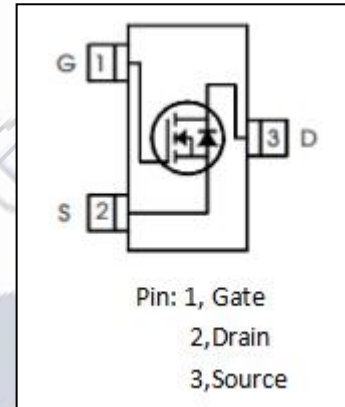


isc N-Channel MOSFET Transistor
IRFIRLML2502TRPBF
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(on)} \leq 45m\Omega$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

- Provides the designer with an extremely efficient and reliable device for use in battery and load management.


• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	± 12	V
I_D	Drain Current-Continuous	4.2	A
I_{DM}	Drain Current-Single Pulsed	33	A
P_D	Total Dissipation @ $T_C=25^\circ\text{C}$	1.25	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	100	$^\circ\text{C/W}$

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =250 μ A	20			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =250 μ A	0.6		1.2	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =4.5V; I _D =4.2A			0.045	Ω
		V _{GS} =2.5V; I _D =3.6A			0.08	
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±12V			±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =16V; V _{GS} = 0V			1	μ A
		V _{DS} =16V; V _{GS} = 0V; T _J = 70°C			25	
V _{SD}	Diode forward voltage	I _S =1.3A; V _{GS} = 0V			1.2	V

OUTLINE DRAWING

