

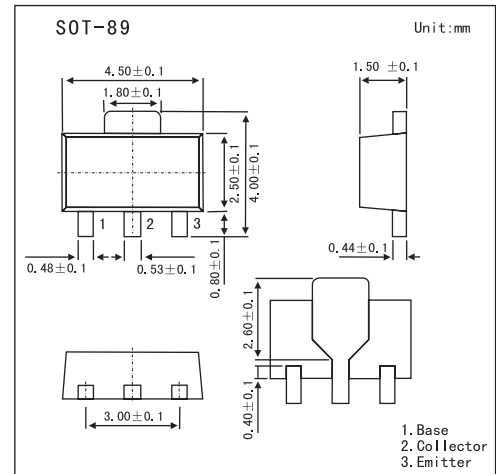
PNP Silicon Power Switching Transistor

FCX1151A

■ Features

- 2W power dissipation.
- 5A peak pulse current.
- Excellent HFE characteristics up to 5 Amps.
- Extremely low saturation voltage E.g. 60mv Typ.
- Extremely low equivalent on-resistance.

$R_{CE(sat)}$ 66m Ω at 3A.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|---|----------------|-------------|------------------|
| Collector-base voltage | V_{CBO} | -45 | V |
| Collector-emitter voltage | V_{CEO} | -40 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Continuous collector current | I_{CM} | -5 | A |
| Peak pulse current *3 | I_C | -3 | A |
| Base current | I_B | -500 | mA |
| Power dissipation | P_{tot} | 1 *1 | W |
| | | 2 *2 | W |
| Operating and storage temperature range | T_j, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

*1 recommended P_{tot} calculated using FR4 measuring 15X15X0.6mm

*2 Maximum power dissipation is calculated assuming that the device is mounted on FR4 substrate measuring 40X40X0.6mm

*3 Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

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■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|---|----------|---|--------------------------|--------------------------------|-----------------------------|------|
| Collector-base breakdown voltage | V(BR)CBO | IC=-100μA | -45 | | | V |
| Collector-emitter breakdown voltage * | V(BR)CEO | IC=-10mA | -40 | | | V |
| Emitter-base breakdown voltage | V(BR)EBO | IE=-100μA | -5 | | | V |
| Collector cut-off current | ICBO | VCE=-36V | | -0.3 | -100 | nA |
| Collector Emitter Cut-Off Current | ICES | VCE=-32V | | -0.3 | -100 | nA |
| Emitter Cut-Off Current | IEBO | VEB=-4V | | -0.3 | -100 | nA |
| Collector-emitter saturation voltage * | VCE(sat) | IC=-0.1A, IB=-1mA IC=-0.5A, IB=-5mA IC=-1A, IB=-20mA IC=-3A, IB=-250mA | | -60 -120 -140 -200 | -90 -180 -220 -300 | mV |
| Base-emitter saturation voltage * | VBE(sat) | IC=-3A, IB=-250mA | | -985 | -1050 | mV |
| Base-emitter ON voltage * | VBE(on) | IC=-3A, VCE=-2V | | -850 | -950 | mV |
| Static Forward Current Transfer Ratio * | hFE | IC=-10mA, VCE=-2V IC=-0.5A, VCE=-2V IC=-2A, VCE=-2V IC=-3A, VCE=-2V IC=-5A, VCE=-2V | 270 250 180 100 | 450 400 300 190 45 | 800 | |
| Transitional frequency | fT | IC=-50mA, VCE=-10V, f=50MHz | | 145 | | MHz |
| Output capacitance | Cobo | VCE=-10V, f=1MHz | | 40 | | pF |
| Turn-on time | t(on) | IC=-2A, VCC=-30V | | 170 | | ns |
| Turn-off time | t(off) | IB1=IB2=-20mA | | 460 | | ns |

* Pulse test: tp = 300 μs; d ≤ 0.02.

■ Marking

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| Marking | 151 |
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