



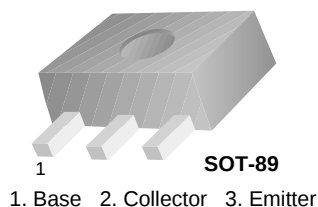
June 2009

FJC1963

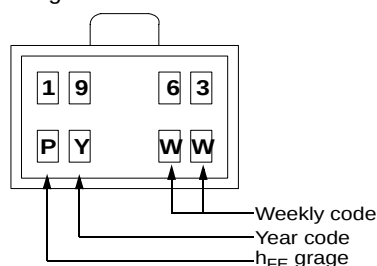
NPN Epitaxial Silicon Transistor

Features

- Audio Power Amplifier Applications
- Complement to FJC1308
- High Collector Current
- Low Collector-Emitter Saturation Voltage



Marking



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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	3	A
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation ($T_A=25^\circ\text{C}$)	0.5	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	250	$^\circ\text{C/W}$

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test conditions	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 50\mu\text{A}$, $I_E = 0$	50		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}$, $I_B = 0$	30		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 50\mu\text{A}$, $I_C = 0$	6		V
I_{CEO}	Collector Cut-off Current	$V_{CE} = 40\text{V}$, $V_B = 0$		0.5	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}$, $I_C = 0$		0.5	μA
h_{FE}	DC Current Gain	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$	120	560	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = 1.5\text{A}$, $I_B = 0.15\text{A}$		0.45	V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C = 1.5\text{A}$, $I_B = 0.15\text{A}$		1.2	V

 h_{FE} Classification

Classification	Q	R	S
h_{FE}	120 ~ 270	180 ~ 390	280 ~ 560

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
1963	FJC1963	SOT-89	13"	--	4,000

