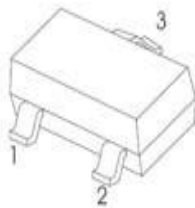
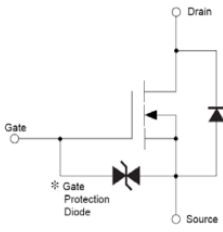
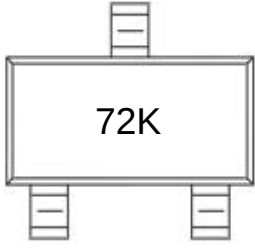


N-Channel 60-V(D-S) MOSFET		SOT-23 Plastic-Encapsulate MOSFETS	
SOT-23  1.GATE 2.SOURCE 3.DRAIN Equivalent Circuit 		Features ※ TrenchFET Power MOSFET Application ※ Load Switch for Portable Devices ※ DC/DC Converter  72K Marking	
V(BR)DSS		RDS(on)MAX	
60 V	3 Ω @1.0V		ID
	4 Ω @4.5V		
300mA			
Maximum ratings (Ta=25℃ unless otherwise noted)			
Parameter		Symbol	Value
Drain-Source Voltage		VDS	60
Gate-Source Voltage		VGS	±20
Continuous Drain Current		ID	300
Pulsed Diode Current		IDM	800
Continuous Source-Drain Current(Diode Conduction)		IS	500
Power Dissipation		PD	0.45
Thermal Resistance from Junction to Ambient (t≤5s)		R θ JA	556
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	60			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 = 60V, VGS = 0V			1	μA
Drain-source on-state resistancea	RDS(on)	VGS = 10V, ID = 500mA		1.9	3	Ω
		VGS = 4.5V, ID = 200mA		2.3	4	Ω
Forward transconductancea	gfs	VDS = 4.5V, ID = 3A	80			mS
Diode forward voltage	VSD	IS=0.3A, VGS=0V		0.7	1.3	V

Dynamic

Input capacitance	Ciss	VDS = 10V, VGS = 0V, f=1MHz			50	pF
Output capacitance	Coss				25	pF
Reverse transfer capacitanceb	Crss				5	pF
Total gate charge	Qg	VDS = 10V, VGS = 4.5V, ID = -4.5A		1		nC
Gate-source charge	Qgs			1		nC
Gate-drain charge	Qgd			1.3		nC
Gate resistance	Rg	f=1MHz		1		Ω

Switchingb

Turn-on delay time	td(on)	VDD= 10V RL=10Ω, ID ≈ 1A, VGEN= 4.5V, Rg=6Ω			20	ns
Rise time	tr					ns
Turn-off delay time	td(off)				40	ns
Fall time	tf					ns

Drain-source body diode characteristics

Continuous Source-Drain Diode Current	IS	Tc=25°C			0.8	A
Pulsed Diode forward Current	ISM				10	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

