FAIRCHILD SEMICONDUCTOR®

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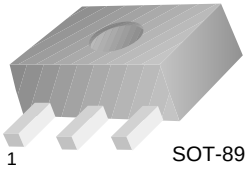
# FJC790
# PNP Epitaxial Silicon Transistor

## Camera Strobe Flash Application

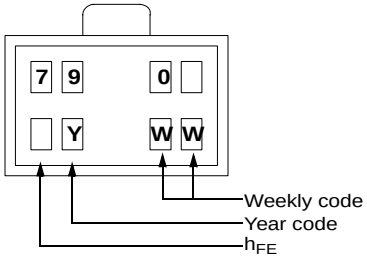
- Complement to FJC690
- High Collector Current
- Low Collector-Emitter Saturation Voltage



SOT-89

1. Base 2. Collector 3. Emitter

Marking




## Absolute Maximum Ratings * $T_a$ = 25°C 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<br>$V_{CE}$ = -2V, $I_C$ = -500mA<br>$V_{CE}$ = -2V, $I_C$ = -1A<br>$V_{CE}$ = -2V, $I_C$ = -2A | 300<br>250<br>200<br>150 | | 800 | |
| $V_{CE}$(sat) | Collector-Emitter Saturation Voltage | $I_C$ = -0.5A, $I_B$ = -5mA<br>$I_C$ = -1A, $I_B$ = -10mA<br>$I_C$ = -2A, $I_B$ = -50mA | | | -250<br>-350<br>-450 | mV<br>mV<br>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 |

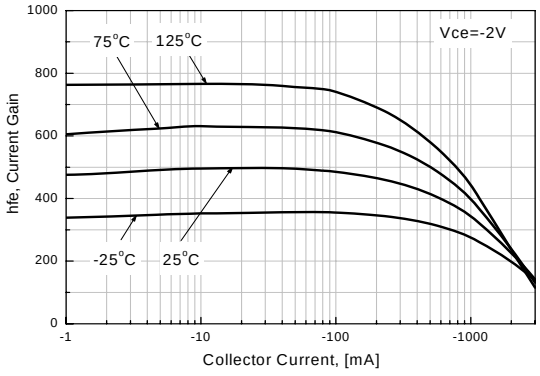
* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

## Package Marking and Ordering Information

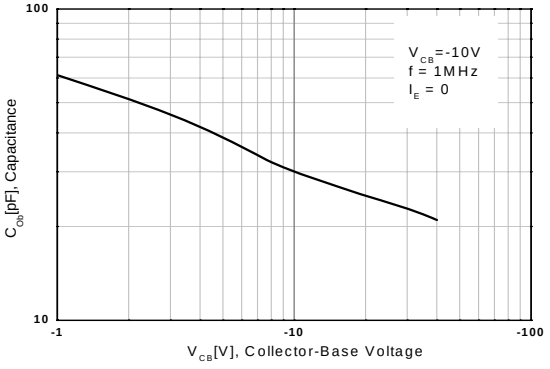
| Device Marking | Device | Package | Reel Size | Tape Width | Quantity |
|---|---|---|---|---|---|
| 790 | FJC790 | SOT-89 | 13” | -- | 4,000 |

