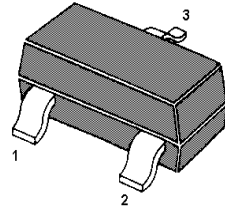
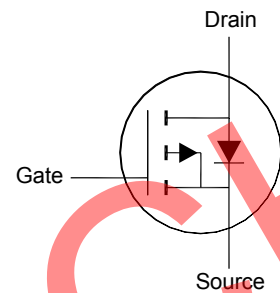


MMFTP2301

P-Channel Enhancement Mode MOSFET



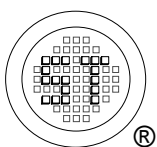
1. Gate 2. Source 3. Drain
SOT-23 Plastic Package



Absolute Maximum Ratings

| Parameter | Symbol | Value | Unit |
|-------------------------------------|------------|---------------|------|
| Drain-Source Voltage | $-V_{DSS}$ | 20 | V |
| Gate-Source Voltage | V_{GS} | ± 8 | V |
| Drain Current - Continuous | $-I_D$ | 2.3 | A |
| Drain Current - Pulse ¹⁾ | $-I_{DM}$ | 8 | A |
| Power Dissipation | P_{tot} | 0.9 | W |
| Operating Junction Temperature | T_j | - 55 to + 150 | °C |
| Storage Temperature | T_{stg} | - 55 to + 150 | °C |

¹⁾ Repetitive Rating: Pulse width limited by maximum junction temperature.



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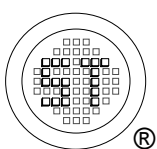


Dated: 16/03/2013 Rev: 02

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Characteristics at $T_a = 25^\circ\text{C}$ unless otherwise specified

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|---|----------------|------|--------|-----------|---------------|
| Drain-Source Breakdown Voltage at $-I_D = 250 \mu\text{A}$ | $-V_{(BR)DSS}$ | 20 | - | - | V |
| Drain-Source Leakage Current at $-V_{DS} = 9.6 \text{ V}$ | $-I_{DSS}$ | - | - | 1 | μA |
| Gate Leakage Current at $V_{GS} = \pm 8 \text{ V}$ | I_{GSS} | - | - | ± 100 | nA |
| Gate-Source Threshold Voltage at $V_{DS} = V_{GS}$, $-I_D = 250 \mu\text{A}$ | $-V_{GS(th)}$ | 0.45 | - | 0.95 | V |
| Drain-Source On-State Resistance at $-V_{GS} = 2.5 \text{ V}$, $-I_D = 2 \text{ A}$ | $R_{DS(on)1}$ | - | - | 150 | m Ω |
| Drain-Source On-State Resistance at $-V_{GS} = 4.5 \text{ V}$, $-I_D = 2.8 \text{ A}$ | $R_{DS(on)2}$ | - | - | 100 | m Ω |
| Forward Transconductance at $-V_{DS} = 5 \text{ V}$, $-I_D = 4 \text{ A}$ | g_{FS} | - | 6.5 | - | S |
| Input Capacitance at $-V_{DS} = 6 \text{ V}$, $f = 1 \text{ MHz}$ | C_{iss} | - | 882.51 | - | pF |
| Output Capacitance at $-V_{DS} = 6 \text{ V}$, $f = 1 \text{ MHz}$ | C_{oss} | - | 145.54 | - | pF |
| Reverse Transfer Capacitance at $-V_{DS} = 6 \text{ V}$, $f = 1 \text{ MHz}$ | C_{rss} | - | 97.26 | - | pF |
| Turn-On Delay Time at $-V_{DD} = 6 \text{ V}$, $-V_{GEN} = 4.5 \text{ V}$, $-I_D = 1 \text{ A}$, $R_G = 6 \Omega$, $R_L = 6 \Omega$ | $t_{d(on)}$ | - | 17.28 | - | ns |
| Turn-Off Delay Time at $-V_{DD} = 6 \text{ V}$, $-V_{GEN} = 4.5 \text{ V}$, $-I_D = 1 \text{ A}$, $R_G = 6 \Omega$, $R_L = 6 \Omega$ | $t_{d(off)}$ | - | 36.05 | - | ns |
| Turn-On Rise Time at $-V_{DD} = 6 \text{ V}$, $-V_{GEN} = 4.5 \text{ V}$, $-I_D = 1 \text{ A}$, $R_G = 6 \Omega$, $R_L = 6 \Omega$ | t_r | - | 3.73 | - | ns |
| Turn-Off Fall Time at $-V_{DD} = 6 \text{ V}$, $-V_{GEN} = 4.5 \text{ V}$, $-I_D = 1 \text{ A}$, $R_G = 6 \Omega$, $R_L = 6 \Omega$ | t_f | - | 6.19 | - | ns |



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