,000

## Typical Performance Characteristics

Figure 1. Static Characteristic

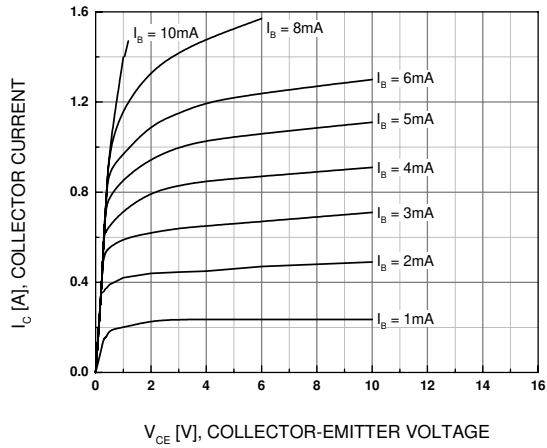


Figure 2. Base-Emitter On Voltage

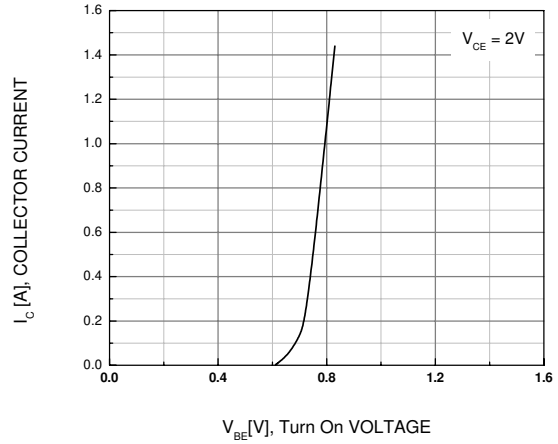


Figure 3. DC Current Gain

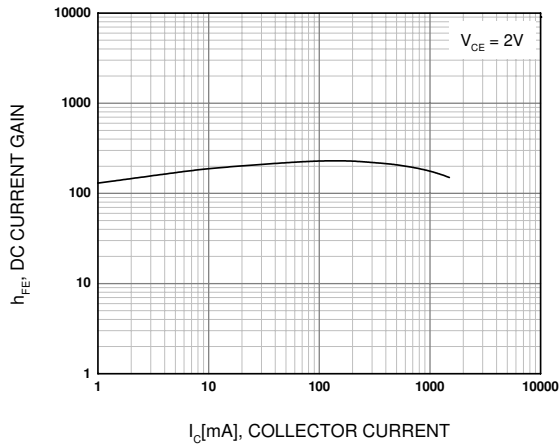


Figure 4. Collector-Emitter Saturation Voltage

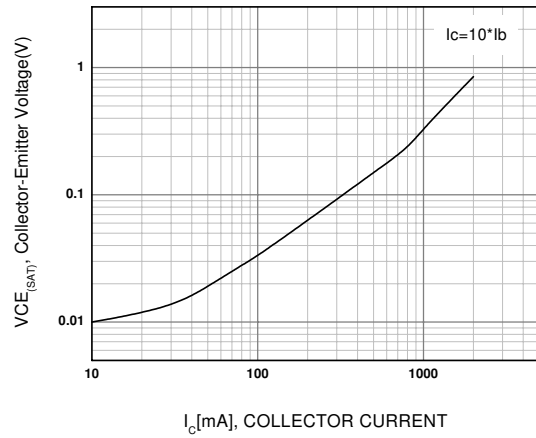


Figure 5. Safe Operating Area

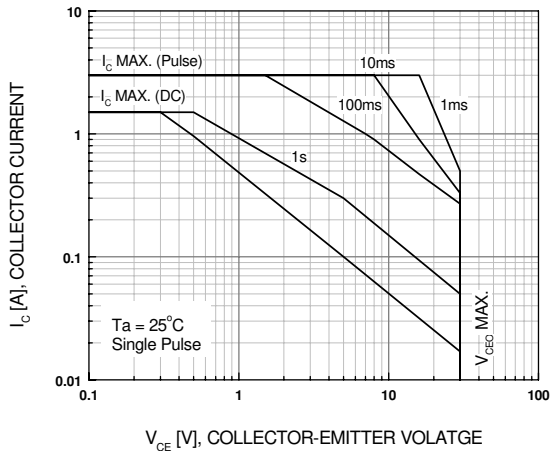
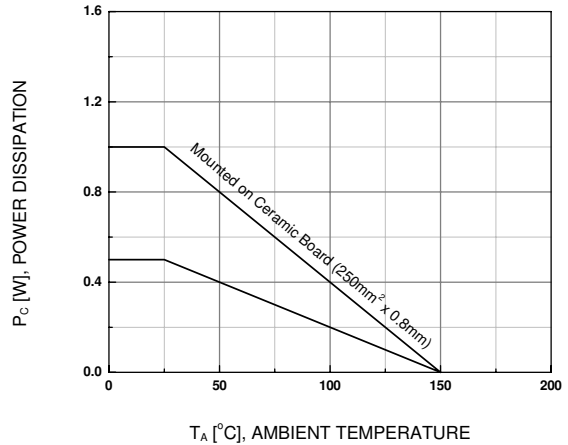
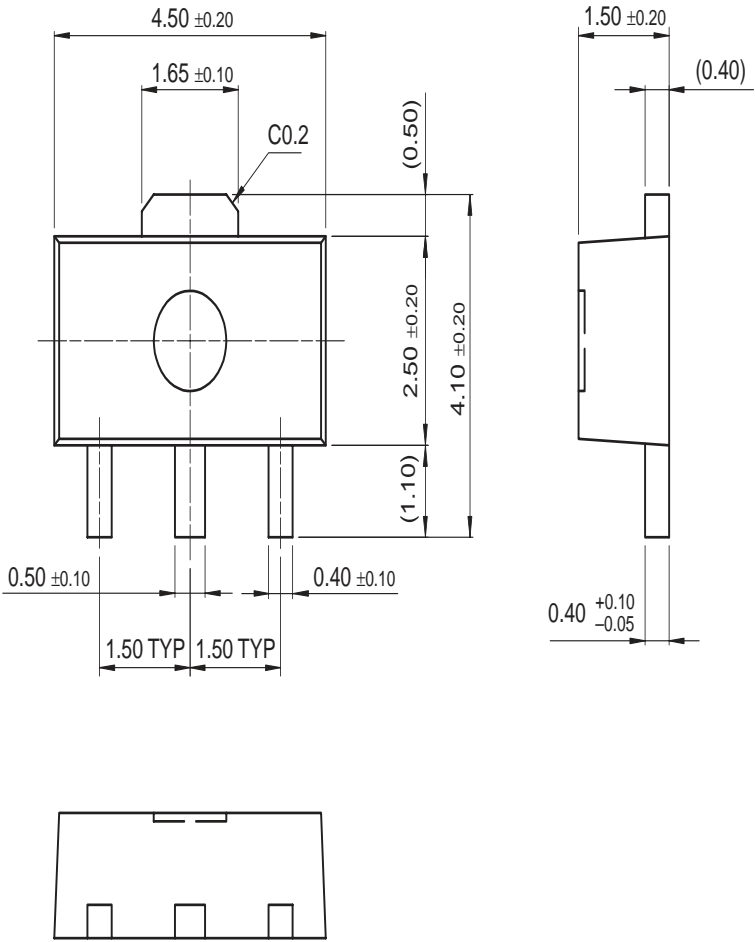


Figure 6. Power Derating



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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Build it Now™	HiSeC™	OPTOPLANAR™	Stealth™	Wire™
CoolFET™	I <sup>2</sup> C™	PACMAN™	SuperFET™	
CROSSVOLT™	i-Lo™	POP™	SuperSOT™-3	
DOME™	ImpliedDisconnect™	Power247™	SuperSOT™-6	
EcoSPARK™	IntelliMAX™	PowerEdge™	SuperSOT™-8	
E <sup>2</sup> CMOS™	ISOPLANAR™	PowerSaver™	SyncFET™	
EnSigna™	LittleFET™	PowerTrench®	TCM™	
FACT®	MICROCOUPLER™	QFET®	TinyBoost™	
FAST®	MicroFET™	QS™	TinyBuck™	
FAST <sub>r</sub> ™	MicroPak™	QT Optoelectronics™	TinyPWM™	
FPS™	MICROWIRE™	Quiet Series™	TinyPower™	
FRFET™	MSX™	RapidConfigure™	TinyLogic®	
	MSXPro™	RapidConnect™	TINYOPTO™	
Across the board. Around the world.™		μSerDes™	TruTranslation™	
The Power Franchise®		ScalarPump™	UHC®	
Programmable Active Droop™				

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