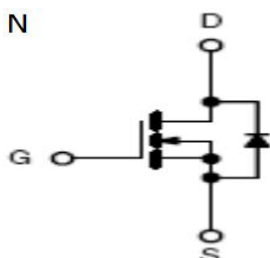
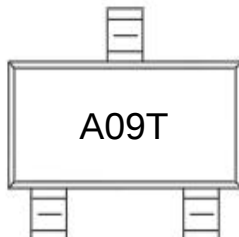


N-Channel 30-V(D-S) MOSFET		SOT-23 Plastic-Encapsulate MOSFETS	
SOT-23  1.GATE 2.SOURCE 3.DRAIN Equivalent Circuit 		Features ※ TrenchFET Power MOSFET ※ Exceptional on-resistance and maximum DC current capability ※ High dense cell design for extremely low RDS(ON) Application ※ Load Switch for Portable Devices ※ DC/DC Converter MARKING 	
V(BR)DSS	RDS(on)MAX		ID
30 V	60m Ω @10V		5. 8A
	60m Ω @4.5V		
	80m Ω @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	1. 2	W
Thermal Resistance from Junction to Ambient (t≤5s)	R θ JA	357	℃/W
Operating Junction	TJ	150	℃
Storage Temperature	TSTG	-55~+150	℃

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	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.						

Typical Electrical and Thermal Characteristics (Curves)

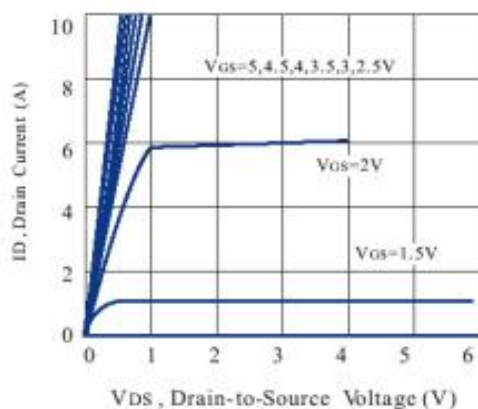


Figure 1. Output Characteristics

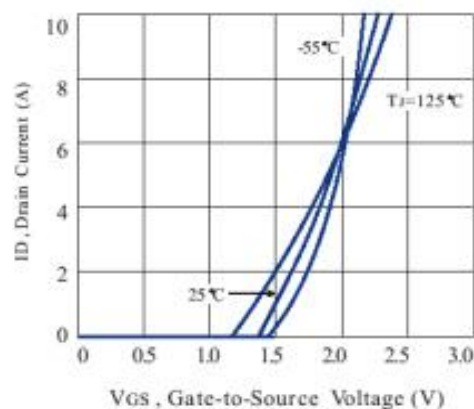


Figure 2. Transfer Characteristics

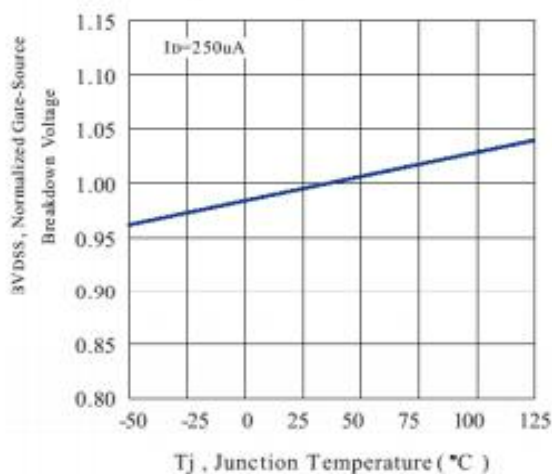


Figure 3. Breakdown Voltage Variation with Temperature

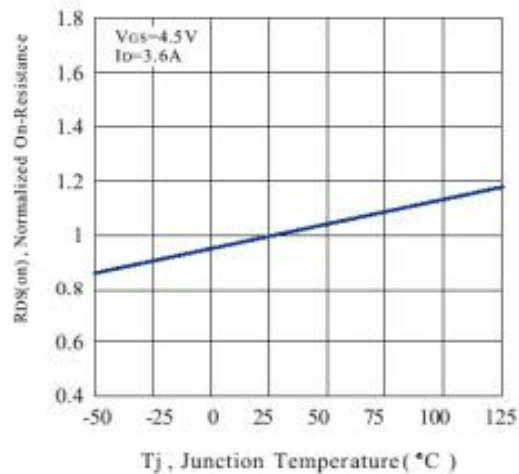


Figure 4. On-Resistance Variation with Temperature

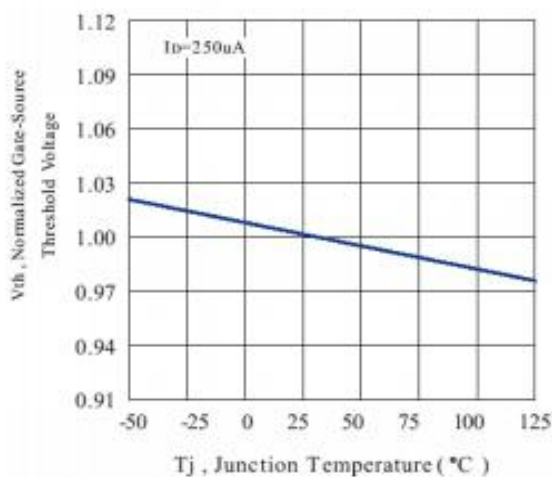


Figure 5. Gate Threshold Variation with Temperature

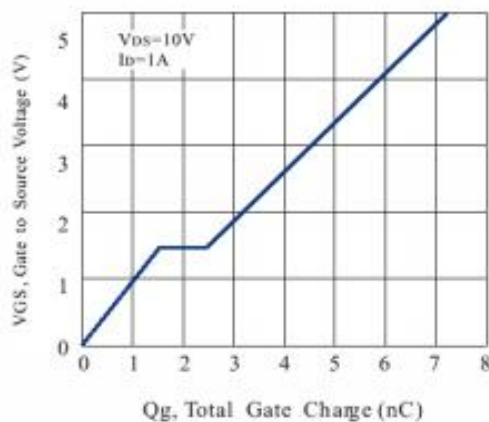


Figure 6. Gate Charge