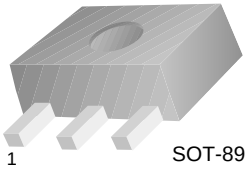
FAIRCHILD SEMICONDUCTOR®

July 2007

FJC790
PNP Epitaxial Silicon Transistor

Camera Strobe Flash Application

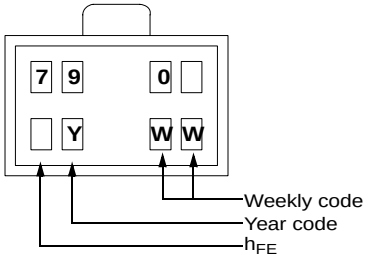
- Complement to FJC690
- High Collector Current
- Low Collector-Emitter Saturation Voltage



SOT-89

1. Base 2. Collector 3. Emitter

Marking



Absolute Maximum Ratings * T_a = 25℃ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-2	A
P_C	Power Dissipation	0.5	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

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	-50			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = -10mA, I_B = 0	-40			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = -100μA, I_C = 0	-5			V
I_{CEO}	Collector Cut-off Current	V_{CE} = -35V, V_B = 0			-0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = -4V, I_C = 0			-0.1	μA
h_{FE}	DC Current Gain	V_{CE} = -2V, I_C = -10mA V_{CE} = -2V, I_C = -500mA V_{CE} = -2V, I_C = -1A V_{CE} = -2V, I_C = -2A	300 250 200 150		800	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = -0.5A, I_B = -5mA I_C = -1A, I_B = -10mA I_C = -2A, I_B = -50mA			-250 -350 -450	mV mV mV
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = -1A, I_B = -10mA			-0.9	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = -2V, I_C = 1A			-0.8	V
C_{OB}	Collector Output Capacitance	V_{CB} = -10V, I_E = 0, f = 1MHz		20		pF

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
790	FJC790	SOT-89	13”	--	4,000

