



MK2310

N-C a e 60-V(D-S) MOSFET

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

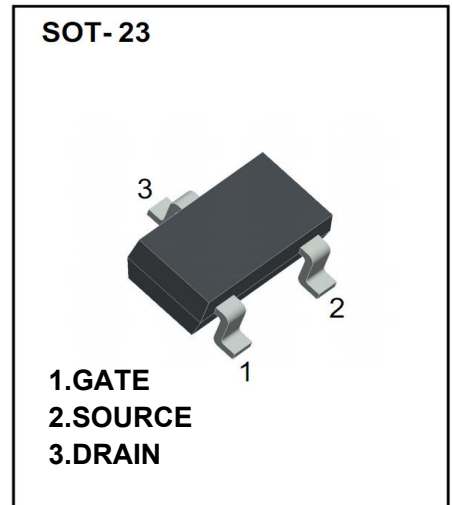
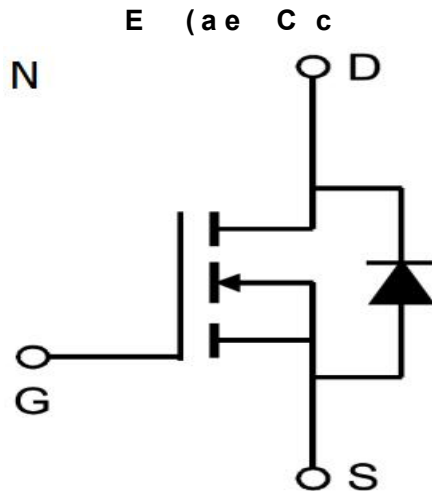
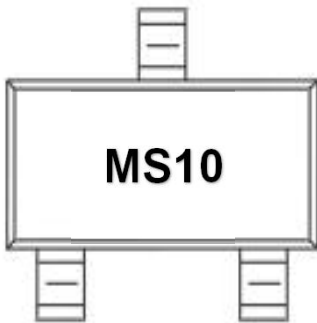
FEATURE

※ TrenchFET Power MOSFET

APPLICATION

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

MARKING



Ma a (Ta=25°C e e e ed)

Pa a e e	S b	Va e	U
Drain-Source Voltage	VDS	60	V
Gate-Source Voltage	VGS	±20	
Continuous Drain Current	ID	3	A
Pulsed Drain Current	IDM	10	
Continuous Source-Drain Current(Diode Conduction)	IS	0.8	
Power Dissipation	PD	1.25	W
Thermal Resistance from Junction to Ambient (t≤5s)	R JA	357	°C/W
Operating Junction	TJ	150	°C
Storage Temperature	TSTG	-55~+150	°C



MOSFET ELECTRICAL CHARACTERISTICS

S a c E e c c a C a a c e c (Ta = 25 °C U e O e e N e d)

