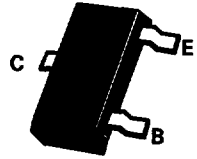


SOT23 NPN SILICON PLANAR VHF/UHF TRANSISTOR

ISSUE 2 – JANUARY 1996

FMMT918

PARTMARKING DETAILS – 3B



SOT23

ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | 30 | V |
| Collector-Emitter Voltage | V_{CEO} | 15 | V |
| Emitter-Base Voltage | V_{EBO} | 3 | V |
| Continuous Collector Current | I_C | 100 | mA |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | P_{tot} | 330 | mW |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}C$ |

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

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|----------------|------|------|------------|----------|--|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 30 | | | V | $I_C=1\mu A, I_E=0$ |
| Collector-Emitter Sustaining Voltage | $V_{CEO(sus)}$ | 15 | | | V | $I_C=3mA, I_B=0^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 3 | | | V | $I_E=10\mu A, I_C=0$ |
| Collector Cut-Off Current | I_{CBO} | | | 0.05 | μA | $V_{CB}=15V, I_E=0$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | 0.4 | V | $I_C=10mA, I_B=1mA$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | | 1.0 | V | $I_C=10mA, I_B=1mA$ |
| Static Forward Current Transfer Ratio | h_{FE} | 20 | | | | $I_C=3mA, V_{CE}=1V$ |
| Transition Frequency | f_T | 600 | | | MHz | $I_C=4mA, V_{CE}=10V$ $f=100MHz$ |
| Output Capacitance | C_{obo} | | | 3.0 1.7 | pF pF | $V_{CB}=0V, f=1MHz$ $V_{CB}=10V, f=1MHz$ |
| Input Capacitance | C_{ibo} | | | 1.6 | pF | $V_{EB}=0.5V, f=1MHz$ |
| Noise Figure | N | | | 6.0 | dB | $V_{CE}=6V, I_C=1mA$ $f=60MHz, R_G=400\Omega$ |
| Common Emitter Power Gain | G_{pe} | | 15 | | dB | $V_{CB}=12V, I_C=6mA$ $f=200MHz$ |

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