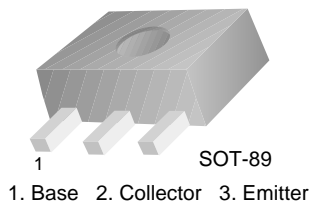


KSC2883

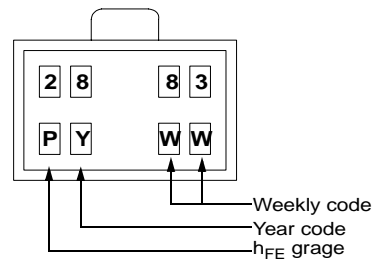
NPN Epitaxial Silicon Transistor

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 (250mm²x0.8mm)

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 $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

h_{FE} Classification

Classification	O	Y
h _{FE}	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

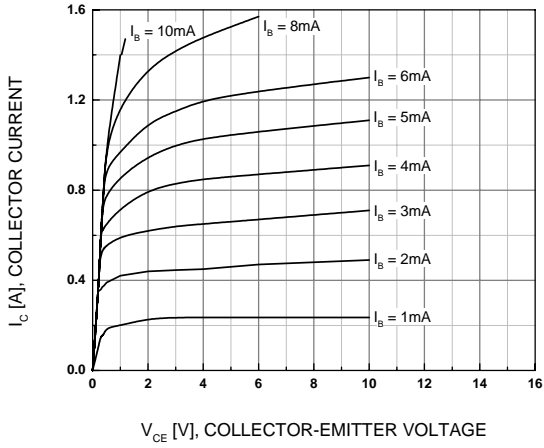


Figure 2. Base-Emitter On Voltage

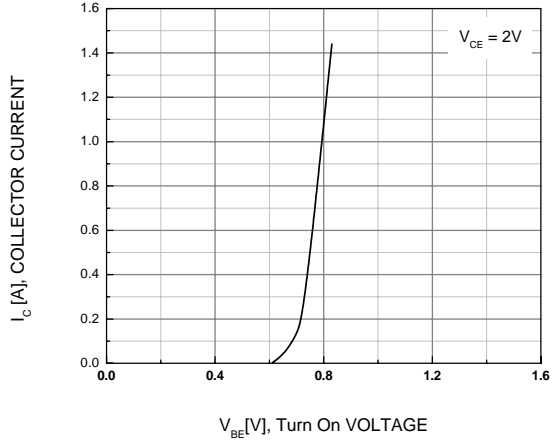


Figure 3. DC Current Gain

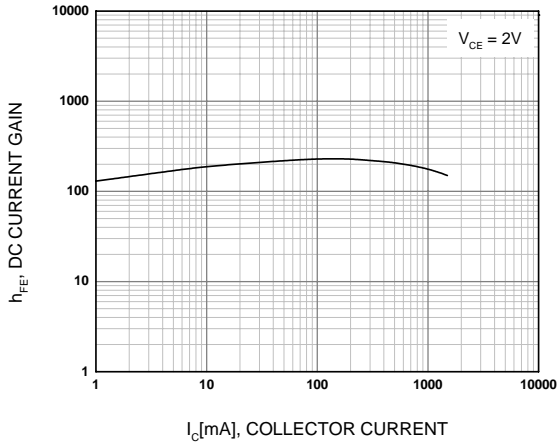


