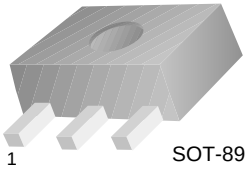
FAIRCHILD SEMICONDUCTOR®

July 2007

FJC690
NPN Epitaxial Silicon Transistor

Camera Strobe Flash Application

- Complement to FJC790
- High Collector Current
- Low Collector-Emitter Saturation Voltage



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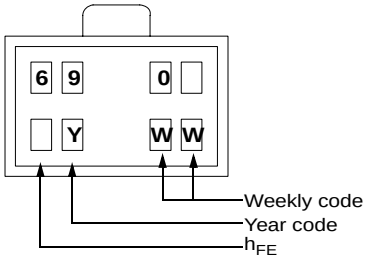
SOT-89

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	45	V
V_{CEO}	Collector-Emitter Voltage	45	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

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	45			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10mA, I_B = 0	45			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 = 100mA V_{CE} = 2V, I_C = 1mA V_{CE} = 2V, I_C = 2mA	500 400 150			
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 0.1A, I_B = 0.5mA I_C = 1A, I_B = 5mA			80 300	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			0.85	V
C_{OB}	Collector Output Capacitance	V_{CB} = 10V, I_E = 0, f = 1MHz		20		pF

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
690	FJC690	SOT-89	13”	--	4,000

Typical Performance Characteristics

Figure 1. DC current Gain

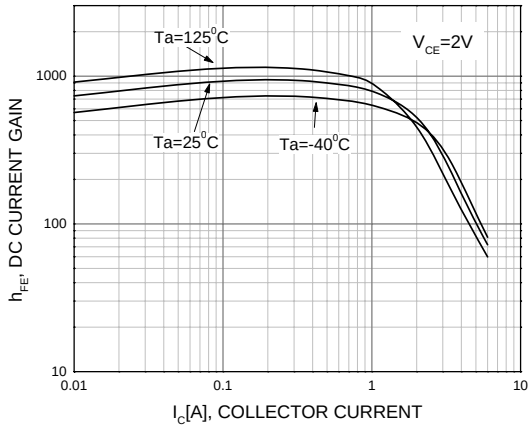


Figure 2. Collector-Emitter Saturation Voltage

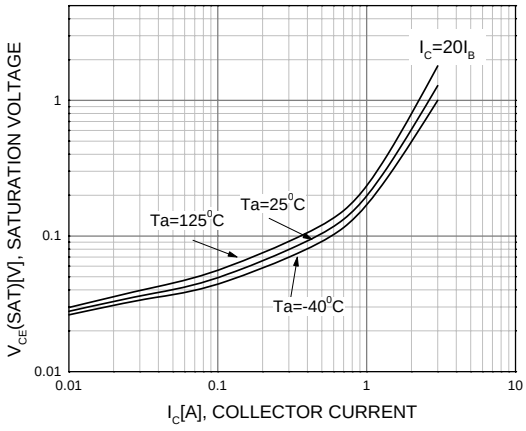
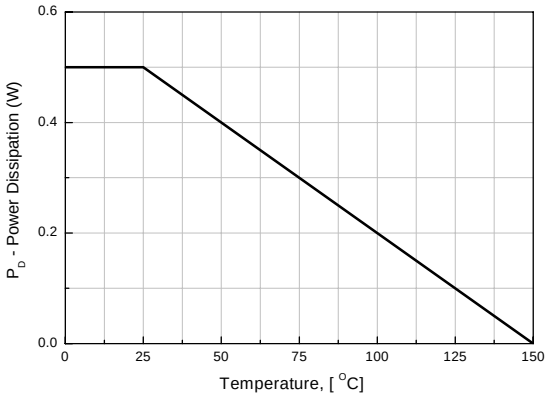
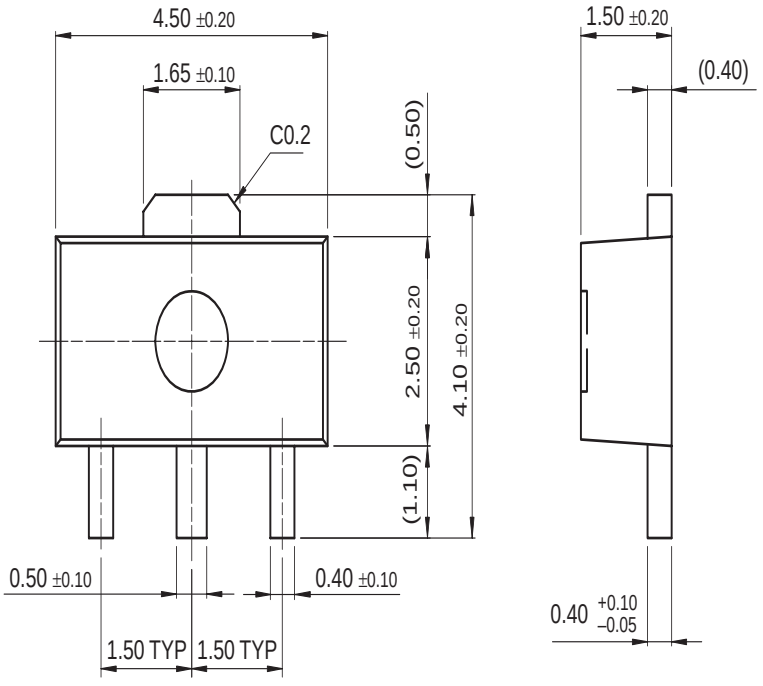


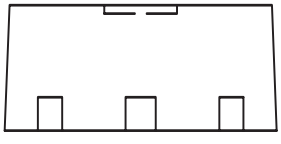
Figure 3. Power Dissipation vs Ambient Temperature



Mechanical Dimensions

SOT-89





Dimensions in Millimeters

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QS™
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SPM®
STEALTH™
SuperFET™
SuperSOT™-3
SuperSOT™-6
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