



# FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

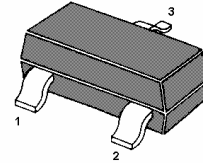
FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

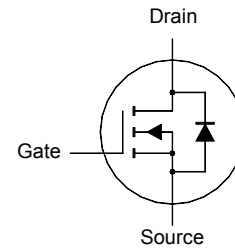
## MMFTN123

### N-Channel Logic Level Enhancement

### Mode Field Effect Transistor



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



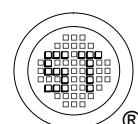
#### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DSS}$	100	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current	$I_D$	170	mA
Peak Drain Current	$I_{DM}$	680	mA
Total Power Dissipation	$P_{tot}$	360	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to +150	$^\circ\text{C}$

#### Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient	$R_{thj-a}$	500 <sup>1)</sup>	K/W

<sup>1)</sup> Device mounted on a printed-circuit board.



Dated: 03/06/2006



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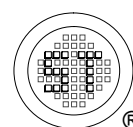
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### Characteristics at $T_a = 25\text{ }^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at $I_D = 250\text{ }\mu\text{A}$	$V_{(BR)DSS}$	100	-	-	V
Gate-Source Threshold Voltage at $V_{GS} = V_{DS}, I_D = 1\text{ mA}$	$V_{GSth}$	0.8	-	2	V
Drain-Source Leakage Current at $V_{DS} = 100\text{ V}$ at $V_{DS} = 20\text{ V}$	$I_{DSS}$	- -	- -	1 10	$\mu\text{A}$ nA
Gate-Source Leakage Current at $V_{GS} = \pm 20\text{ V}$	$I_{GSS}$	-	-	$\pm 50$	nA
Drain-Source On-State Resistance at $V_{GS} = 10\text{ V}, I_D = 170\text{ mA}$ at $V_{GS} = 4.5\text{ V}, I_D = 170\text{ mA}$	$R_{DS(ON)}$	- -	- -	6 10	$\Omega$
Input Capacitance at $V_{DS} = 25\text{ V}, f = 1\text{ MHz}$	$C_{iss}$	-	73	-	pF
Output Capacitance at $V_{DS} = 25\text{ V}, f = 1\text{ MHz}$	$C_{oss}$	-	7	-	pF
Reverse Transfer Capacitance at $V_{DS} = 25\text{ V}, f = 1\text{ MHz}$	$C_{rss}$	-	3.4	-	pF
Turn-On Delay Time at $V_{DD} = 30\text{ V}, I_D = 280\text{ mA}, V_{GS} = 10\text{ V}, R_G = 6\text{ }\Omega$	$t_{d(on)}$	-	-	3.4	ns
Turn-On Rise Time at $V_{DD} = 30\text{ V}, I_D = 280\text{ mA}, V_{GS} = 10\text{ V}, R_G = 6\text{ }\Omega$	$t_r$	-	-	18	ns
Turn-Off Delay Time at $V_{DD} = 30\text{ V}, I_D = 280\text{ mA}, V_{GS} = 10\text{ V}, R_G = 6\text{ }\Omega$	$t_{d(off)}$	-	-	31	ns
Turn-Off Fall Time at $V_{DD} = 30\text{ V}, I_D = 280\text{ mA}, V_{GS} = 10\text{ V}, R_G = 6\text{ }\Omega$	$t_f$	-	-	5	ns



Dated: 03/06/2006