



SOT-23 P a a MOSFETS

**MK2308**

N-C a

60-V(D-S) MOSFET

<b>V(BR)DSS</b>	<b>RDS( )MAX</b>	<b>ID</b>
60 V	95mΩ@10V	3 A
	100mΩ@4.5V	

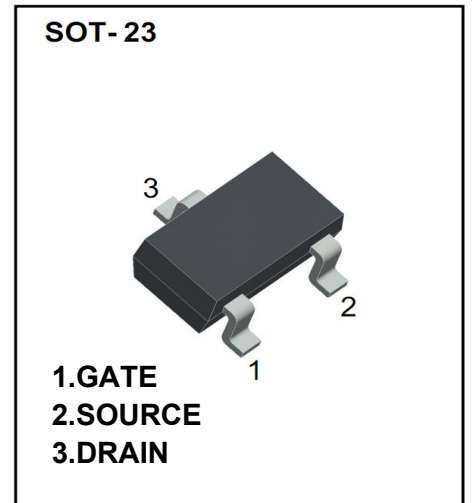
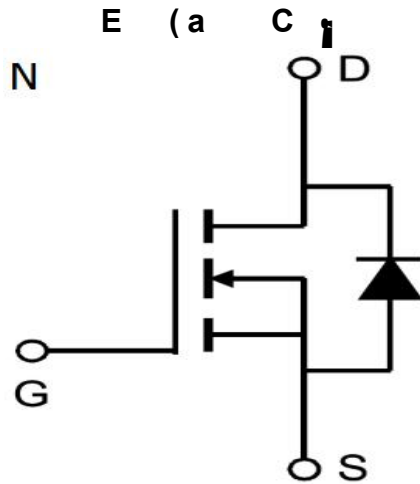
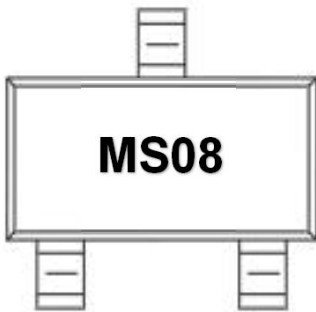
**FEATURE**

※ TrenchFET Power MOSFET

**APPLICATION**

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

**MARKING**



**Ma a ( Ta=25°C )**

Pa a	S b	Va	U
Drain-Source Voltage	<b>VDS</b>	60	V
Gate-Source Voltage	<b>VGS</b>	±20	
Continuous Drain Current	<b>ID</b>	3	A
Pulsed Drain Current	<b>IDM</b>	10	
Continuous Source-Drain Current(Diode Conduction)	<b>IS</b>	0.8	
Power Dissipation	<b>PD</b>	1.25	W
Thermal Resistance from Junction to Ambient (t≤5s)	<b>R JA</b>	150	°C/W
Operating Junction	<b>TJ</b>	150	°C
Storage Temperature	<b>TSTG</b>	-55~+150	°C



