ZLM2323AB ÿ V1.0

P-Channel Trench Power MOSFET

ZLW-QW-EN-G146

台湾卓朗微科有限公司

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Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-20V	39mΩ@-4.5V	-4.7A
	52mΩ@-2.5V	

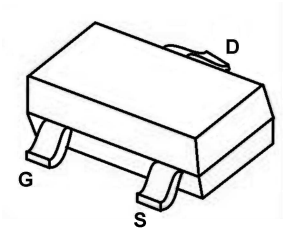
Feature

- TrenchFET Power MOSFET

Application

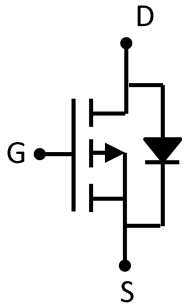
- PA Switch
- Load Switch

Package



SOT-23

Circuit diagram



Absolute maximum ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±10	V
Continuous Drain Current	I_D	-4.7	A
Pulsed Drain Current	I_{DM}	-20	A
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

Electrical characteristics (T_A=25 °C, unless otherwise noted)

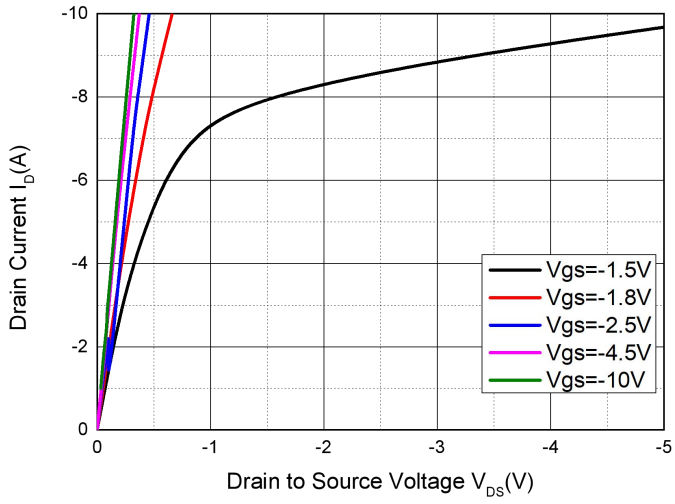
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-16V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±1	μA
Gate-source threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.4		-1	V
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-2.7A		33	39	mΩ
		V_{GS} =-2.5V, I_D =-2.7A		43	52	
Dynamic characteristics						
Input Capacitance[1)2)]	C_{iss}	V_{DS} =-10V,V_{GS} =0V,f =1MHz		1020		pF
Output Capacitance[1)2)]	C_{oss}			191		pF
Reverse Transfer Capacitance[1)2)]	C_{rss}			140		pF
Total Gate Charge[1)]	Q_g	V_{DS} =-10V, V_{GS} =-4.5V,I_D=-4.7A		12.5	19	nC
Gate-Source Charge[1)]	Q_{gs}			1.7		nC
Gate-Drain Charge[1)]	Q_{gd}			3.3		nC
Switching[1)2)]						
Turn-on delay time	$t_{d(on)}$	V_{GEN}=-4.5V,V_{DD}=-10V, I_D =-1A,R_G=6Ω		25	40	ns
Turn-on rise time	t_r			43	65	ns
Turn-off delay time	$t_{d(off)}$			71	110	ns
Turn-off fall time	t_f			48	75	ns
Source-Drain Diode characteristics						
Diode Forward voltage	V_{SD}	V_{GS} =0V, I_S=-1A			-1.2	V

Notes:

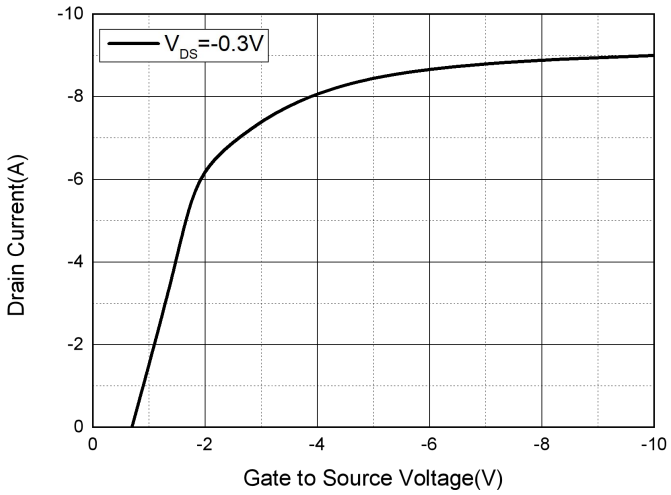
1) Pulse test: pulse width≤300μs, duty cycle≤2%.

