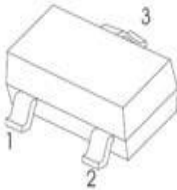
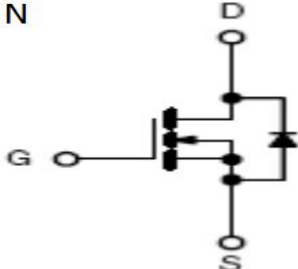
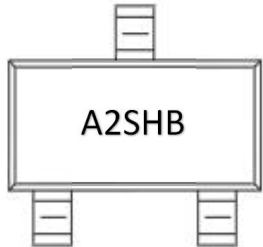


N-Channel 20-V(D-S) MOSFET		SOT-23 Plastic-Encapsulate MOSFETS	
SOT-23  1.GATE 2.SOURCE 3.DRAIN Equivalent Circuit 		Features ※ TrenchFET Power MOSFET Application ※ Load Switch for Portable Devices ※ DC/DC Converter MARKING 	
V(BR)DSS	RDS(on)MAX	ID	
20 V	110mΩ @4.5V	2.3A	
	150mΩ @2.5V		
Maximum ratings (Ta=25℃ unless otherwise noted)			
Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	20	V
Gate-Source Voltage	VGS	±8	
Continuous Drain Current	ID	2.3	A
Pulsed Diode Curren	IDM	10	
Continuous Source-Drain Current(Diode Conduction)	IS	0.8	
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 °C Unless Otherwise Noted)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = -250μA	20			V
Gate-source threshold voltage	VGS(th)	VDS =VGS, ID = -250μA	0.4	0.75	1	V
Gate-source leakage	IGSS	VDS =0V, VGS =±8V		±10	±100	nA
Zero gate voltage drain current	IDSS	VDS = 20V, VGS =0V			1	μA
Drain-source on-state resistancea	RDS(on)	VGS = 4.5V, ID = 3A		70	90	mΩ
		VGS = 2.5V, ID = 2A		85	125	mΩ
Forward transconductancea	gfs	VDS = 4.5V, ID = 2.3A		4		S
Diode forward voltage	VSD	IS=0.8A,VGS=0V		0.8	1.3	V
Dynamic						
Input capacitance	Ciss	VDS = 10V,VGS =0V, f=1MHz		405		pF
Output capacitance	Coss			75		pF
Reverse transfer capacitanceb	Crss			55		pF
Total gate charge	Qg	VDS = 10V,VGS = 4.5V,ID =2.3A		5.5	10	nC
		VDS = 10V,VGS = 2.5V, ID = 3A		3.3	6	
Gate-source charge	Qgs			0.7		nC
Gate-drain charge	Qgd			1.3		nC
Gate resistance	Rg	f=1MHz		6.0		Ω
Switchingb						
Turn-on delay time	td(on)	VDD= 10V RL=10Ω, ID ≈ 1A, VGEN= 4.5V,Rg=1Ω		11	20	ns
Rise time	tr			35	60	ns
Turn-off delay time	td(off)			30	50	ns
Fall time	tf			10	20	ns
Drain-source body diode characteristics						
Continuous Source-Drain Diode Current	IS	Tc=25°C			1.3	A
Pulsed Diode forward Curren	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.						

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

