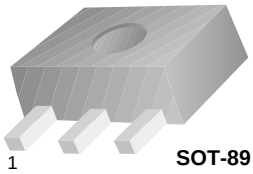
FAIRCHILD SEMICONDUCTOR®

June 2009

FJC1963
NPN Epitaxial Silicon Transistor

Features

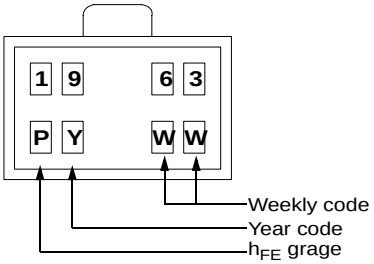
- Audio Power Amplifier Applications
- Complement to FJC1308
- High Collector Current
- Low Collector-Emitter Saturation Voltage



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	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	°C
T_{STG}	Storage Temperature	- 55 to + 150	°C

Thermal Characteristics

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

Electrical Characteritics T_A = 25°C unless otherwise noted

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

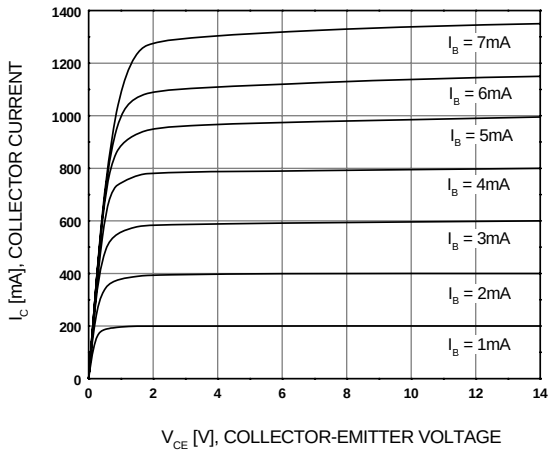


Figure 2. DC Current Gain

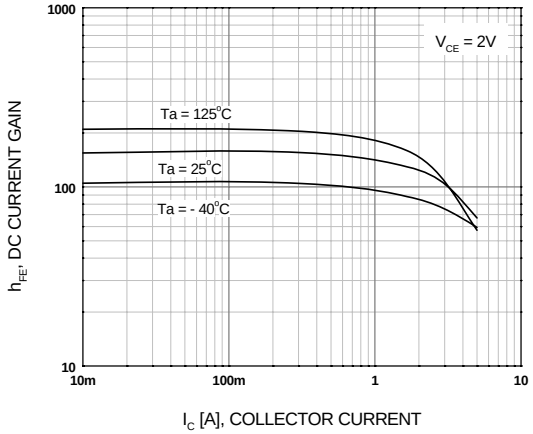


Figure 3. Collector-Emitter Saturation Voltage

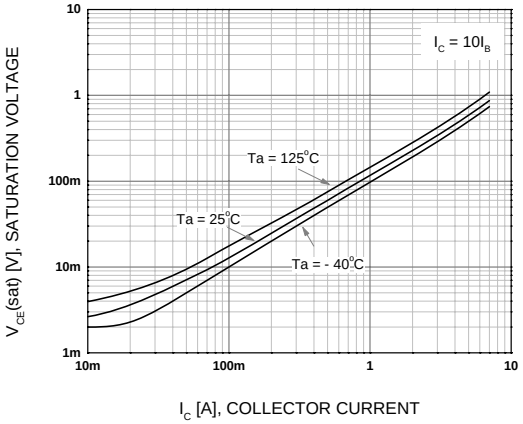


Figure 4. Base-Emitter Saturation Voltage

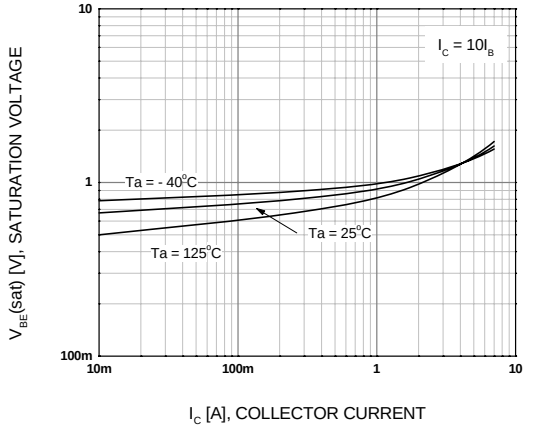


Figure 5. Base-Emitter On Voltage

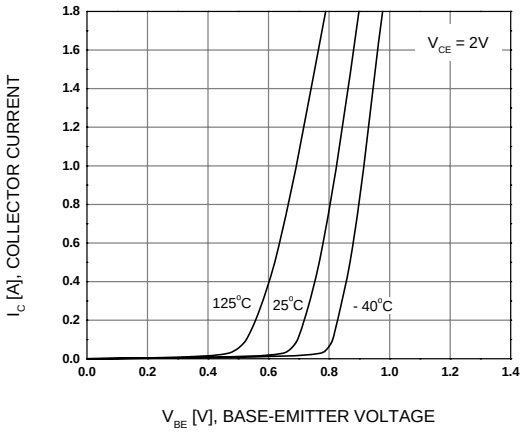
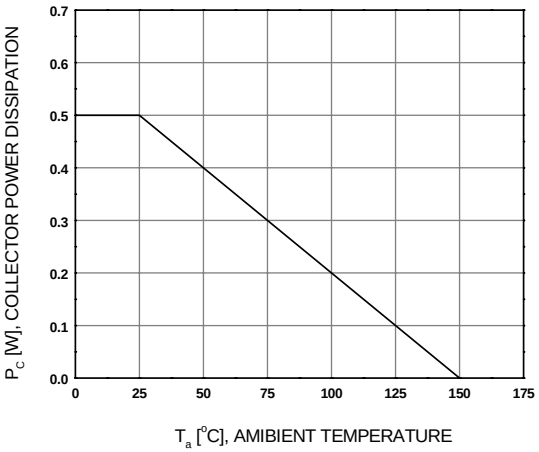
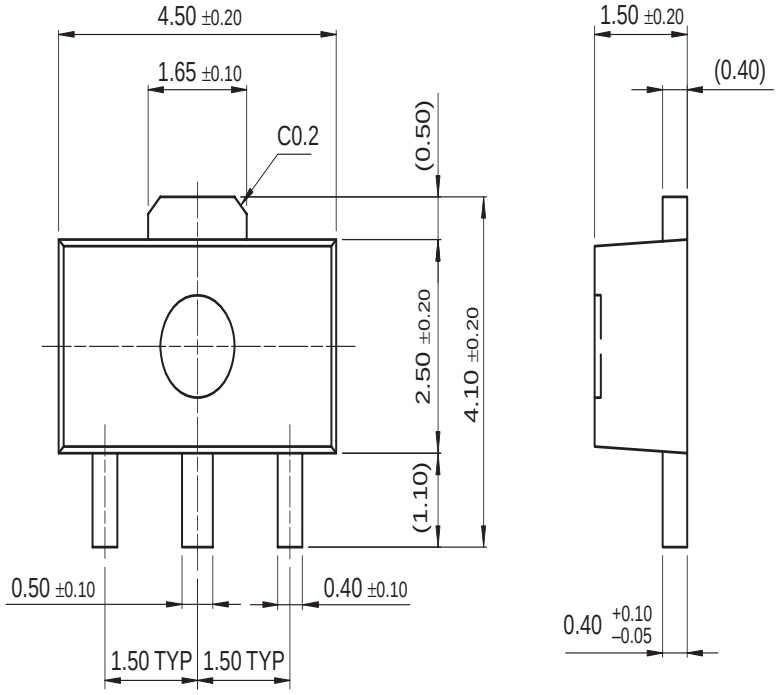


Figure 6. Power Derating



Physical Dimensions

SOT-89



Dimensions in Millimeters

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