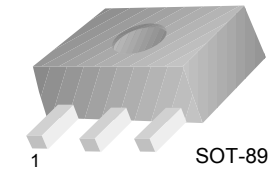
FAIRCHILD SEMICONDUCTOR®

July 2005

KSB798
PNP Epitaxial Silicon Transistor

Audio Frequency Power Amplifier

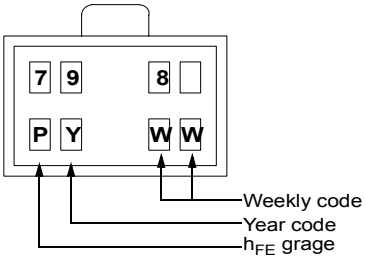
- Collector Current : I_C = -1A
- Collector Power Dissipation : P_C = 2W



SOT-89

1. Base 2. Collector 3. Emitter

Marking



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-1.0	A
I_{CP}	Collector Current (Pulse) *	-1.5	A
P_C	Collector Power Dissipation	2.0	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

* PW ≤ 10ms, Duty cycle ≤ 50%

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = -100μA, I_E = 0	-30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = -1mA, I_B = 0	-25			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = -100μA, I_C = 0	-5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = -30V, I_E = 0			-0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = -5V, I_C = 0			-0.1	μA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE} = -1V, I_C = -0.1A V_{CE} = -1V, I_C = -1.0A	90 50		400	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C = -1.0A, I_B = -0.1A			-0.4	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C = -1.0A, I_B = -0.1A			-1.2	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE} = -6V, I_C = -10mA	-0.6		-0.7	V
f_T	Current Gain Bandwidth Product	V_{CE} = -6V, I_C = -10mA		110		MHz
C_{ob}	Output Capacitance	V_{CB} = -6V, I_E = 0, f = 1MHz		18		pF

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h_{FE} Classification

Classification	O	Y	G
h_{FE1}	90 ~ 180	135 ~ 270	200 ~ 400

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
798	KSB798	SOT-89	13”	--	4,000

