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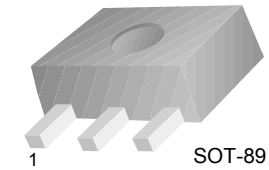
FAIRCHILD
SEMICONDUCTOR®

July 2005

FJC2383
NPN Epitaxial Silicon Transistor

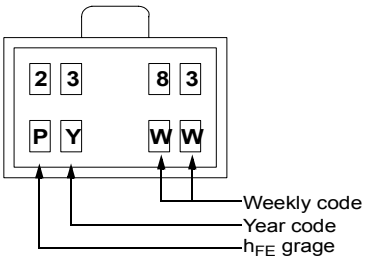
Color TV Audio Output & Color TV Vertical Deflection Output



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

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

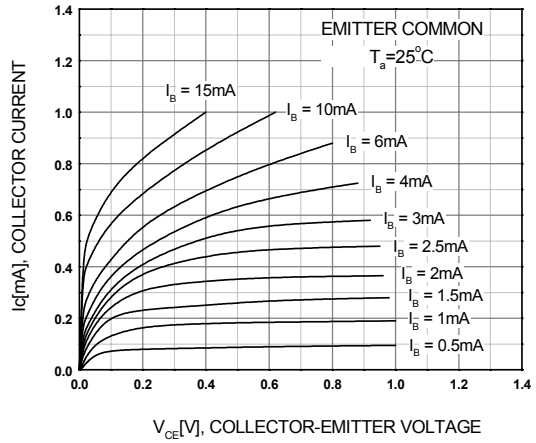


Figure 2. DC Current Gain

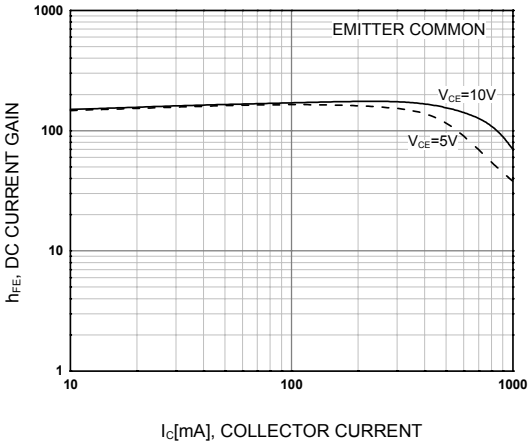


Figure 3. DC Current Gain

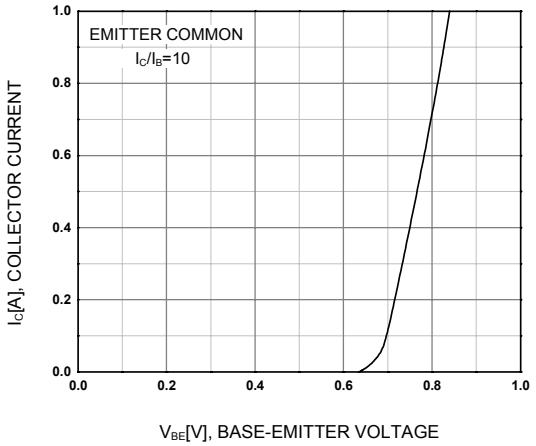