Typical Performance Characteristics

Figure 1. Static Characteristic

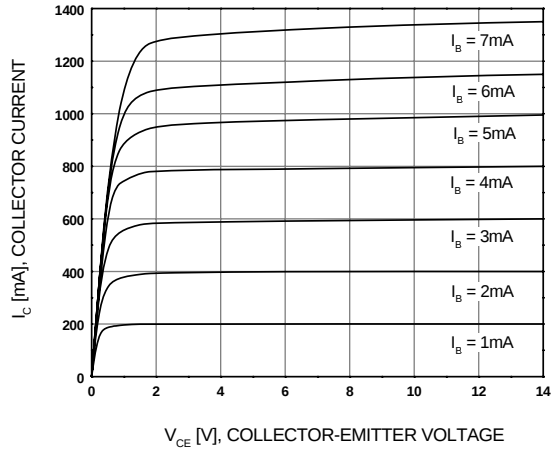


Figure 2. DC Current Gain

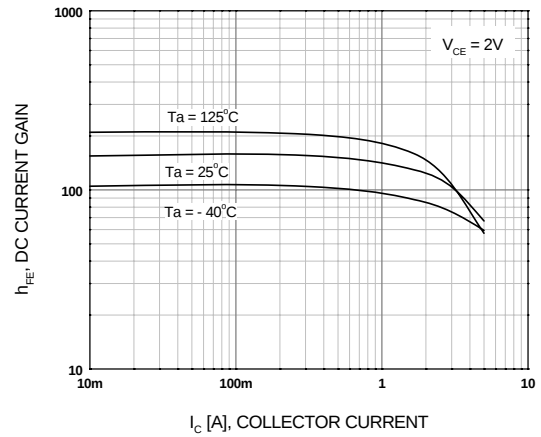


Figure 3. Collector-Emitter Saturation Voltage

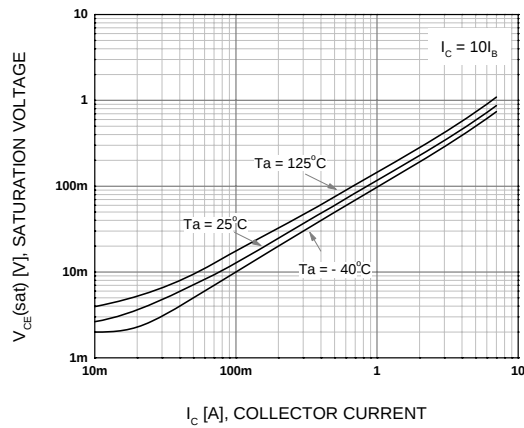


Figure 4. Base-Emitter Saturation Voltage

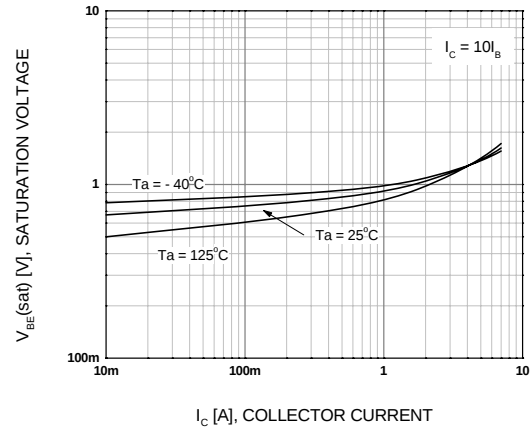


Figure 5. Base-Emitter On Voltage

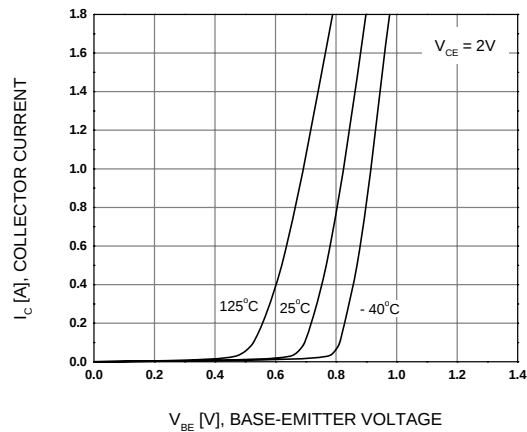
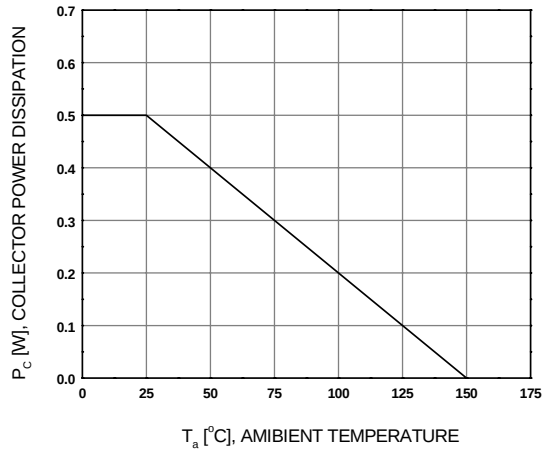
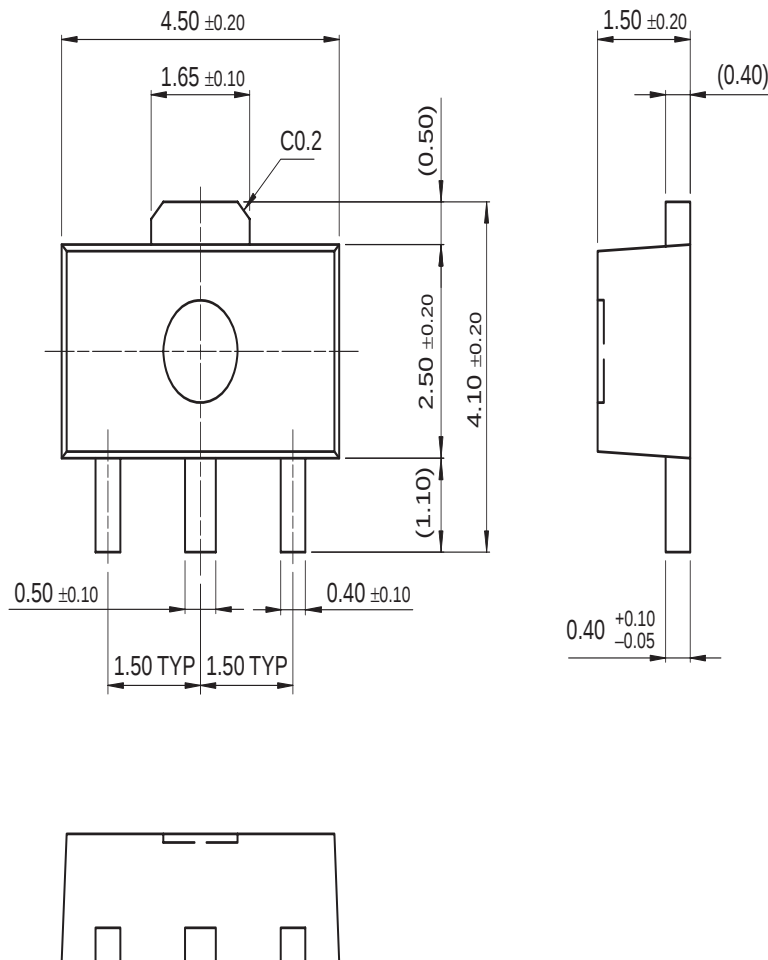


Figure 6. Power Derating



Physical Dimensions

SOT-89



Dimensions in Millimeters



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