ZXM41N0F

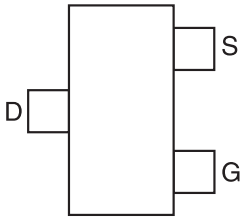
SOT23 N-CHANNEL ENHANCEMENT MODE VERTICAL D MOSFET

FEATURES

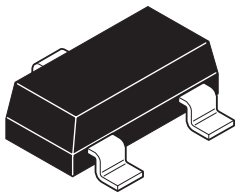
- BV_{DSS} = 100V
- Low Threshold

DEVICE MARKING

- 410



PINOUT TOP VIEW



SOT23

ABSOLUTE MAXIMUM RATINGS

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°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°C	P_{tot}	360	mW
Operating and storage temperature range	T_j:T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°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}=±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 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	V_{DD} ≈30V, I_D=280mA
Rise time (2)(3)	t_r		10		ns	
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=300μs. Duty cycle ≤2% (2) Sample test.

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

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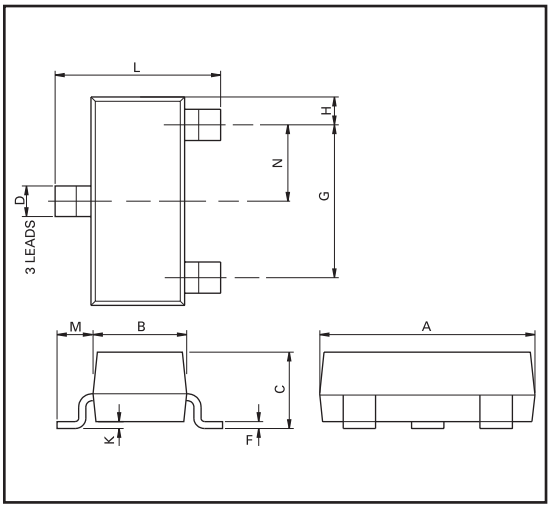
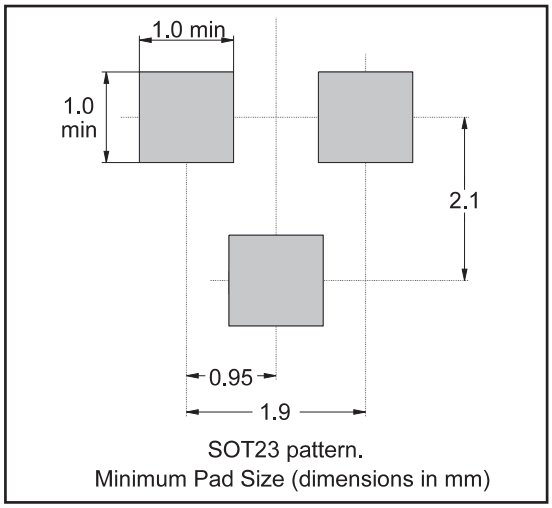
PACKAGE OUTLINE



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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