THE DATASHEET OF

KSC2883YTF

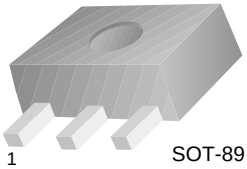
FAIRCHILD SEMICONDUCTOR®

November 2006

KSC2883
NPN Epitaxial Silicon Transistor

Low Frequency Power Amplifier

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



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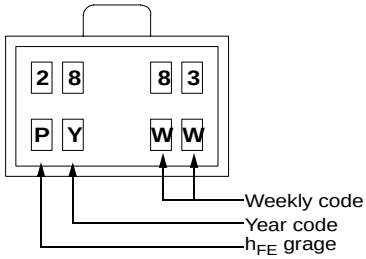
SOT-89

1. Base 2. Collector 3. Emitter

Marking



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	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

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired. Mounted on Ceramic Board (250mm^{2}x0.8mm)

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 = 10μA, 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		40		pF

* Pulse Test: Pulse Width≤300μs, Duty Cycle≤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

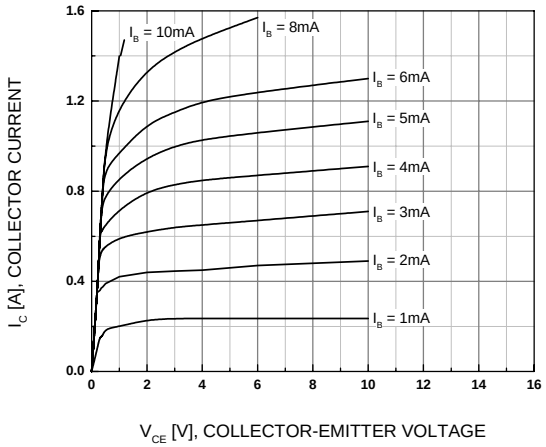


Figure 2. Base-Emitter On Voltage

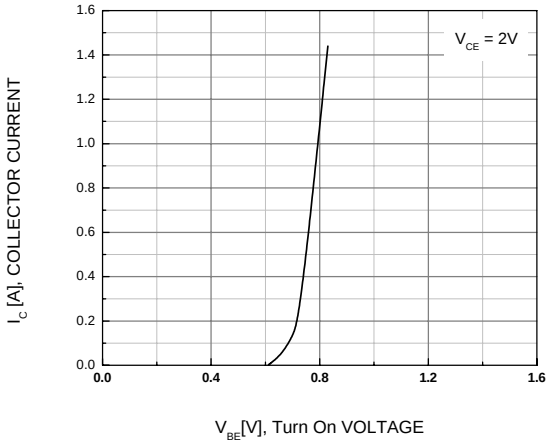


Figure 3. DC Current Gain

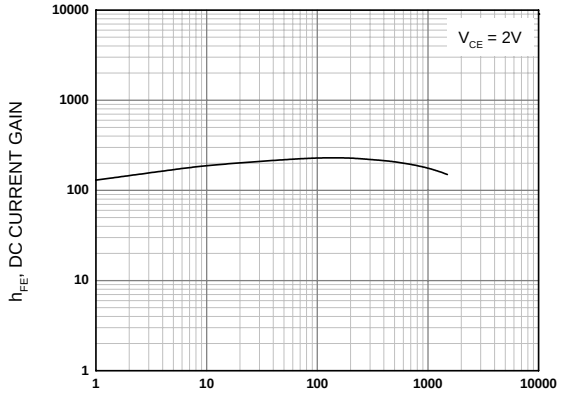


Figure 4. Collector-Emitter Saturation Voltage

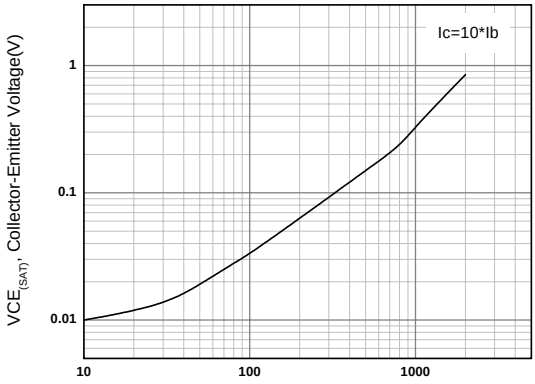


Figure 5. Safe Operating Area

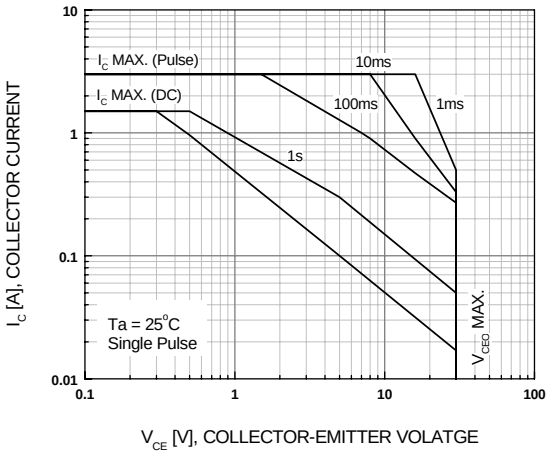
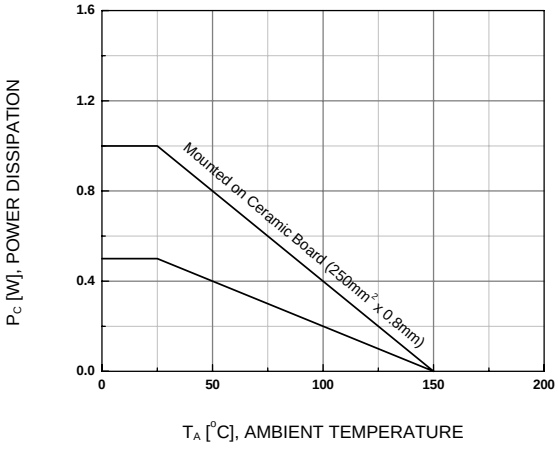
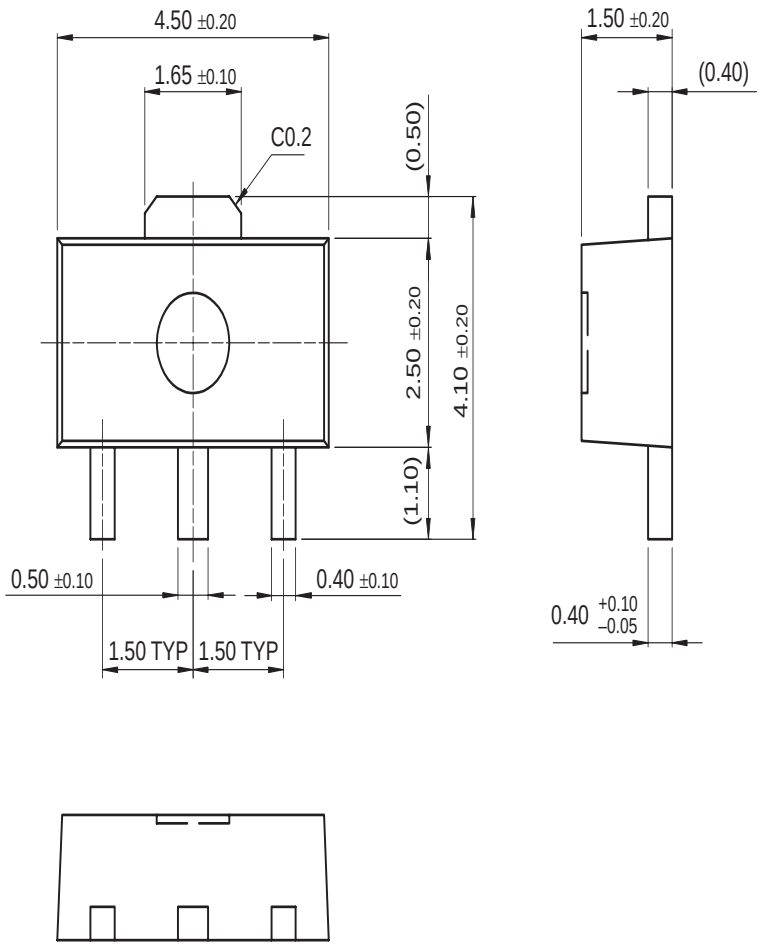


Figure 6. Power Derating



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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