2) These parameters have no way to verify.

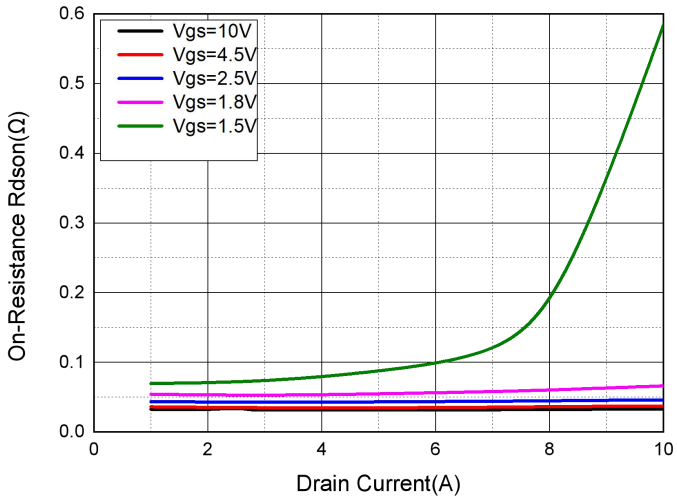
Typical Characteristics



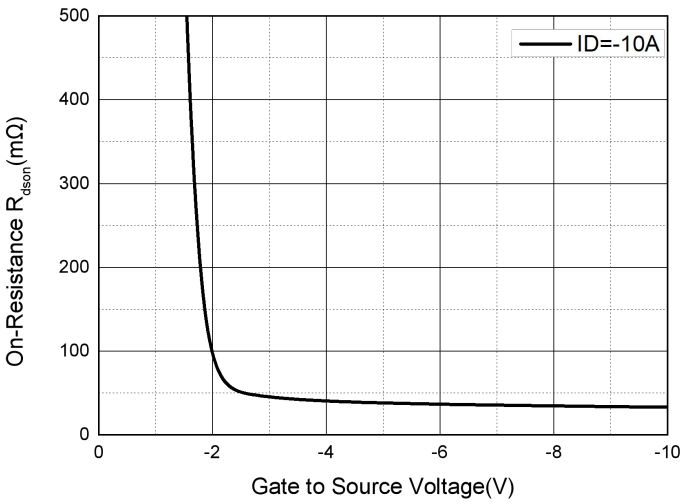
Output Characteristics



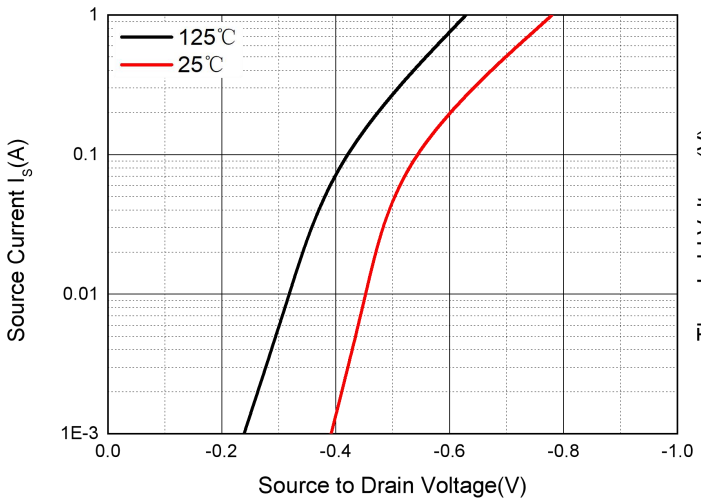
Transfer Characteristics



