

## isc N-Channel MOSFET Transistor

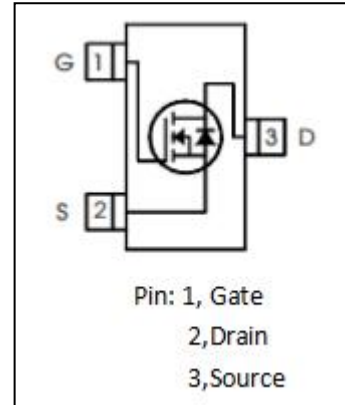
## IRFIRLML2502TRPBF

## • 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
$V_{DS}$	Drain-Source Voltage	20	V
$V_{GS}$	Gate-Source Voltage	$\pm 12$	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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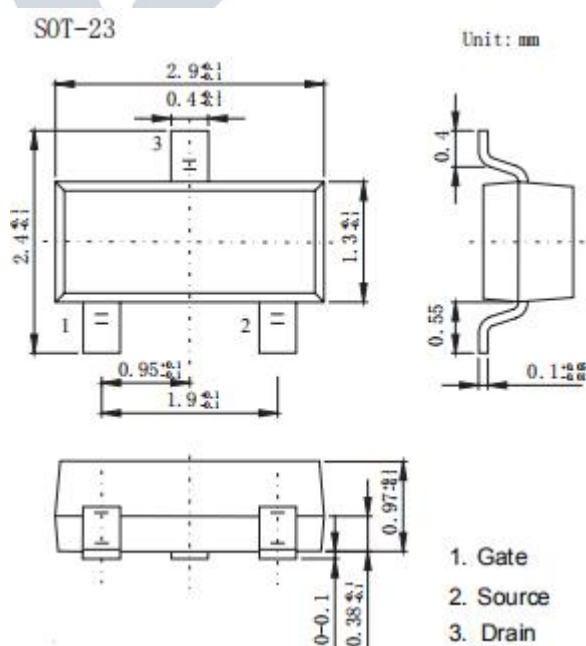
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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ ; $I_D=250\mu A$	20			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$ ; $I_D=250\mu A$	0.6		1.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=4.5V$ ; $I_D=4.2A$			0.045	$\Omega$
		$V_{GS}=2.5V$ ; $I_D=3.6A$			0.08	
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 12V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=16V$ ; $V_{GS}=0V$			1	$\mu A$
		$V_{DS}=16V$ ; $V_{GS}=0V$ ; $T_J=70^{\circ}\text{C}$			25	
$V_{SD}$	Diode forward voltage	$I_S=1.3A$ ; $V_{GS}=0V$			1.2	V

## OUTLINE DRAWING



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