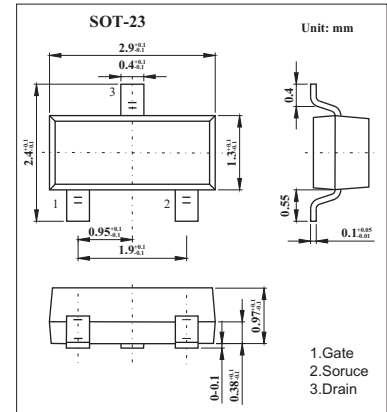
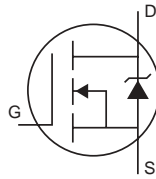


HEXFET Power MOSFET

IRLML2402

■ Features

- Ultra Low On-Resistance
- N-Channel MOSFET
- Fast switching.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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

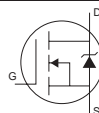
*1.Repetitive rating:pulse width limited by max.junction temperature.

*2. $I_{SD} \leq 0.93A, di/dt \leq 90A/\mu s, V_{DD} \leq V_{(BR)DSS}, T_J \leq 150^\circ\text{C}$

IRLML2402

■ Electrical Characteristics Ta = 25°C

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°C			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			2.6	3.9	nC
Gate-Source Charge	Q _{gs}	V _{DS} = 16V, V _{GS} = 4.5 V, I _D = 0.93 A		0.41	0.62	
Gate-Drain Charge	Q _{gd}			1.1	1.7	
Turn-on delay time	t _{d(on)}	V _{DD} = 10 V, M _I D = 0.93A, R _D = 11 Ω, R _G = 6.2Ω		2.5		ns
Rise time	t _r			9.5		
Turn-off delay time	t _{d(off)}			9.7		
Fall time	t _f			4.8		
Reverse recovery time	t _{rr}	T _J = 25°C, 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 symbol I 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°C, 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 ≤ 300 μs, Duty cycle ≤ 2%