

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
20V	28mΩ@4.5V	4.3A
	38mΩ@2.5V	

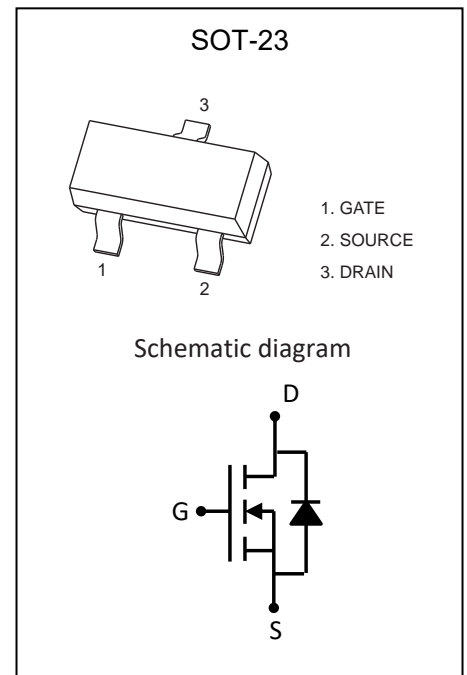
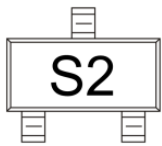
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

MARKING:



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

Parameter	Symbol	Value	Unit
Drain - Source Voltage	V_{DS}	20	V
Gate - Source Voltage	V_{GS}	±12	V
Continuous Drain Current ^{1,5}	I_D	4.3	A
Pulsed Drain Current ²	I_{DM}	14	A
Power Dissipation ^{4,5}	P_D	1.4	W
Thermal Resistance from Junction to Ambient ⁵	$R_{\theta JA}$	89	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~ +150	$^{\circ}\text{C}$

