HEXFET Power MOSFET

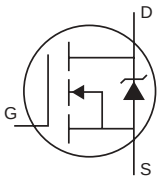
IRLML2402

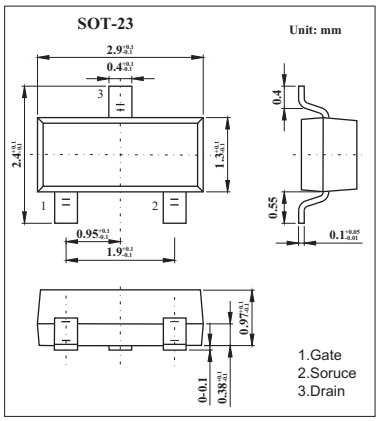
Features

Ultra Low On-Resistance

N-Channel MOSFET

Fast switching.





Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-to-source voltage	V_{GS}	±12	V
Continuous drain curent, @ V_{GS}=4.5V,T_A=25℃	I_D	1.2	A
Continuous drain curent, @ V_{GS}=4.5V,T_A=70℃		0.95	A
Pulsed drain current *1	I_{DM}	7.4	A
Power dissipation @ T_A=25℃	P_D	540	mW
Thermal Resistance,Junction- to-Ambient	$R_{\theta JA}$	230	℃/W
Junction and storage temperature range	T_J,T_{STG}	-55 to +150	℃

*1.Reptitive rating:pulse width limited by max.junction temperature.

*2.I_{SD} 0.93A,di/dt 90A/μs,V_{DD} $V_{(BR)DSS}$,T_J 150℃

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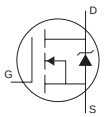
Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test conditons	Min	Typ	Max	Unit
Drain-source Breakdown voltage	V_{DSS}	I_D= 250 μA, V_{GS} = 0V	20			V
Gate-source leakage current	I_{DSS}	V_{DS} = 16 V, V_{GS} = 0V			1	μA
		V_{DS} = 16 V, V_{GS} = 0V, T_J=125℃			25	
Gate-source leadage	I_{GSS}	V_{GS}=±12V,V_{DS}=0V			±100	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D= 250 μA	0.70			V
Static drain-source on- resistance	$R_{DS(on)}$	I_D= 0.93A, V_{GS} = 4.5V			0.25	Ω
		I_D= 0.47A, V_{GS} =2.7V			0.35	
Forward Transconductance	g_{fs}	V_{DS} = 10 V, I_D = 0.47 A	1.3			S
Input capacitance	C_{iss}	V_{DS} = 15V,		110		pF
Output capacitance	C_{oss}	V_{GS} = 0 V,		51		
Reverse transfer capacitance	C_{rss}	f= 1MHz		25		
Total Gate Charge	Q_g	V_{DS} =16V ,V_{GS} = 4.5 V , I_D= 0.93 A		2.6	3.9	nC
Gate-Source Charge	Q_{gs}			0.41	0.62	
Gate-Drain Charge	Q_{gd}			1.1	1.7	
Turn-on delay time	$t_{d(on)}$	V_{DD}= 10 V, MI$_D$= 0.93A,		2.5		ns
Rise time	t_r			9.5		
Turn-off delay time	$t_{d(off)}$	R_D= 11Ω ,R_G= 6.2Ω		9.7		
Fall time	t_f			4.8		
Reverse recovery time	t_{rr}	T_J=25℃, I_F = 0.93 A, di / dt = 100 A/μs *2		25	38	ns
Reverse recovery charge	Q_{rr}			16	24	nC
Continuous source current	I_S	MOSFET symbo l showing the integral reverse p-n junction diode 			0.54	A
Pulsed source current *1	I_{SM}				7.4	
Diode forward voltage	V_{SD}	T_J=25℃,V_{GS} = 0 V, I_S = 0.93 A *2			1.2	V

*1 Repetitive rating;pulse width limited by max.junction temperature.

* 2 Pulse width 300μs, Duty cycle 2%