MOSFET ELECTRICAL CHARACTERISTICS

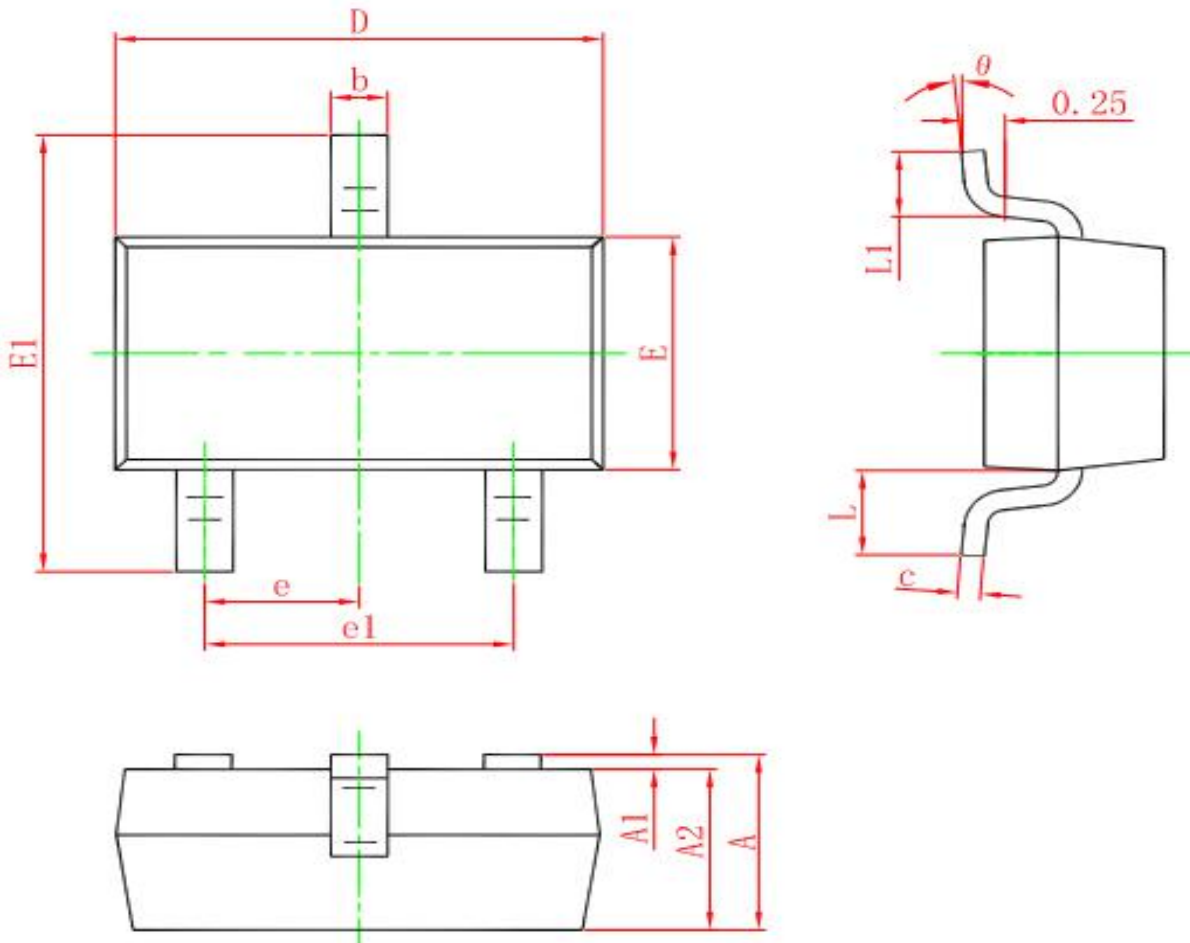
(Ta = 25 °C)							
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Drain-source breakdown voltage	V(BR) <sub>DSS</sub>	VGS = 0V, ID = 250μA	60			V	
Gate-source threshold voltage	VGS(th)	VDS = VGS, ID = 250μA	0.9		2	V	
Gate-source leakage	IGSS	VDS = 0V, VGS = ±20V			±100	nA	
Zero gate voltage drain current	IDSS	VDS = 60V, VGS = 0V			1	μA	
Drain-source on-state resistancea	RDS(on)	VGS = 10V, ID = 2A		72	95	mΩ	
		VGS = 4.5V, ID = 1.5A		82	100	mΩ	
Forward transconductancea	gfs	VDS = 4.5V, ID = 3A		7		S	
Diode forward voltage	VSD	IS=1A, VGS=0V		0.7	1.2	V	
Input capacitance	C <sub>i</sub>	VDS = 10V, VGS = 0V, f=1MHz		247		pF	
Output capacitance	C <sub>o</sub>			34		pF	
Reverse transfer capacitanceb	C <sub>is</sub>			20		pF	
Total gate charge	Q <sub>g</sub>	VDS = 10V, VGS = 4.5V, ID = 3A		6	4.5	nC	
Gate-source charge	Q <sub>gs</sub>			1		nC	
Gate-drain charge	Q <sub>gd</sub>			1.3		nC	
Gate resistance	R <sub>g</sub>	f=1MHz		5		Ω	
Turn-on delay time	t <sub>on</sub>	VDD= 10V RL=6Ω, ID ≈ 1A, VGEN= 4.5V, Rg=6Ω		7	11	ns	
Rise time	t <sub>r</sub>			12	18	ns	
Turn-off delay time	t <sub>off</sub>			14	25	ns	
Fall time	t <sub>f</sub>			6	10	ns	
Continuous Source-Drain Diode Current	IS	Tc=25°C			1.2	A	
Pulsed Diode forward Current	ISM				20	A	

Notes:

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.



SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°