Figure 4. Collector-Emitter Saturation Voltage

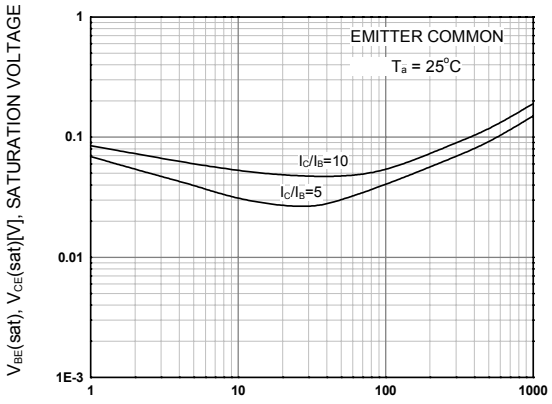


Figure 5. Base-Emitter On Voltage

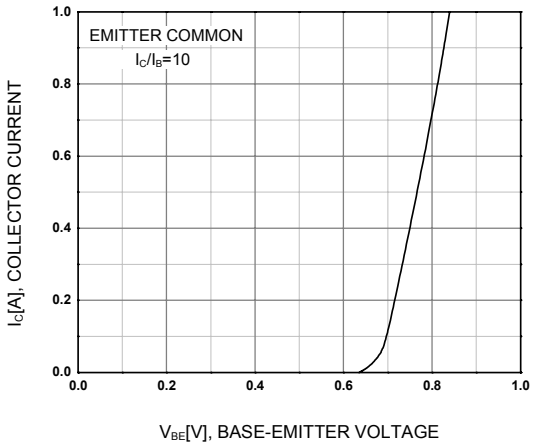
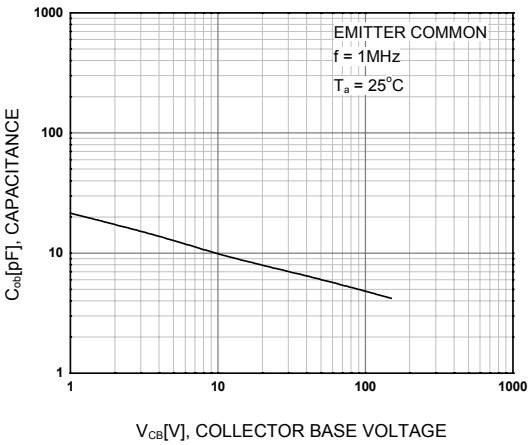
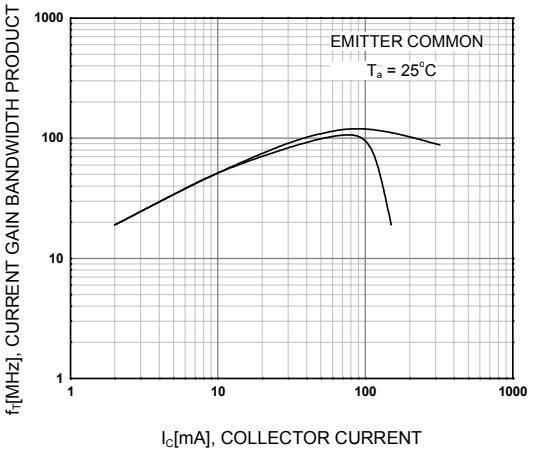


Figure 6. Collectro Output Capacitance



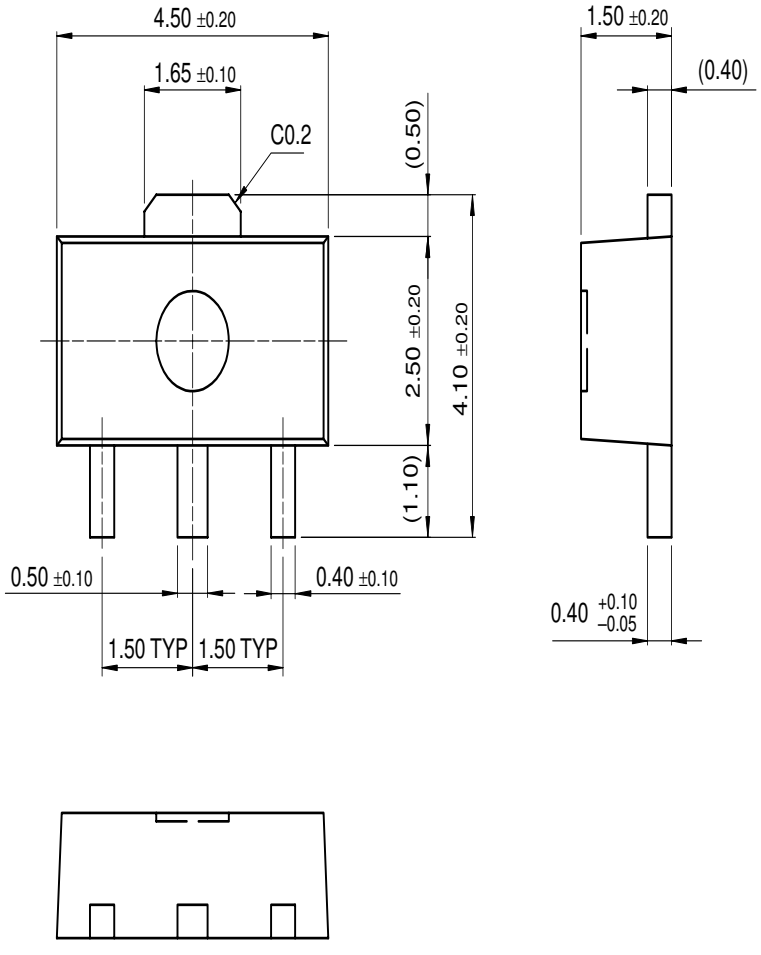
Typical Performance Characteristics (Continued)

Figure 7. Current Gain Bandwidth Product



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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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