Typical Performance Characteristics

Figure 1. Static Characteristic

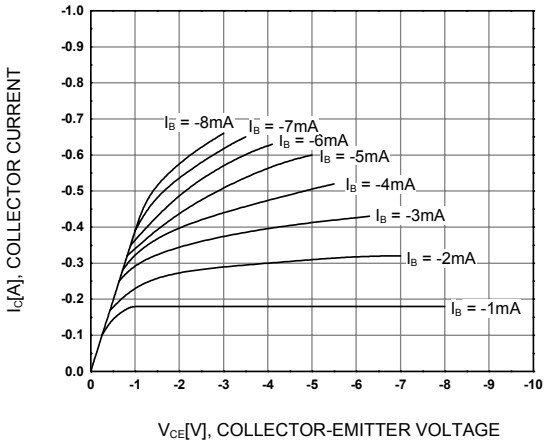


Figure 2. DC Current Gain

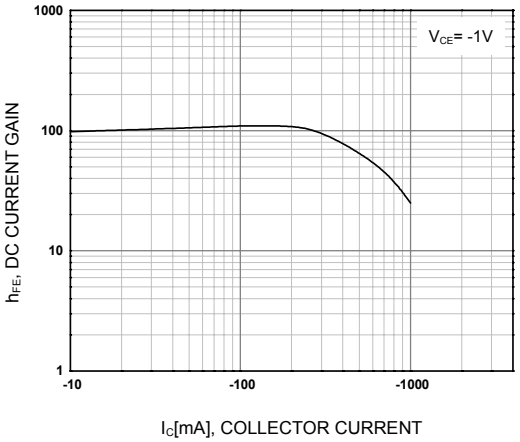


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

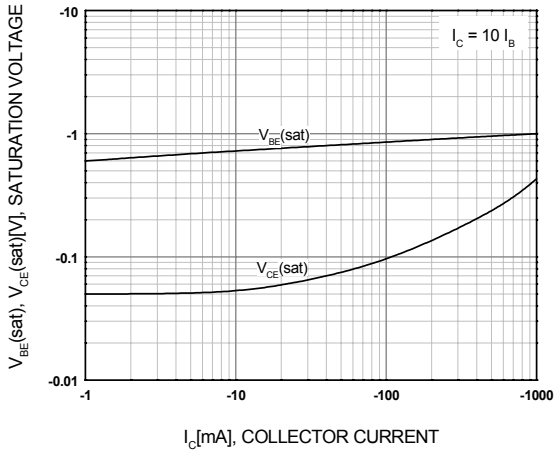


Figure 4. Collector Output Capacitance

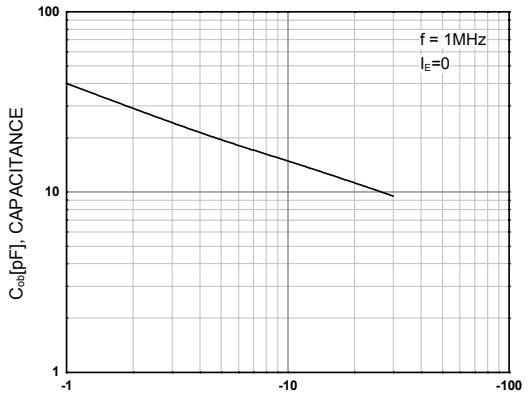


Figure 5. Current Gain Bandwidth Product

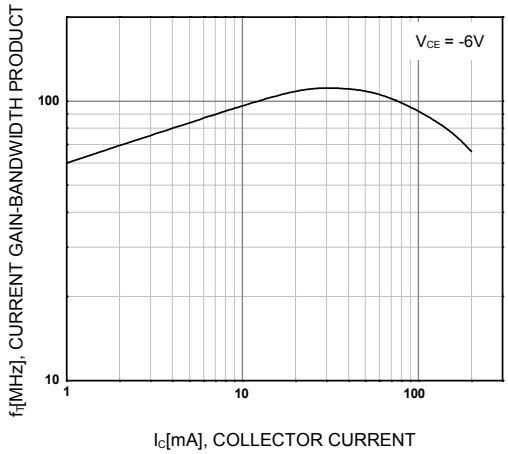
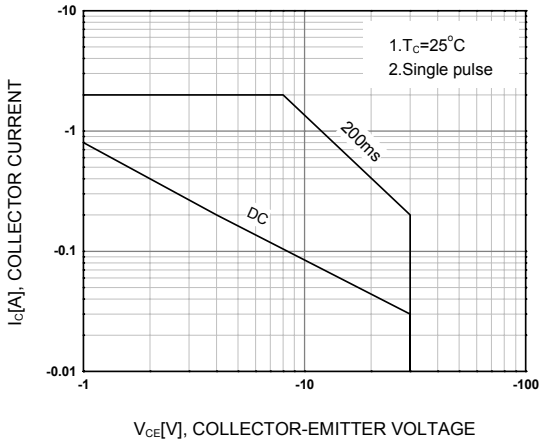
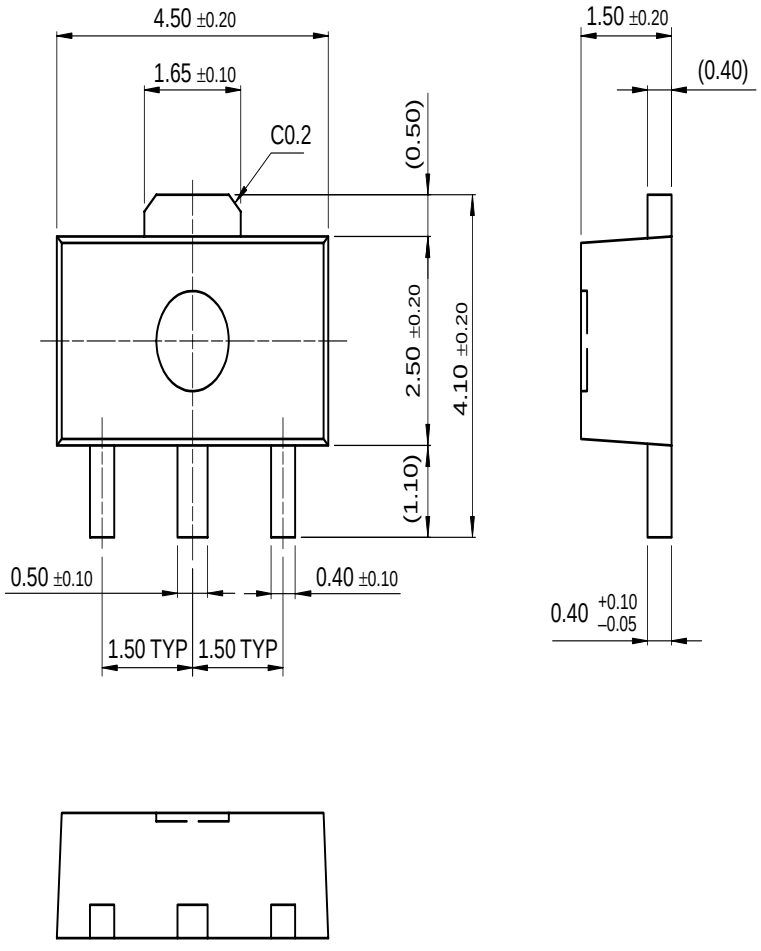


Figure 6. Safe Operating Area



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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Rev. I16