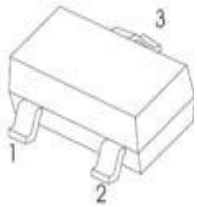
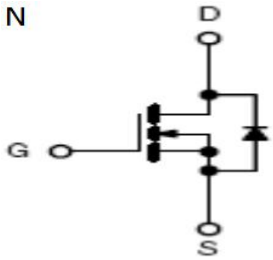
N-Channel 30-V(D-S) MOSFET	SOT-23 Plastic-Encapsulate MOSFETS

SOT-23



1.GATE
2.SOURCE
3.DRAIN

Equivalent Circuit



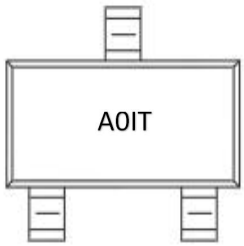
Features

※ TrenchFET Power MOSFET
※ Exceptional on-resistance and maximum DC current capability
※ High dense cell design for extremely low RDS(ON)

Application

※ Load Switch for Portable Devices
※ DC/DC Converter

MARKING



V(BR)DSS	RDS(on)MAX	ID
30 V	60mΩ@10V	5.8A
	60mΩ@4.5V	
	80mΩ@2.5V	

Maximum ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	30	V
Gate-Source Voltage	VGS	±12	
Continuous Drain Current	ID	5.8	A
Pulsed Diode Curren	IDM	30	
Continuous Source-Drain Current(Diode Conduction)	IS	0.72	
Power Dissipation	PD	0.35	W
Thermal Resistance from Junction to Ambient (t≤5s)	RθJA	357	℃/W
Operating Junction	TJ	150	℃
Storage Temperature	TSTG	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

Static Electrical Characteristics (Ta = 25 ℃ 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	0.6	0.9	1.2	V
Gate-source leakage	IGSS	VDS =0V, VGS = ±12V			±100	nA
Zero gate voltage drain current	IDSS	VDS = 30V, VGS =0V			1	μA
Drain-source on-state resistancea	RDS(on)	VGS = 10V, ID = 2.8A		24	60	mΩ
		VGS = 4.5V, ID = 2.8A		28	60	mΩ
		VGS = 2.5V, ID = 2A		37	80	mΩ
Forward transconductancea	gfs	VDS = 4.5V, ID = 4A	8			S
Diode forward voltage	VSD	IS=1A,VGS=0V		0.7	1.3	V
Dynamic						
nput capacitance	Ciss	VDS = 15V,VGS =0V, f=1MHz			1050	pF
Output capacitance	Coss			99		pF
Reverse transfer capacitanceb	Crss			77		pF
Total gate charge	Qg	VDS = 10V,VGS = 4.5V, ID =-4.5A		11	14	nC
Gate-source charge	Qgs			1.3		nC
Gate-drain charge	Qgd			2.8		nC
Gate resistance	Rg	f=1MHz			3.6	Ω
Switchingb						
Turn-on delay time	td(on)	VDD= 10V RL=10Ω, ID ≈ 1A, VGEN= 4.5V,Rg=6Ω		7	15	ns
Rise time	tr			15	20	ns
Turn-off delay time	td(off)			38	50	ns
Fall time	tf			3	10	ns
Drain-source body diode characteristics						
Continuous Source-Drain Diode Current	IS	Tc=25℃			1.2	A
Pulsed Diode forward Curren	ISM				20	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.

