

N-Channel MOSFET

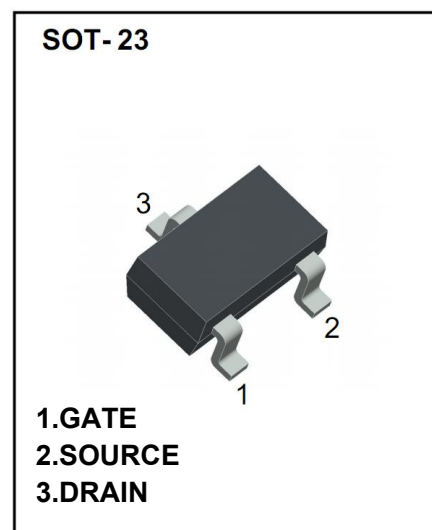
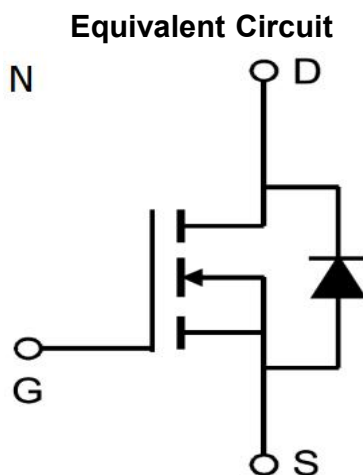
V(BR)DSS	RDS(on)MAX	ID
30 V	60mΩ@10V	3.3A
	75mΩ@4.5V	

FEATURE

※ TrenchFET Power MOSFET

APPLICATION

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


Maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	30	V
Gate-Source Voltage	VGS	±20	
Continuous Drain Current	ID	3.3	A
Pulsed Diode Current	IDM	15	
Continuous Source-Drain Current(Diode Conduction)	IS	0.9	
Power Dissipation	PD	0.35	W
Thermal Resistance from Junction to Ambient (t≤5s)	RθJA	357	°C/W
Operating Junction	TJ	150	°C
Storage Temperature	TSTG	-55~+150	°C

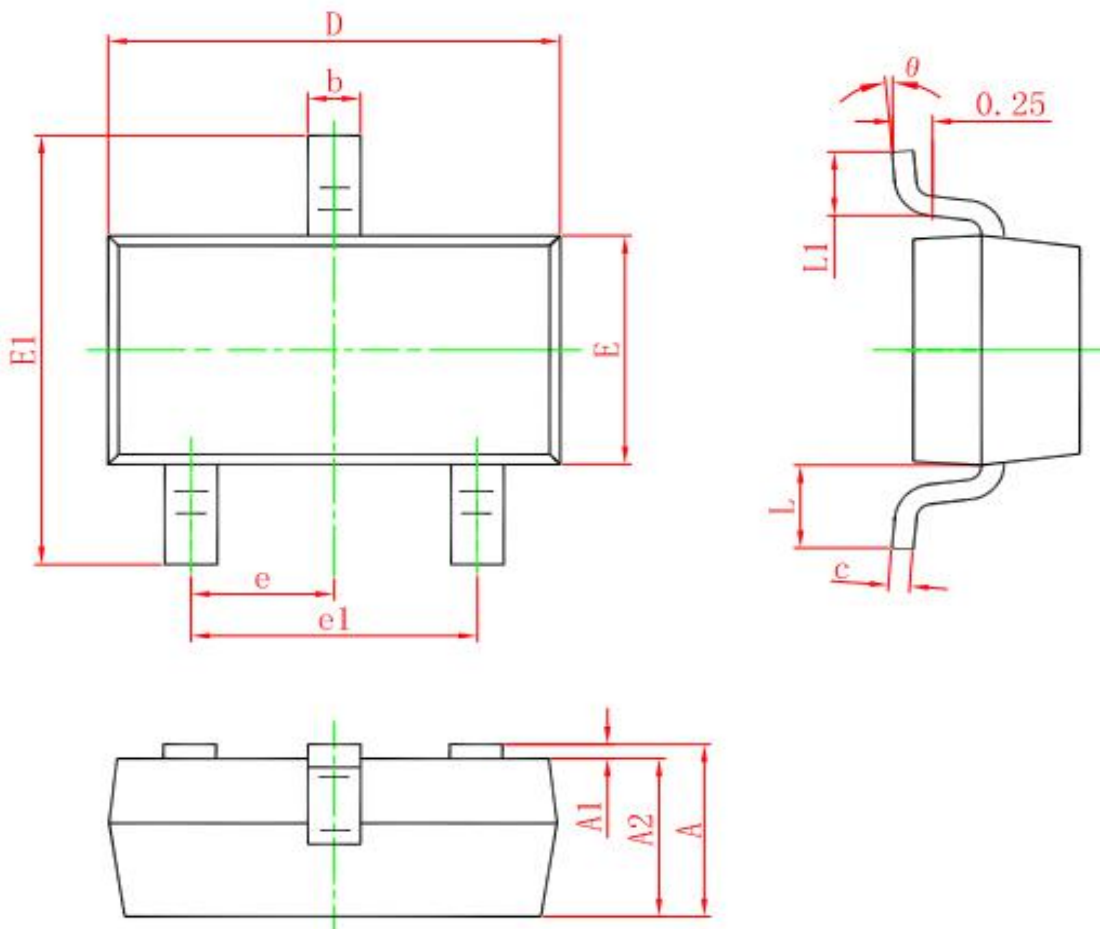
MOSFET ELECTRICAL CHARACTERISTICS
Static Electrical Characteristics (Ta = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = 250μA	30			V
Gate-source threshold voltage	VGS(th)	VDS = VGS, ID = 250μA	1		3	V
Gate-source leakage	IGSS	VDS = 0V, VGS = ±20V			±100	nA
Zero gate voltage drain current	IDSS	VDS = 30V, VGS = 0V			1	μA
Drain-source on-state resistance ^a	RDS(on)	VGS = 10V, ID = 3.2A		37	60	mΩ
		VGS = 4.5V, ID = 2.8A		57	75	mΩ
Forward transconductance ^a	gfs	VDS = 4.5V, ID = 2.5A	2.5			S
Diode forward voltage	VSD	IS=1.25A,VGS=0V		0.8	1.2	V
Dynamic						
Input capacitance	Ciss	VDS = 15V, VGS = 0V, f=1MHz		235		pF
Output capacitance	Coss			45		pF
Reverse transfer capacitance ^b	Crss			17		pF
Total gate charge	Qg	VDS = 15V, VGS = 4.5V, ID = 3.3A		2.1	3.2	nC
Gate-source charge	Qgs			0.85		nC
Gate-drain charge	Qgd			0.65		nC
Gate resistance	Rg	f=1MHz		4.4	8.8	Ω
Switching^b						
Turn-on delay time	td(on)	VDD= 15V RL=5.6Ω, ID ≈ 2.7A, VGEN= 4.5V,Rg=1Ω		12	20	ns
Rise time	tr			50	75	ns
Turn-off delay time	td(off)			12	20	ns
Fall time	tf			22	35	ns
Drain-source body diode characteristics						
Continuous Source-Drain Diode Current	IS	Tc=25°C			1.4	A
Pulsed Diode forward Curren	ISM				15	A

Note :

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°

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