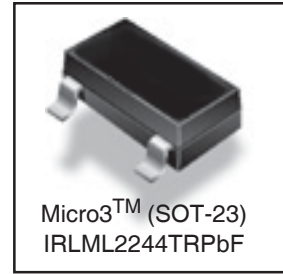
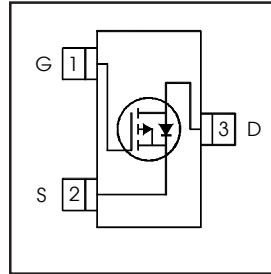


IRLML2244TRPbF

HEXFET® Power MOSFET

V_{DS}	-20	V
V_{GS} Max	± 12	V
$R_{DS(on)}$ max (@ $V_{GS} = -4.5V$)	54	mΩ
$R_{DS(on)}$ max (@ $V_{GS} = -2.5V$)	95	mΩ



Application(s)

- System/Load Switch

Features and Benefits

Features

Low $R_{DS(on)}$ ($\leq 54m\Omega$)
Industry-standard pinout
Compatible with existing Surface Mount Techniques
RoHS compliant containing no lead, no bromide and no halogen
MSL1, Consumer qualification

results in
⇒

Benefits

Lower switching losses
Multi-vendor compatibility
Easier manufacturing
Environmentally friendly
Increased reliability

Absolute Maximum Ratings

Symbol	Parameter	Max.	Units
V_{DS}	Drain-Source Voltage	-20	V
I_D @ $T_A = 25^\circ C$	Continuous Drain Current, V_{GS} @ -4.5V	-4.3	A
I_D @ $T_A = 70^\circ C$	Continuous Drain Current, V_{GS} @ -4.5V	-3.4	
I_{DM}	Pulsed Drain Current	-18	
P_D @ $T_A = 25^\circ C$	Maximum Power Dissipation	1.3	W
P_D @ $T_A = 70^\circ C$	Maximum Power Dissipation	0.8	
	Linear Derating Factor	0.01	
V_{GS}	Gate-to-Source Voltage	± 12	V
T_J, T_{STG}	Junction and Storage Temperature Range	-55 to + 150	°C

Thermal Resistance

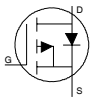
Symbol	Parameter	Typ.	Max.	Units
$R_{\theta JA}$	Junction-to-Ambient ③	—	100	°C/W
$R_{\theta JA}$	Junction-to-Ambient (t<10s) ④	—	99	

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Electric Characteristics @ T_J = 25°C (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
V _{(BR)DSS}	Drain-to-Source Breakdown Voltage	-20	—	—	V	V _{GS} = 0V, I _D = -250μA
ΔV _{(BR)DSS} /ΔT _J	Breakdown Voltage Temp. Coefficient	—	0.01	—	V/°C	Reference to 25°C, I _D = -1mA
R _{DS(on)}	Static Drain-to-Source On-Resistance	—	42	54	mΩ	V _{GS} = -4.5V, I _D = -4.3A ②
		—	71	95		V _{GS} = -2.5V, I _D = -3.4A ②
V _{GS(th)}	Gate Threshold Voltage	-0.4	—	-1.1	V	V _{DS} = V _{GS} , I _D = -10μA
I _{DSS}	Drain-to-Source Leakage Current	—	—	1	μA	V _{DS} = -16V, V _{GS} = 0V
		—	—	150		V _{DS} = -16V, V _{GS} = 0V, T _J = 125°C
I _{GSS}	Gate-to-Source Forward Leakage	—	—	-100	nA	V _{GS} = 12V
	Gate-to-Source Reverse Leakage	—	—	100		V _{GS} = -12V
R _G	Internal Gate Resistance	—	8.9	—	Ω	
g _{fs}	Forward Transconductance	6.5	—	—	S	V _{DS} = -10V, I _D = -4.3A
Q _g	Total Gate Charge	—	6.9	—	nC	I _D = -4.3A
Q _{gs}	Gate-to-Source Charge	—	1.0	—		V _{DS} = -10V
Q _{gd}	Gate-to-Drain ("Miller") Charge	—	2.9	—		V _{GS} = -4.5V ②
t _{d(on)}	Turn-On Delay Time	—	7.0	—	ns	V _{DD} = -10V ②
t _r	Rise Time	—	12	—		I _D = -1A
t _{d(off)}	Turn-Off Delay Time	—	34	—		R _G = 6.8Ω
t _f	Fall Time	—	25	—		V _{GS} = -4.5V
C _{iss}	Input Capacitance	—	570	—	pF	V _{GS} = 0V
C _{oss}	Output Capacitance	—	160	—		V _{DS} = -16V
C _{rss}	Reverse Transfer Capacitance	—	110	—		f = 1.0KHz

Source - Drain Ratings and Characteristics

Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
I _S	Continuous Source Current (Body Diode)	—	—	-1.3	A	MOSFET symbol showing the integral reverse p-n junction diode. 
I _{SM}	Pulsed Source Current (Body Diode) ①	—	—	-18		
V _{SD}	Diode Forward Voltage	—	—	-1.2	V	T _J = 25°C, I _S = -4.3A, V _{GS} = 0V ②
t _{rr}	Reverse Recovery Time	—	21	32	ns	T _J = 25°C, V _R = -16V, I _F = -4.3A
Q _{rr}	Reverse Recovery Charge	—	9.0	14	nC	di/dt = 100A/μs ②