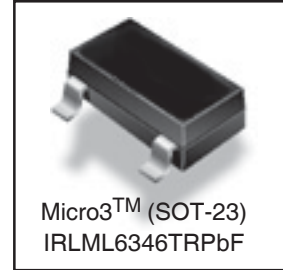
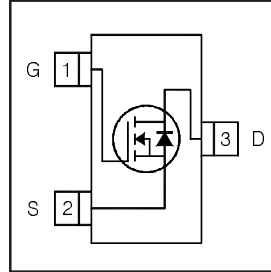


IRLML6346TRPbF

HEXFET® Power MOSFET

V_{DS}	30	V
$V_{GS\ Max}$	± 12	V
$R_{DS(on)\ max}$ (@ $V_{GS} = 4.5V$)	63	mΩ
$R_{DS(on)\ max}$ (@ $V_{GS} = 2.5V$)	80	mΩ



Application(s)

- Load/ System Switch

Features and Benefits

Features

Industry-standard SOT-23 Package
RoHS compliant containing no lead, no bromide and no halogen
MSL1, Consumer Qualification

results in



Benefits

Multi-vendor compatibility
Environmentally friendly
Increased Reliability

Absolute Maximum Ratings

Symbol	Parameter	Max.	Units
V_{DS}	Drain-Source Voltage	30	V
$I_D @ T_A = 25^\circ C$	Continuous Drain Current, $V_{GS} @ 10V$	3.4	A
$I_D @ T_A = 70^\circ C$	Continuous Drain Current, $V_{GS} @ 10V$	2.7	
I_{DM}	Pulsed Drain Current	17	
$P_D @ T_A = 25^\circ C$	Maximum Power Dissipation	1.3	W
$P_D @ T_A = 70^\circ C$	Maximum Power Dissipation	0.8	
	Linear Derating Factor	0.01	W/°C
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	30	—	—	V	V _{GS} = 0V, I _D = 250μA
ΔV _{(BR)DSS} /ΔT _J	Breakdown Voltage Temp. Coefficient	—	0.02	—	V/°C	Reference to 25°C, I _D = 1mA
R _{DS(on)}	Static Drain-to-Source On-Resistance	—	46	63	mΩ	V _{GS} = 4.5V, I _D = 3.4A ②
		—	59	80		V _{GS} = 2.5V, I _D = 2.7A ②
V _{GS(th)}	Gate Threshold Voltage	0.5	0.8	1.1	V	V _{DS} = V _{GS} , I _D = 10μA
I _{DSS}	Drain-to-Source Leakage Current	—	—	1.0	μA	V _{DS} = -24V, V _{GS} = 0V
		—	—	150		V _{DS} = 24V, 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	—	3.9	—	Ω	
g _{fs}	Forward Transconductance	9.5	—	—	S	V _{DS} = 10V, I _D = 3.4A
Q _g	Total Gate Charge	—	2.9	—	nC	I _D = 3.4A
Q _{gs}	Gate-to-Source Charge	—	0.13	—		V _{DS} = 15V
Q _{gd}	Gate-to-Drain ("Miller") Charge	—	1.1	—		V _{GS} = 4.5V ②
t _{d(on)}	Turn-On Delay Time	—	3.3	—	ns	V _{DD} = 15V ②
t _r	Rise Time	—	4.0	—		I _D = 1.0A
t _{d(off)}	Turn-Off Delay Time	—	12	—		R _G = 6.8Ω
t _f	Fall Time	—	4.9	—		V _{GS} = 4.5V
C _{iss}	Input Capacitance	—	270	—	pF	V _{GS} = 0V
C _{oss}	Output Capacitance	—	32	—		V _{DS} = 24V
C _{rss}	Reverse Transfer Capacitance	—	21	—		f = 1.0MHz

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	—	—	17		
V _{SD}	Diode Forward Voltage	—	—	1.2	V	T _J = 25°C, I _S = 3.4A, V _{GS} = 0V ②
t _{rr}	Reverse Recovery Time	—	8.8	13	ns	T _J = 25°C, V _R = 24V, I _F = 1.3A
Q _{rr}	Reverse Recovery Charge	—	2.7	4.1	nC	di/dt = 100A/μs ②