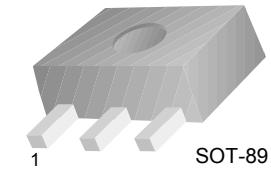
FAIRCHILD
SEMICONDUCTOR®

July 2005

FJC2383
NPN Epitaxial Silicon Transistor

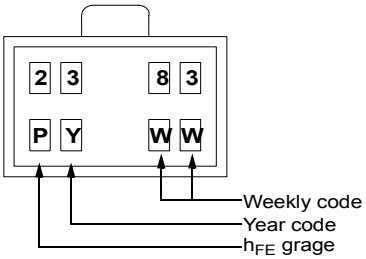
Color TV Audio Output & Color TV Vertical Deflection Output



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	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	1	A
I_B	Base Current	0.5	A
P_C	Collector Power Dissipation	500	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB} = 150V, I_E = 0			1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 6V, I_C = 0			1	μA
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10mA, I_B = 0	160			V
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 200mA	100		320	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C = 500mA, I_B = 50mA			1.5	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE} = 5V, I_C = 5mA	0.45		0.75	V
f_T	Current Gain Bandwidth Product	V_{CE} = 5V, I_C = 200mA	20	100		MHz
C_{ob}	Output Capacitance	V_{CB} = 10V, I_E = 0, f = 1MHz			20	pF

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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
2383	FJC2383	SOT-89	13”	--	4,000