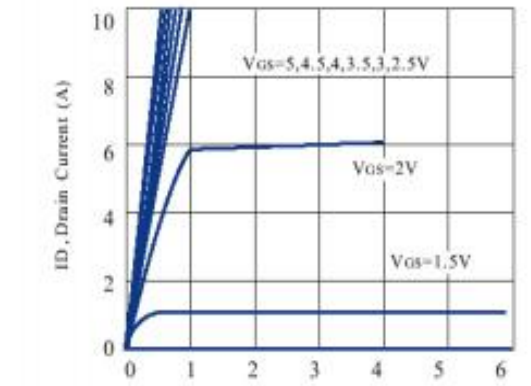


Figure 1. Output Characteristics

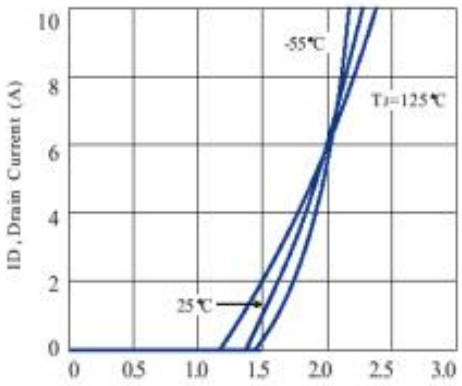


Figure 2. Transfer Characteristics

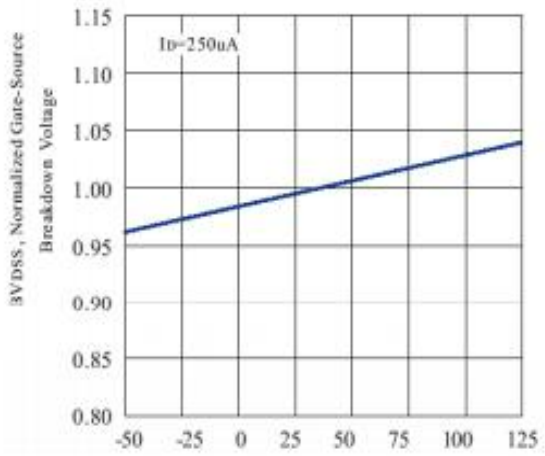


Figure 3. Breakdown Voltage Variation with Temperature

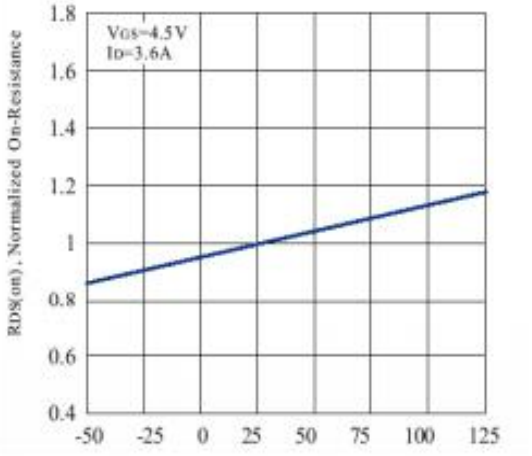


Figure 4. On-Resistance Variation with Temperatur

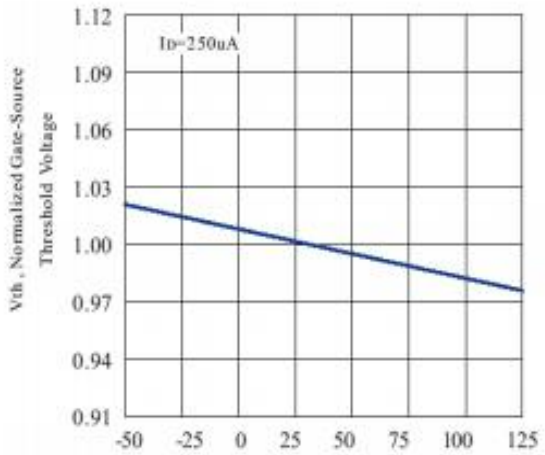


Figure 5. Gate Threshold Variation with Temperature

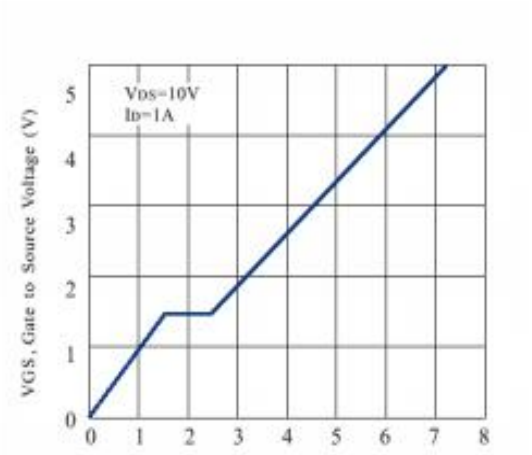


Figure 6. Gate Charge

单击下面可查看定价，库存，交付和生命周期等信息

>>DIOS(迪恩思)