

SOT89 PNP SILICON POWER (SWITCHING) TRANSISTOR

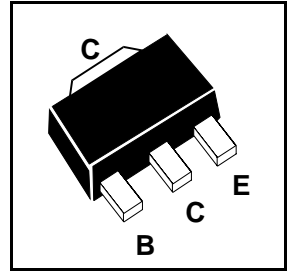
ISSUE 3 - OCTOBER 2005

FCX790A

FEATURES

- * 2W POWER DISSIPATION
- * 6A Peak Pulse Current
- * Excellent H_{FE} Characteristics
- * Low Saturation Voltages

Partmarking Detail - 790



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|---------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | -50 | V |
| Collector-Emitter Voltage | V_{CEO} | -40 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Peak Pulse Current ** | I_{CM} | -6 | A |
| Continuous Collector Current | I_C | -2 | A |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | P_{tot} | 1 † 2 ‡ | W W |
| Operating and Storage Temperature Range | $T_j:T_{stg}$ | -55 to +150 | $^{\circ}C$ |

† recommended P_{tot} calculated using FR4 measuring 15x15x0.6mm

‡ Maximum power dissipation is calculated assuming that the device is mounted on FR4 substrate measuring 40x40x0.6mm and using comparable measurement methods adopted by other suppliers.

**Measured under pulsed conditions. Pulse width=300 μ s. Duty cycle \leq 2%

Spice parameter data is available upon request for these devices

Refer to the handling instructions when soldering surface mount components.

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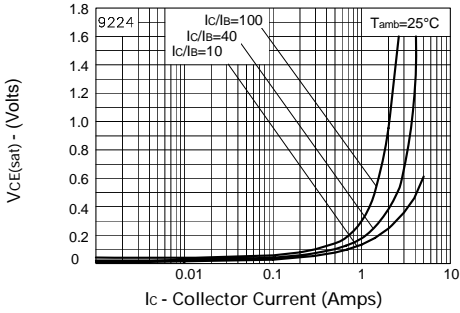
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$)

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|-----------------------|--------------------------|-----------|----------------------|----------------|---|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -50 | | | V | $I_C = -100\mu\text{A}$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -40 | | | V | $I_C = -10\text{mA}^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | | | V | $I_E = -100\mu\text{A}$ |
| Collector Cut-Off Current | I_{CBO} | | | -0.1 | μA | $V_{CB} = -30\text{V}$ |
| Emitter Cut-Off Current | I_{EBO} | | | -0.1 | μA | $V_{EB} = -4\text{V}$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | -250 -350 -450 | mV mV mV | $I_C = -0.5\text{A}, I_B = -5\text{mA}^*$ $I_C = -1\text{A}, I_B = -10\text{mA}^*$ $I_C = -2\text{A}, I_B = -50\text{mA}^*$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | | -0.9 | V | $I_C = -1\text{A}, I_B = -10\text{mA}^*$ |
| Base-Emitter Turn-On Voltage | $V_{BE(on)}$ | | -0.8 | | V | $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 300 250 200 150 | | 800 | | $I_C = -10\text{mA}, V_{CE} = -2\text{V}$ $I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -2\text{A}, V_{CE} = -2\text{V}^*$ |
| Transition Frequency | f_T | 100 | | | MHz | $I_C = -50\text{mA}, V_{CE} = -5\text{V}$ $f = 50\text{MHz}$ |
| Input Capacitance | C_{ibo} | | 225 | | pF | $V_{EB} = -0.5\text{V}, f = 1\text{MHz}$ |
| Output Capacitance | C_{obo} | | 24 | | pF | $V_{CB} = -10\text{V}, f = 1\text{MHz}$ |
| Switching Times | t_{on} t_{off} | | 35 600 | | ns ns | $I_C = -500\text{mA}, I_{B1} = -50\text{mA}$ $I_{B2} = -50\text{mA}, V_{CC} = -10\text{V}$ |

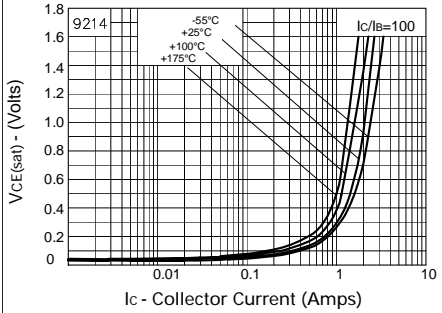
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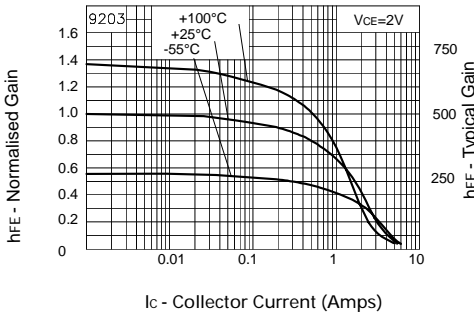
TYPICAL CHARACTERISTICS



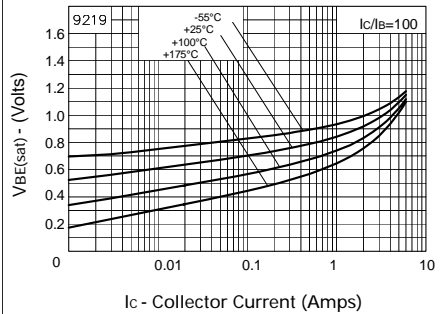
VCE(sat) v IC



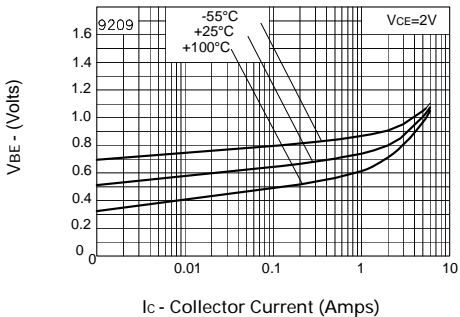
VCE(sat) v IC



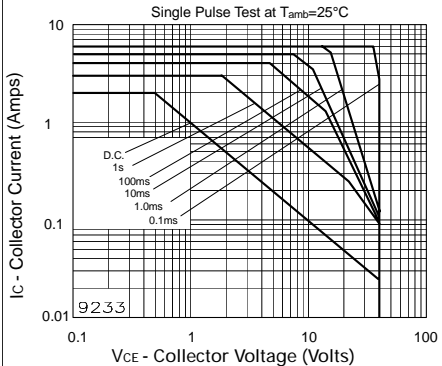
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area

单击下面可查看定价，库存，交付和生命周期等信息

[>>Diodes Incorporated\(达尔科技\)](#)