Typical Performance Characteristics

Figure 1. Static Characteristic

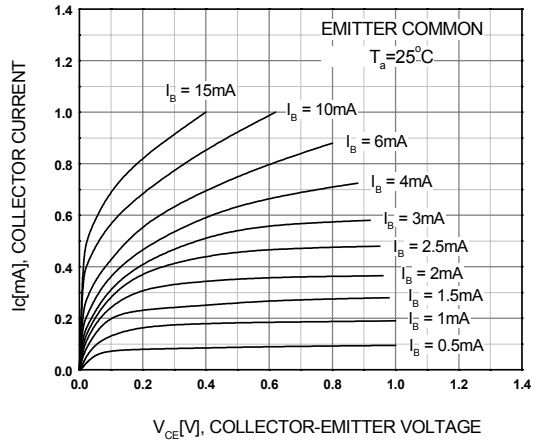


Figure 2. DC Current Gain

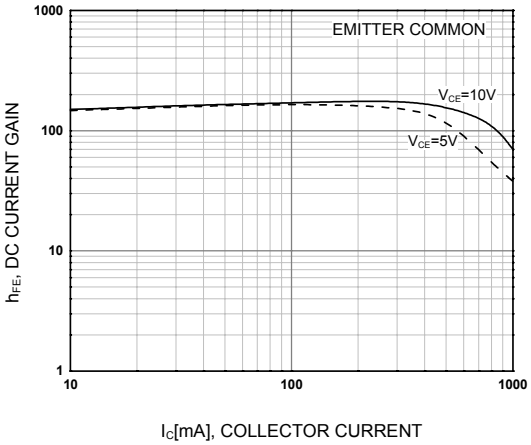


Figure 3. DC Current Gain

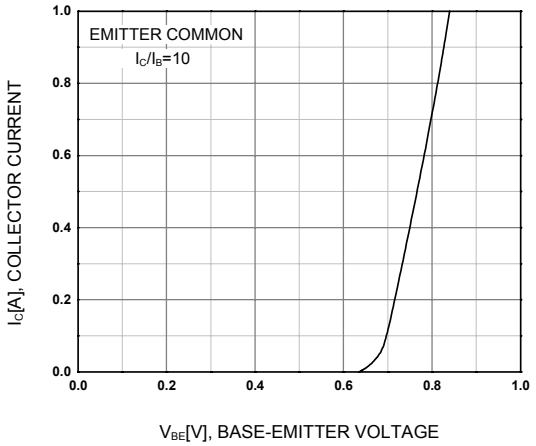


Figure 4. Collector-Emitter Saturation Voltage

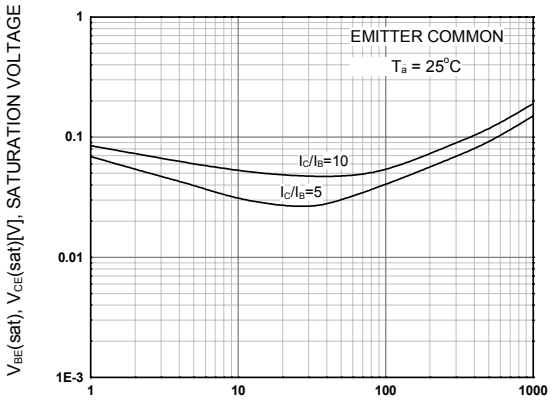


Figure 5. Base-Emitter On Voltage

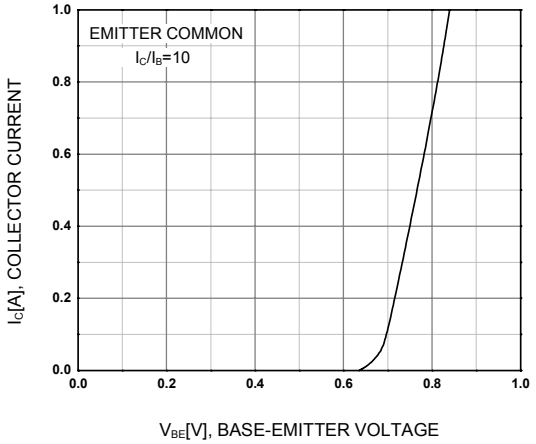
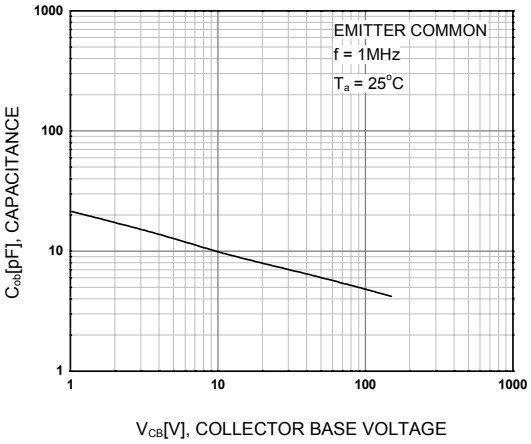
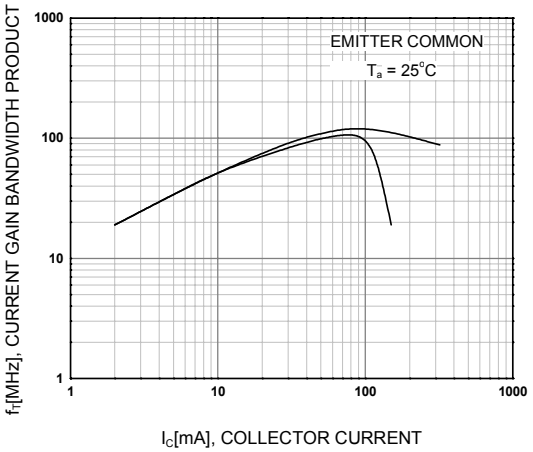


Figure 6. Collectro Output Capacitance



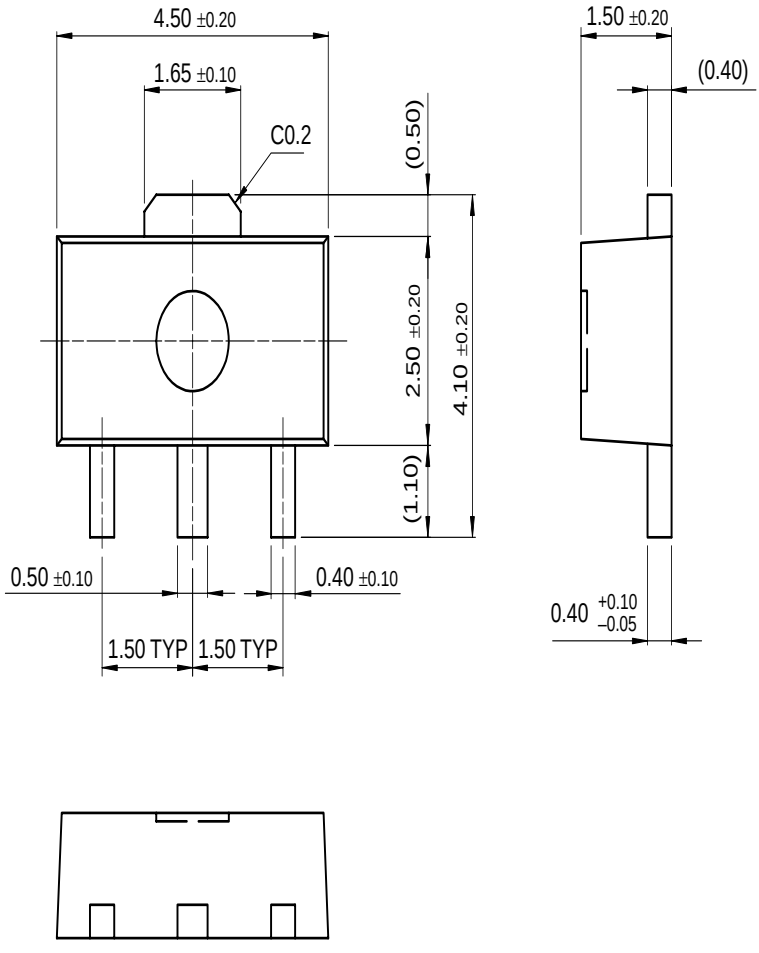
Typical Performance Characteristics (Continued)

Figure 7. Current Gain Bandwidth Product



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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Rev. I16

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