## Typical Performance Characteristics

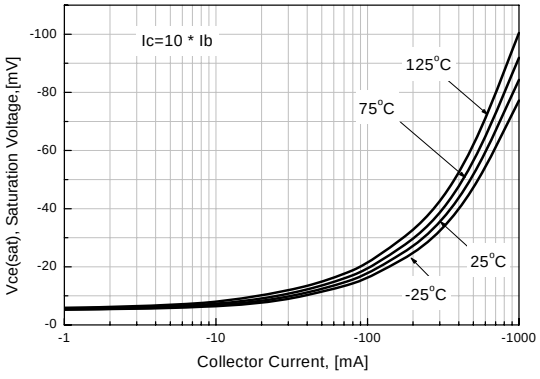
### Figure 1. DC current Gain



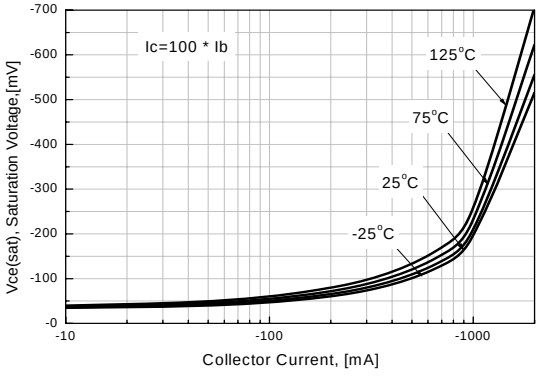

### Figure 2. Collector-Base Capacitance



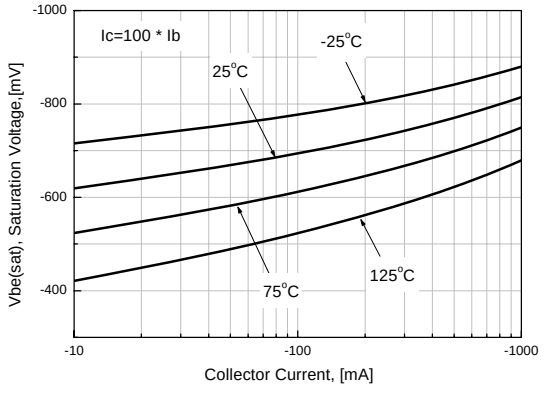

### Figure 3. Collector-Emitter Saturation Voltage



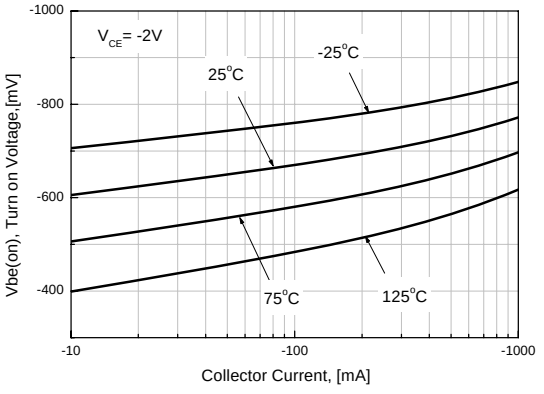

### Figure 4. Collector-Emitter Saturation Voltage




### Figure 5. Base-Emitter Saturation Voltage

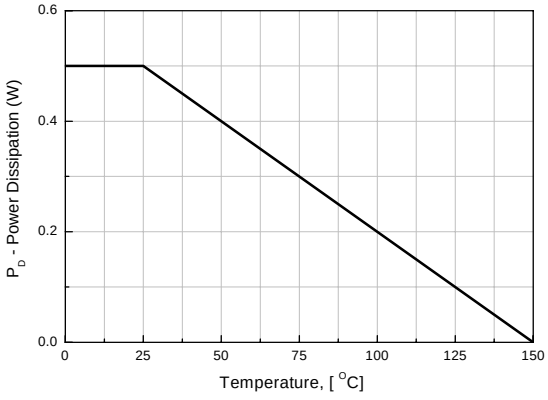



### Figure 6. Base-Emitter Turn on Voltage



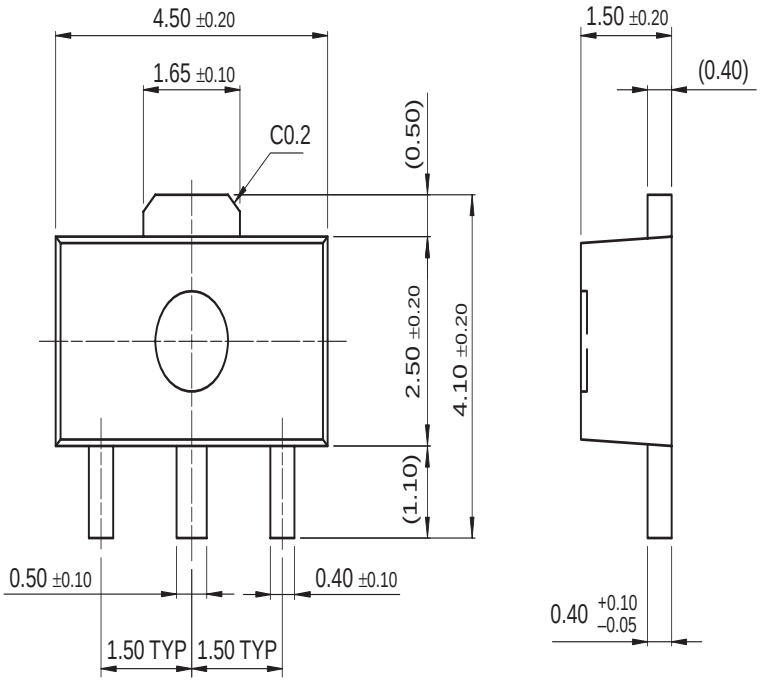
## Typical Performance Characteristics

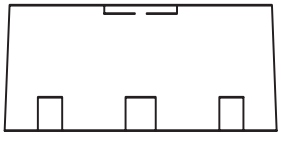
**Figure 7. Power Dissipation vs Ambient Temperature**



## Mechanical Dimensions

# SOT-89



Dimensions in Millimeters

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SuperSOT™-3
SuperSOT™-6
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|---|---|---|
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