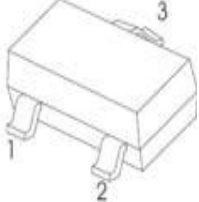
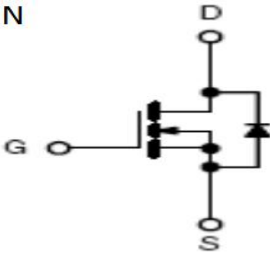
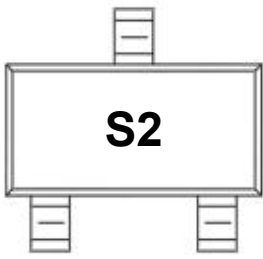


N-Channel 20-V(D-S) MOSFET		SOT-23 Plastic-Encapsulate MOSFETS	
<p style="text-align: center;"><u>SOT-23</u></p>  <p>1.GATE 2.SOURCE 3.DRAIN</p> <p style="text-align: center;">Equivalent Circuit</p> 		<p>Features</p> <ul style="list-style-type: none"> ※ TrenchFET Power MOSFET <p>Application</p> <ul style="list-style-type: none"> ※ Load Switch for Portable Devices ※ DC/DC Converter <p>MARKING</p> 	
V(BR)DSS	RDS(on)MAX		ID
20 V	45m Ω @4.5V 55m Ω @2.5V		3 A
Maximum ratings (Ta=25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	20	V
Gate-Source Voltage	VGS	±12	
Continuous Drain Current	ID	3	A
Pulsed Diode Current	IDM	20	
Continuous Source-Drain Current(Diode Conduction)	IS	0.8	
Power Dissipation	PD	1	W
Thermal Resistance from Junction to Ambient (t≤5s)	R θ JA	157	°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	20			V
Gate-source threshold voltage	VGS(th)	VDS = VGS, ID = -250µA	0.5	0.7	1.1	V
Gate-source leakage	IGSS	VDS = 0V, VGS = ±10V		±0.1	±95	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		27	45	mΩ
		VGS = 2.5V, ID = 2A		35	55	mΩ
Forward transconductancea	gfs	VDS = 4.5V, ID = 2.8A		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	DS = 10V, VGS = 4.5V, ID = 2.8A		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	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.						

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

