

ZXM41N0F

SOT23 N-CHANNEL ENHANCEMENT MODE VERTICAL D MOSFET

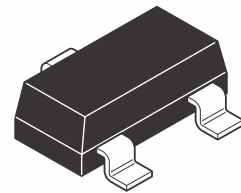
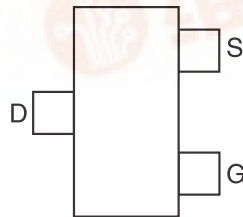
FEATURES

- $BV_{DSS} = 100V$

- Low Threshold

DEVICE MARKING

- 410



ABSOLUTE MAXIMUM RATINGS

PINOUT TOP VIEW

SOT23

PARAMETER	SYMBOL	VALUE	UNIT
Drain-source voltage	V_{DS}	100	V
Drain-gate voltage	V_{DGR}	100	V
Continuous drain current at $T_{amb}=25^{\circ}C$	I_D	170	mA
Pulsed drain current	I_{DM}	680	mA
Gate-source voltage	V_{GS}	± 20	V
Power dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	360	mW
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
Drain-source breakdown voltage	BV_{DSS}	100			V	$I_D=0.25mA, V_{GS}=0V$
Gate-source threshold voltage	$V_{GS(th)}$	0.5		1.5	V	$I_D=1mA, V_{DS}=V_{GS}$
Gate-body leakage	I_{GSS}			50	nA	$V_{GS}=\pm 20V, V_{DS}=0V$
Zero gate voltage drain current	I_{DSS}			500	nA	$V_{DS}=100V, V_{GS}=0V$
Static drain-source on-state resistance ⁽¹⁾	$R_{DS(on)}$			8 12	Ω	$V_{GS}=4.5V, I_D=150mA$ $V_{GS}=3V, I_D=50mA$
Forward transconductance ⁽¹⁾⁽²⁾	g_{fs}	80			mS	$V_{DS}=25V, I_D=100mA$
Input capacitance ⁽²⁾	C_{iss}		25		pF	$V_{DS}=25V, V_{GS}=0V, f=1MHz$
Common source output capacitance ⁽²⁾	C_{oss}		9		pF	
Reverse transfer capacitance ⁽²⁾	C_{rss}		4		pF	
Turn-on delay time ⁽²⁾⁽³⁾	$t_{d(on)}$		10		ns	
Rise time ⁽²⁾⁽³⁾	t_r		10		ns	$V_{DD} \approx 30V, I_D=280mA$
Turn-off delay time ⁽²⁾⁽³⁾	$t_{d(off)}$		15		ns	
Fall time ⁽²⁾⁽³⁾	t_f		25		ns	

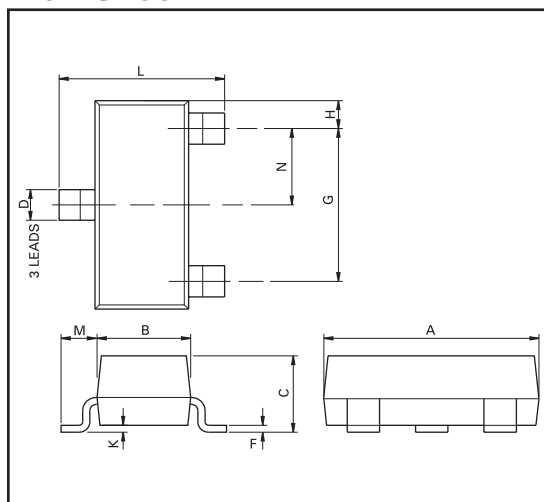
NOTES:

⁽¹⁾ Measured under pulsed conditions. Width=300 μs . Duty cycle $\leq 2\%$ ⁽²⁾ Sample test.

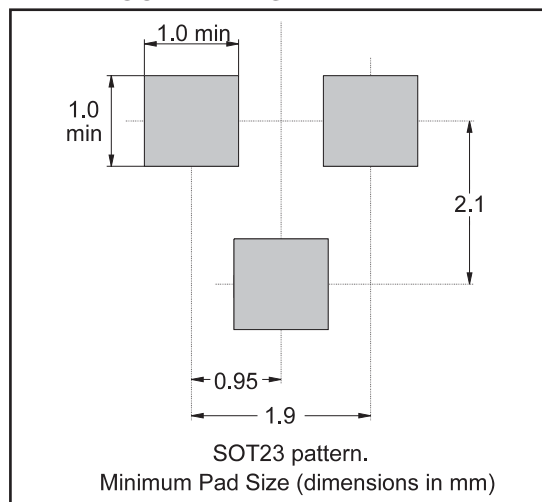
⁽³⁾ Switching times measured with 50 Ω source impedance and <5ns rise time on a pulse generator

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PACKAGE OUTLINE



PAD LAYOUT DETAILS



Controlling dimensions are in millimeters. Approximate conversions are given in inches

PACKAGE DIMENSIONS

DIM	Millimeters		Inches		DIM	Millimeters		Inches	
	Min	Max	Min	Max		Min	Max	Max	Max
A	2.67	3.05	0.105	0.120	H	0.33	0.51	0.013	0.020
B	1.20	1.40	0.047	0.055	K	0.01	0.10	0.0004	0.004
C	—	1.10	—	0.043	L	2.10	2.50	0.083	0.0985
D	0.37	0.53	0.015	0.021	M	0.45	0.64	0.018	0.025
F	0.085	0.15	0.0034	0.0059	N	0.95 NOM		0.0375 NOM	
G	1.90 NOM		0.075 NOM		Θ	10° TYP		10° TYP	

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ISSUE 1 - JANUARY 2004