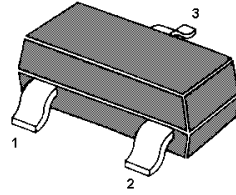
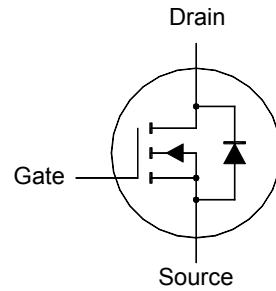


MMFTN123

N-Channel Logic Level Enhancement Mode Field Effect Transistor



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



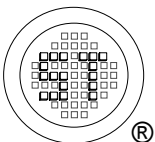
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	100	V
Gate-Source Voltage	V_{GSS}	± 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 ¹⁾	K/W

¹⁾ Device mounted on a printed-circuit board.



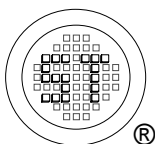
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Characteristics at $T_a = 25\text{ }^\circ\text{C}$ unless otherwise specified

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	μA nA
Gate-Source Leakage Current at $V_{GS} = \pm 20\text{ V}$	I_{GSS}	-	-	± 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	Ω
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



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ISO/TS 16949 : 2009 Certificate No. 05103
 ISO14001 : 2004 Certificate No. 7116
 ISO 9001 : 2008 Certificate No. 0506098
 BS-OHSAS 18001 : 2007 Certificate No. 7116
 IECQ QC 080000 Certificate No. PRC-HSP1801

Dated: 03/06/2006