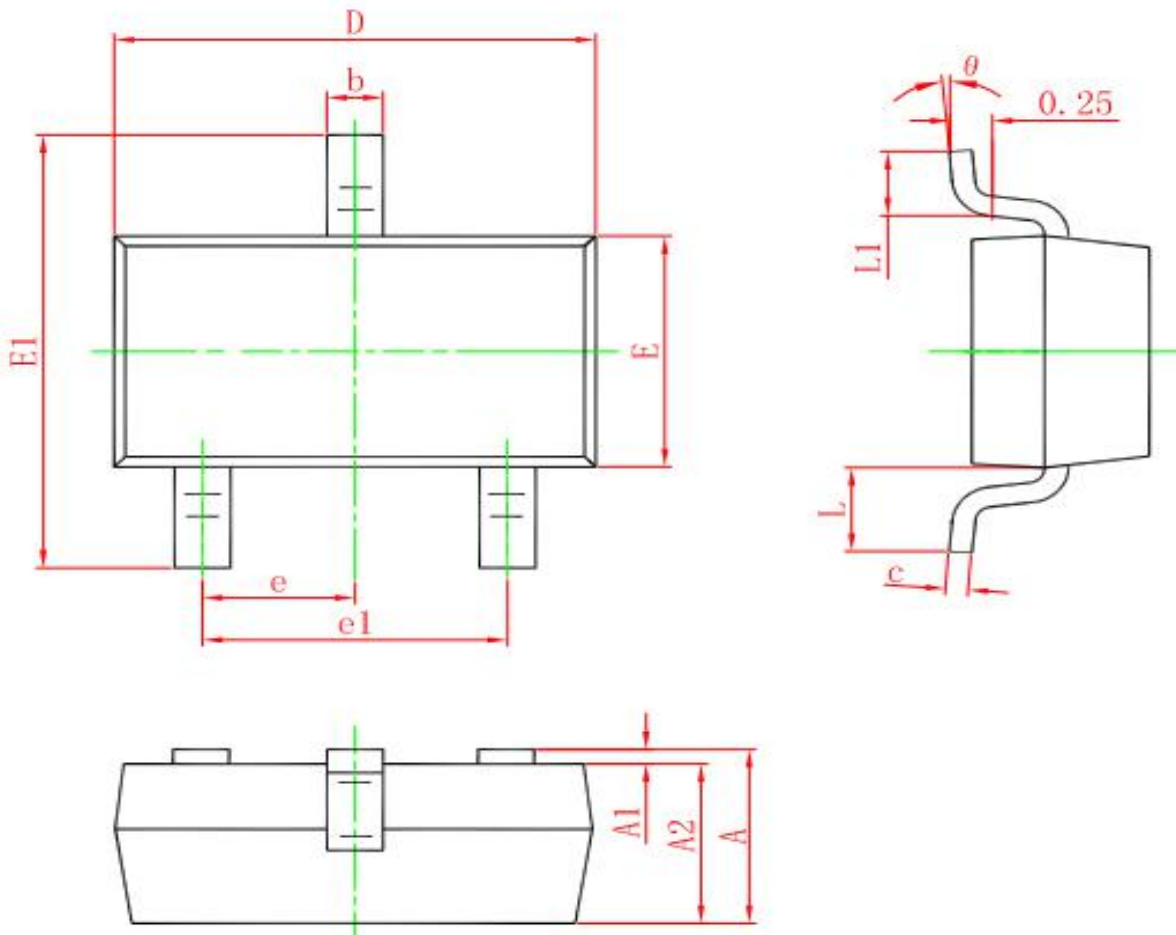
Pa a e e	S b	Te C d	M	T	Ma	U
S a c						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = 250μA	60			V
Gate-source threshold voltage	VGS()	VDS =VGS, ID = 250μA	0.9		2	V
Gate-source leakage	IGSS^G	VDS =0V, VGS = ±20V			±100	nA
Zero gate voltage drain current	IDSS	VDS = 60V, VGS =0V			1	μA
Drain-source on-state resistance ^a	RDS(GG)	VGS = 10V, ID = 3 A		72	95	mΩ
		VGS = 4.5V, ID = 2 A		82	100	mΩ
Forward transconductance ^a	f_{GS}	VDS = 4.5V, ID = 3A		7		S
Diode forward voltage	VSD	IS=1A,VGS=0V		0.8	1.2	V
D a c						
Input capacitance	C_i^G	VDS = 10V,VGS =0V, f=1MHz		247		pF
Output capacitance	C_o			34		pF
Reverse transfer capacitance ^b	C_r			20		pF
Total gate charge	Q_g	VDS = 10V,VGS = 4.5V, ID = 3A		6	4.5	nC
Gate-source charge	Q_{gs}			1		nC
Gate-drain charge	Q_{gd}			1.3		nC
Gate resistance	R_g	f=1MHz		5		Ω
S c b						
Turn-on delay time	t_{d(on)}	VDD= 10V RL=10Ω, ID ≈ 1A, VGEN= 4.5V,Rg=6Ω		7	15	ns
Rise time				15	20	ns
Turn-off delay time	t_{d(off)}			15	25	ns
Fall time	t_f			10	20	ns
D a - c e b d d d e c a a c e c						
Continuous Source-Drain Diode Current	IS	Tc=25°C			1.2	A
Pulsed Diode forward Current	ISM				20	A

N e :

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°



TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