Typical Performance Characteristics

Figure 1. DC current Gain

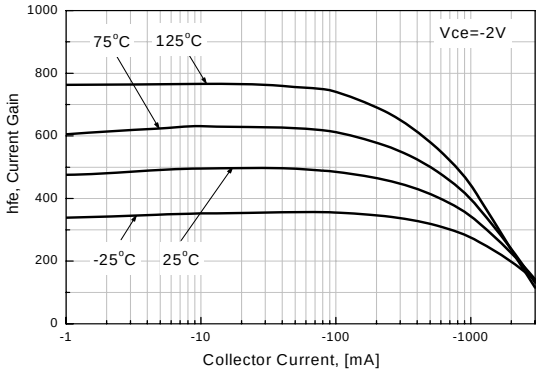


Figure 2. Collector-Base Capacitance

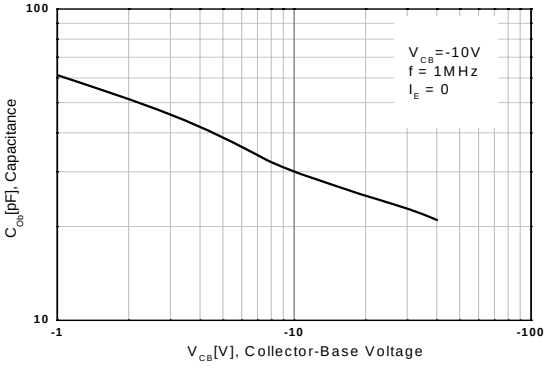


Figure 3. Collector-Emitter Saturation Voltage

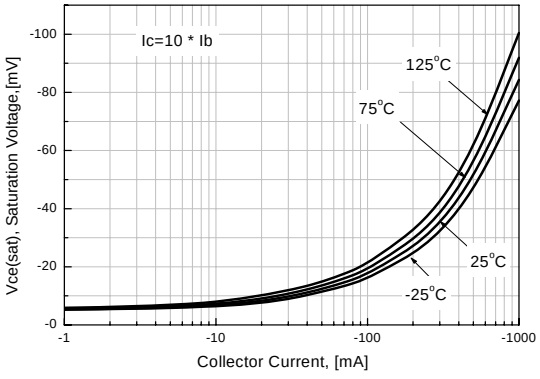


Figure 4. Collector-Emitter Saturation Voltage

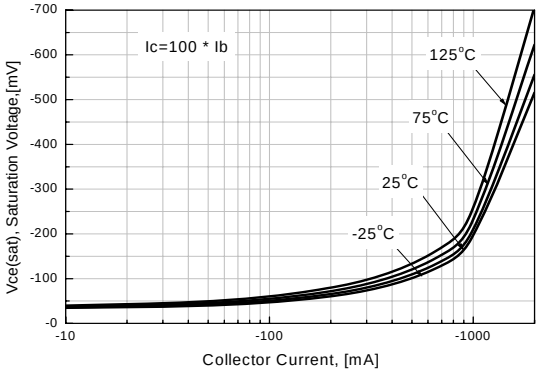


Figure 5. Base-Emitter Saturation Voltage

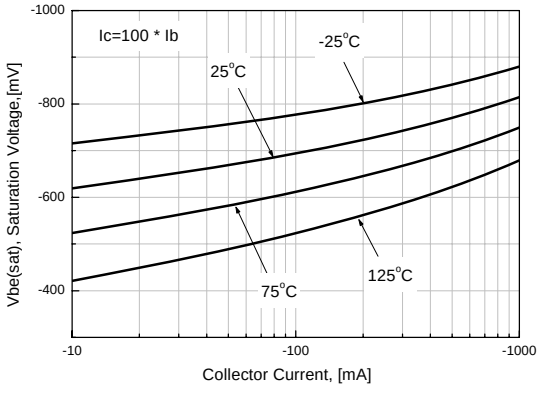
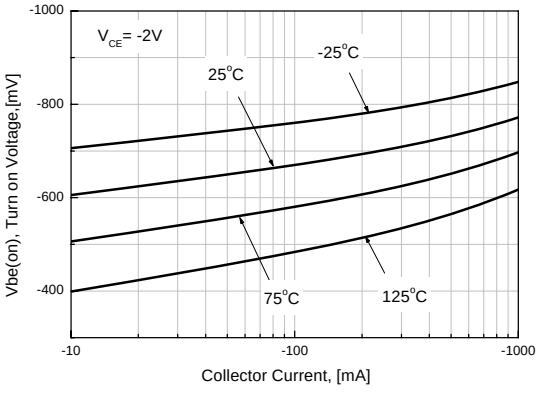
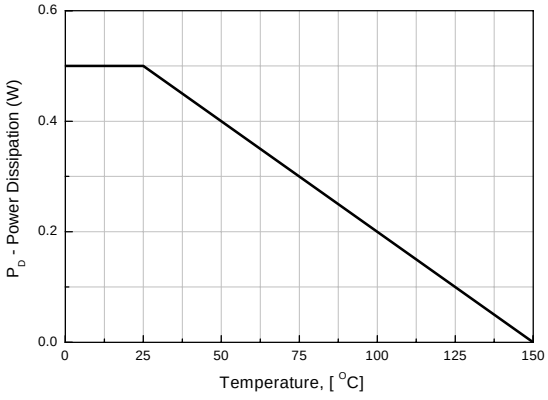


Figure 6. Base-Emitter Turn on Voltage



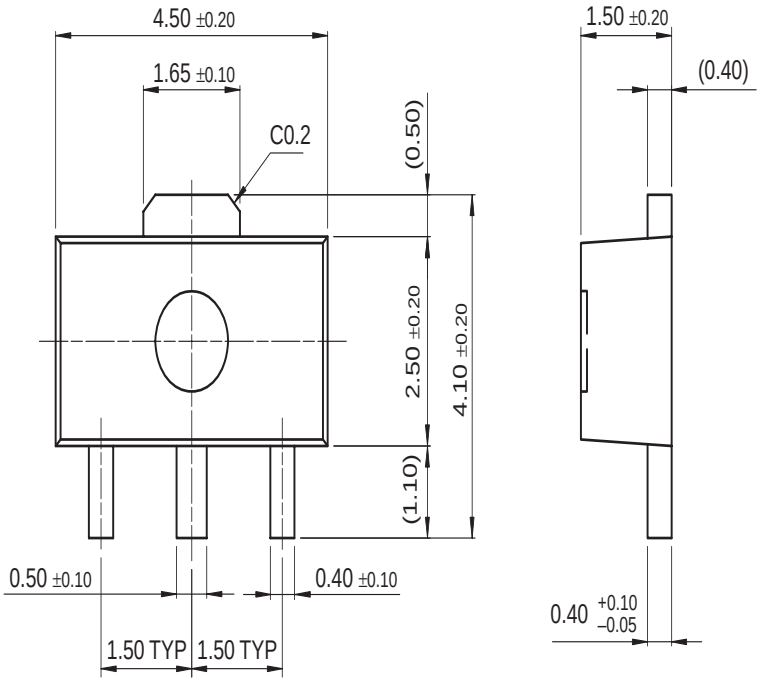
Typical Performance Characteristics

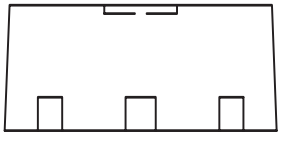
Figure 7. Power Dissipation vs Ambient Temperature



Mechanical Dimensions

SOT-89





Dimensions in Millimeters

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