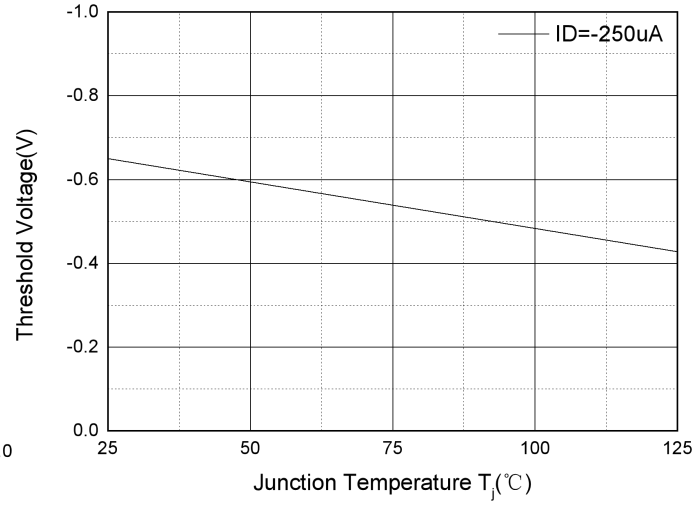
$R_{DS(ON)}$ vs. I_D



$R_{DS(ON)}$ vs. V_{GS}

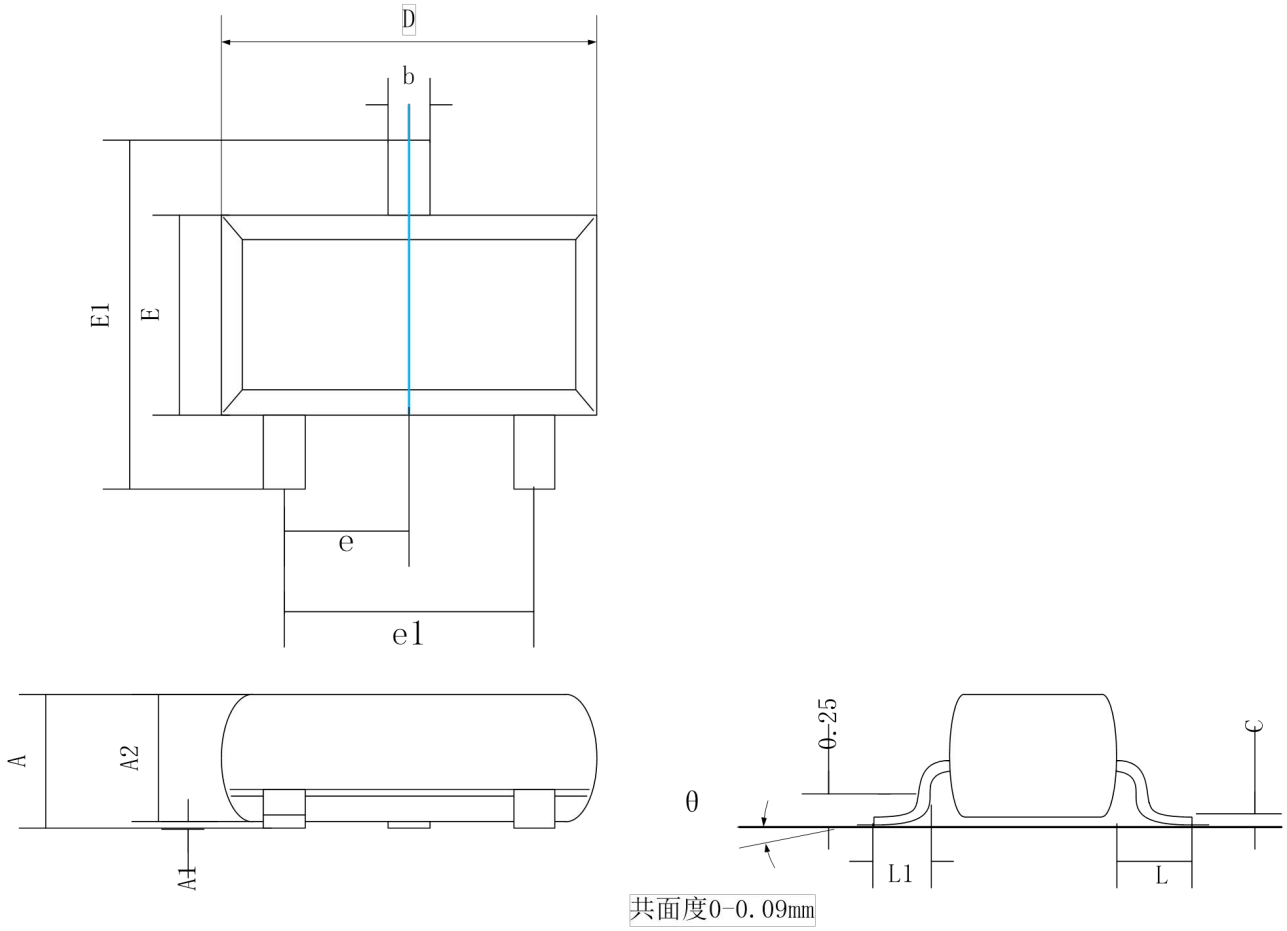


I_S vs. V_{SD}



Threshold Voltage

SOT-23 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50
θ	0°	8°