

SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

FZT749

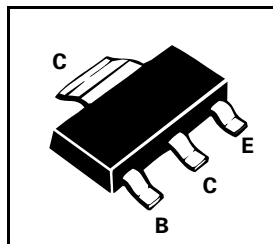
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FEATURES

- * 25 Volt V_{CEO}
- * 3 Amp continuous current
- * Low saturation voltage
- * Excellent h_{FE} specified up to 6A (pulsed).

COMPLEMENTARY TYPE – FZT649

PARTMARKING DETAIL – FZT749



ABSOLUTE MAXIMUM RATINGS.

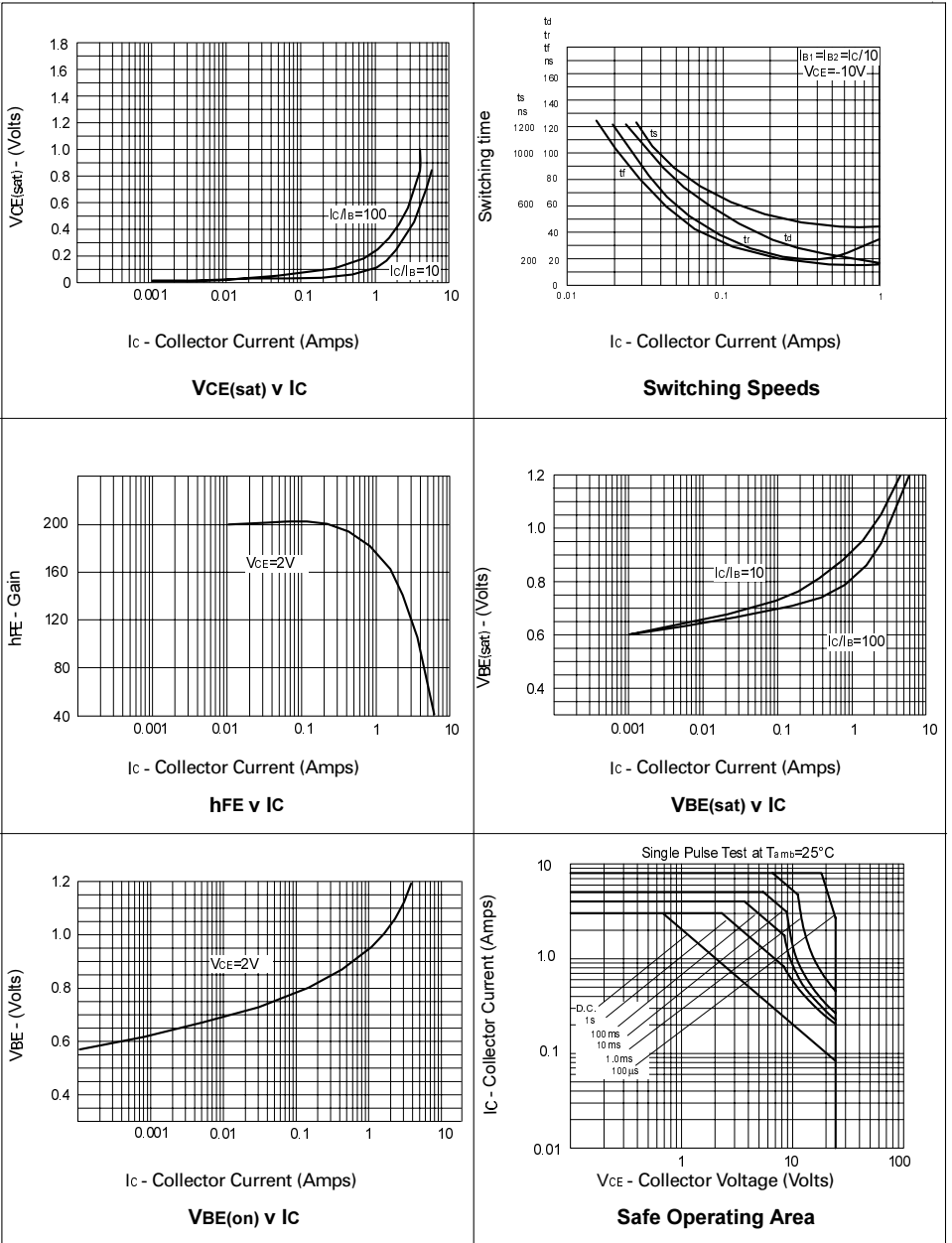
| PARAMETER | SYMBOL | VALUE | UNIT |
|--------------------------------------------|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | -35 | V |
| Collector-Emitter Voltage | V_{CEO} | -25 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Peak Pulse Current | I_{CM} | -8 | A |
| Continuous Collector Current | I_C | -3 | A |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | P_{tot} | 2 | W |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}C$ |

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|---------------|-----------------------|-------------------------|--------------|--------------------|----------------------------------------------------------------------------------------------------------------------------|
| Breakdown Voltages | $V_{(BR)CBO}$ | -35 | | | V | $I_C = -100\mu A$ |
| | $V_{(BR)CEO}$ | -25 | | | V | $I_C = -10mA^*$ |
| | $V_{(BR)EBO}$ | -5 | | | V | $I_E = -100\mu A$ |
| Collector Cut-Off Currents | I_{CBO} | | | -0.1 -10 | μA μA | $V_{CB} = -30V$ $V_{CB} = -30V, T_{amb} = 100^{\circ}C$ |
| | I_{EBO} | | | -0.1 | μA | $V_{EB} = 4V$ |
| Saturation Voltages | $V_{CE(sat)}$ | | -0.12 -0.40 | -0.3 -0.6 | V V | $I_C = -1A, I_B = -100mA^*$ $I_C = -3A, I_B = -300mA^*$ |
| | $V_{BE(sat)}$ | | -0.9 | -1.25 | V | $I_C = -1A, I_B = -100mA^*$ |
| Base-Emitter Turn-On Voltage | $V_{BE(on)}$ | | -0.8 | -1.0 | V | $I_C = -1A, V_{CE} = -2V^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 70 100 75 15 | 200 200 150 50 | 300 | | $I_C = -50mA, V_{CE} = -2V^*$ $I_C = -1A, V_{CE} = -2V^*$ $I_C = -2A, V_{CE} = -2V^*$ $I_C = -6A, V_{CE} = -2V^*$ |
| Transition Frequency | f_T | 100 | 160 | | MHz | $I_C = -100mA, V_{CE} = -5V$ $f = 100MHz$ |
| Output Capacitance | C_{obo} | | 55 | 100 | pF | $V_{CB} = -10V, f = 1MHz$ |
| Switching Times | t_{on} | | 40 | | ns | $I_C = -500mA, V_{CC} = -10V$ |
| | t_{off} | | 450 | | ns | $I_{B1} = I_{B2} = -50mA$ |

*Measured under pulsed conditions. Pulse Width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

TYPICAL CHARACTERISTICS





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