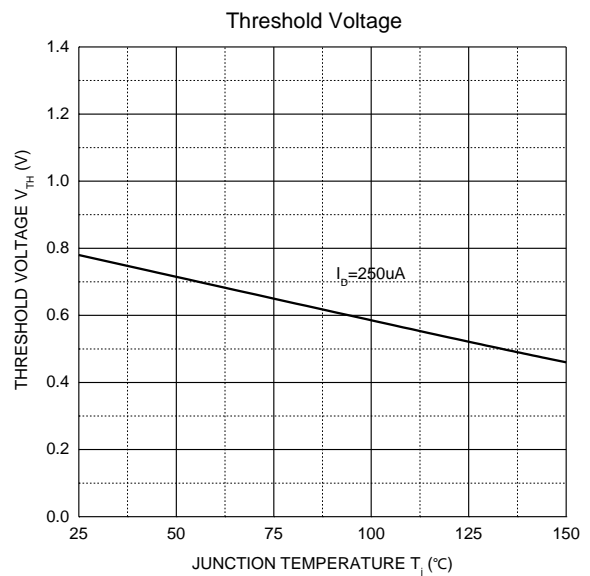
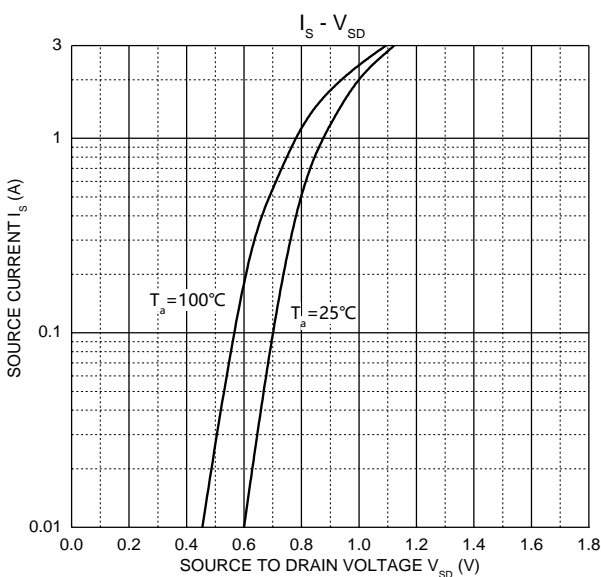
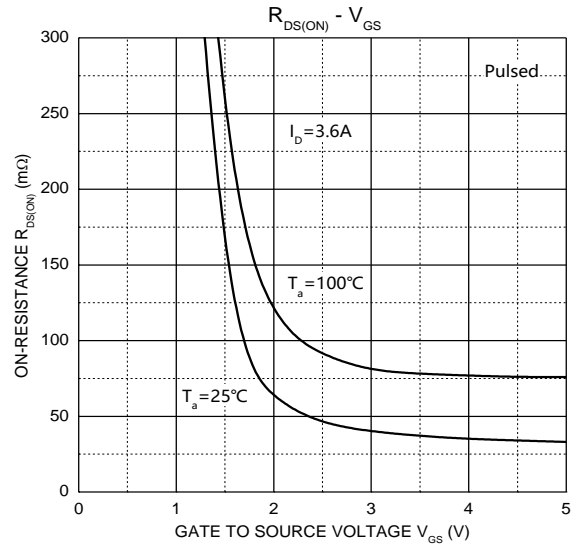
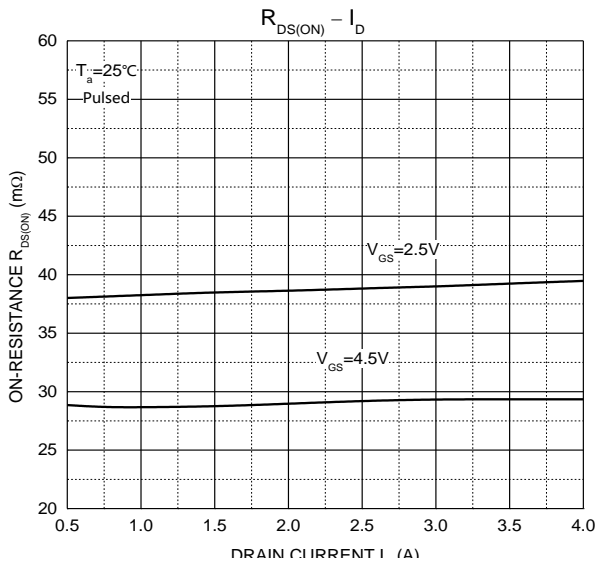
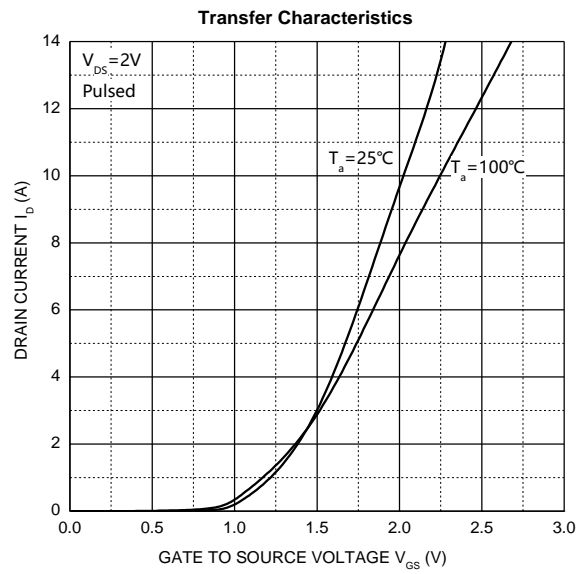
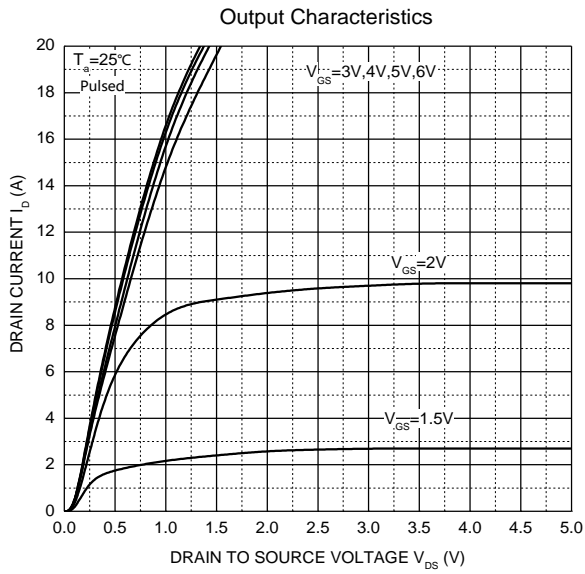
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