Figure 4. Collector-Emitter Saturation Voltage

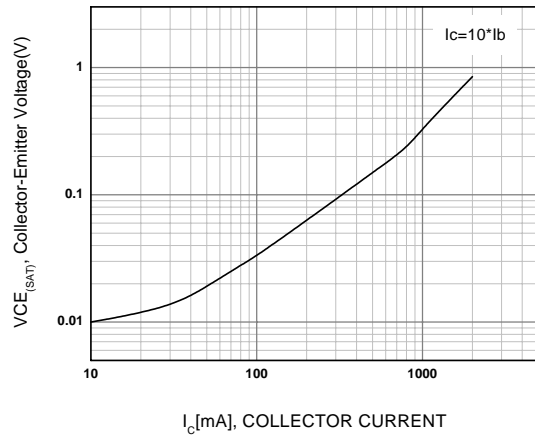


Figure 5. Safe Operating Area

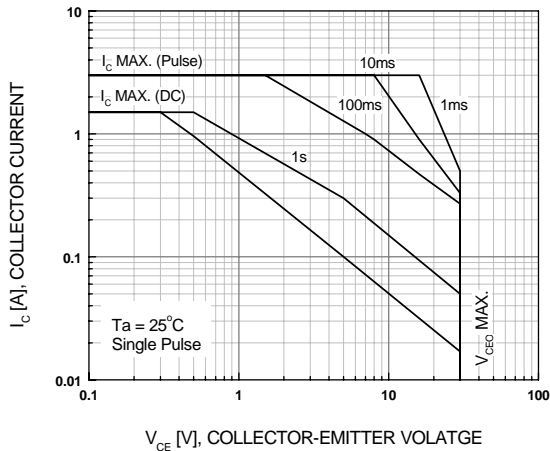
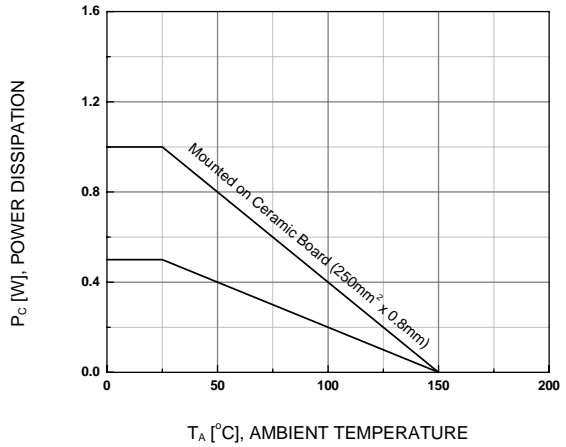
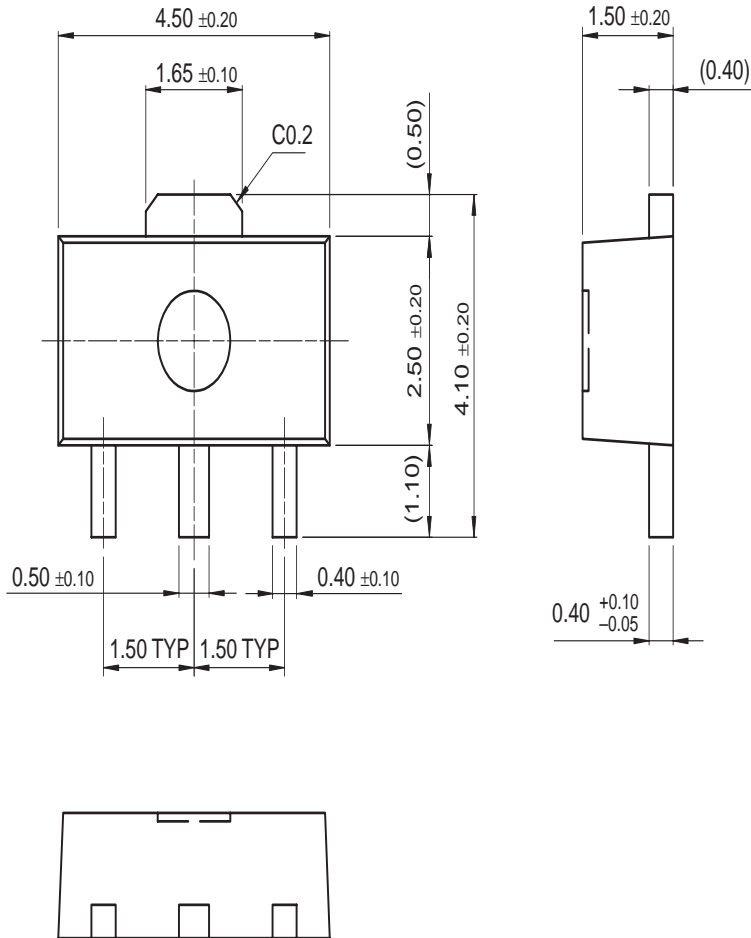


Figure 6. Power Derating



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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EnSigna™	LittleFET™	PowerTrench®	TCM™	
FACT®	MICROCOUPLER™	QFET®	TinyBoost™	
FAST®	MicroFET™	QS™	TinyBuck™	
FAST _r ™	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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