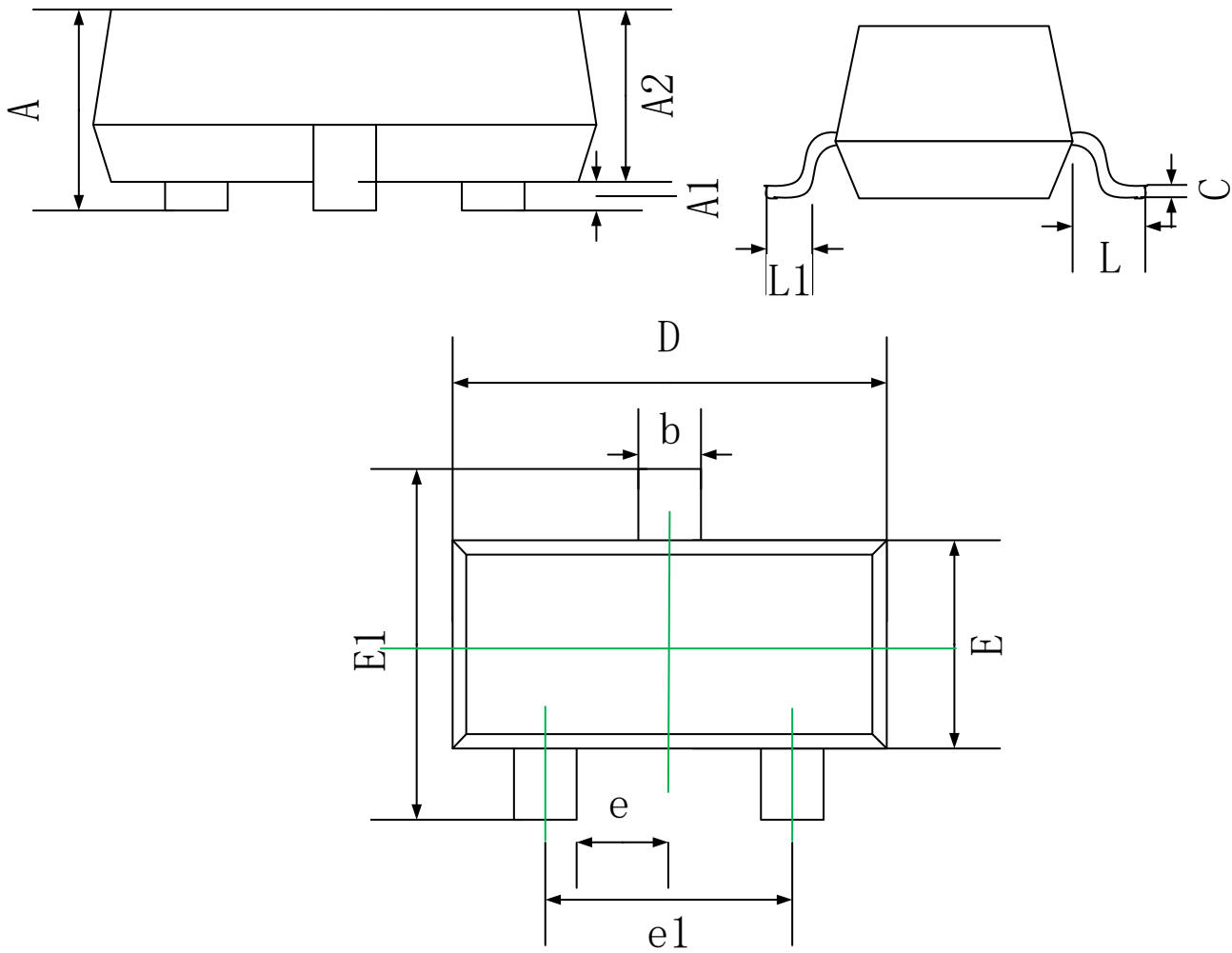
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 0.1	μA
Gate threshold voltage ³	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.6	0.8	1.2	V
Drain-source on-resistance ³	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 4.2A$		28	45	m Ω
		$V_{GS} = 2.5V, I_D = 3.0A$		38	60	
Forward transconductance ³	g_{FS}	$V_{DS} = 5V, I_D = 3.6A$	8			S
Dynamic characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0V, f = 1MHz$		596		pF
Output Capacitance	C_{oss}			105		
Reverse Transfer Capacitance	C_{rss}			58		
Total gate charge	Q_g	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 4.3A$		6.6		nC
Gate-source charge	Q_{gs}			0.9		
Gate-drain charge	Q_{gd}			1.5		
Switching Characteristics						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 10V, R_L = 1.5\Omega, V_{GEN} = 4.5V, R_g = 3\Omega$		15		ns
Turn-on rise time	t_r			54		
Turn-off delay time	$t_{d(off)}$			19		
Turn-off fall time	t_f			12		
Source-Drain Diode characteristics						
Diode Forward voltage ³	V_{DS}	$V_{GS} = 0V, I_S = 1A$			1.2	V

Notes :

- 1.The maximum current rating is limited by package.
- 2.Pulse Test : Pulse Width $\leq 10\mu s$, duty cycle $\leq 1\%$.
- 3.Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.
- 4.The power dissipation P_D is limited by $T_{J(MAX)} = 150^{\circ}\text{C}$.
- 5.Device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^{\circ}\text{C}$.

Typical Electrical and Thermal Characteristics



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

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)