

N-Channel Encapsulate MOSFET

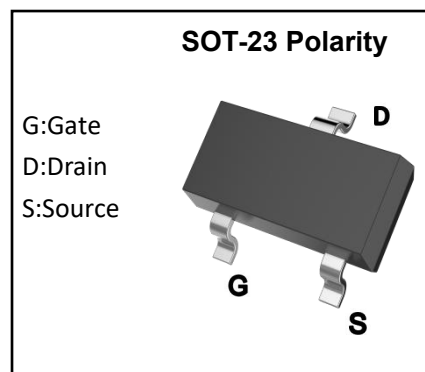
FEATURES

- High power and current handing capability
- Lead free product is acquired

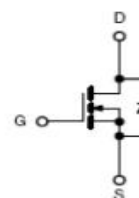
MARKING: S2

Application

- Load Switch for Portable Devices
- DC/DC Converter



Equivalent Circuit



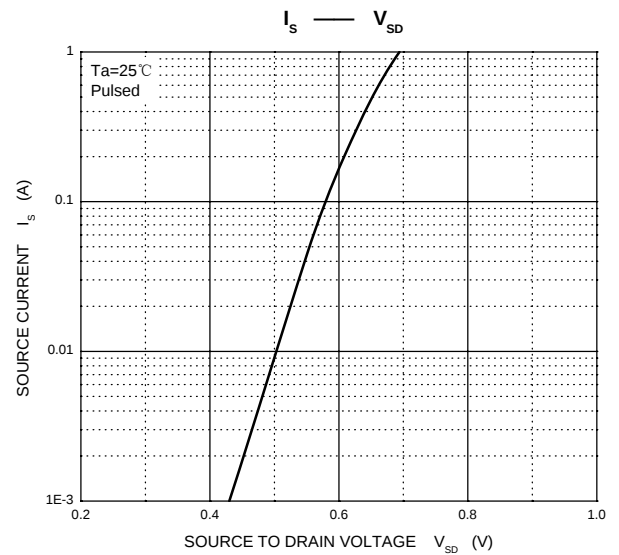
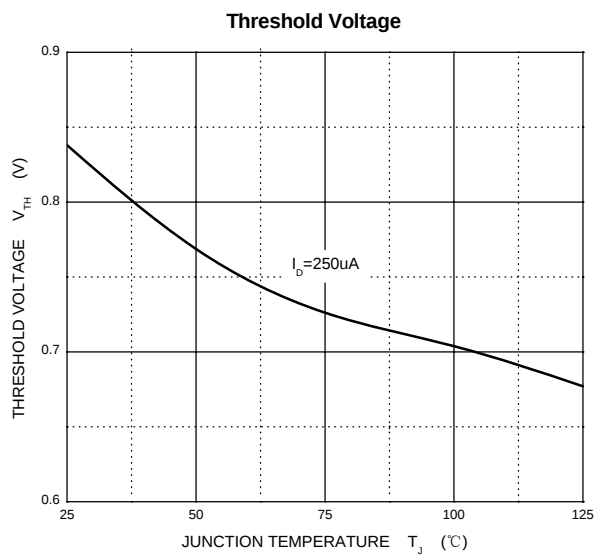
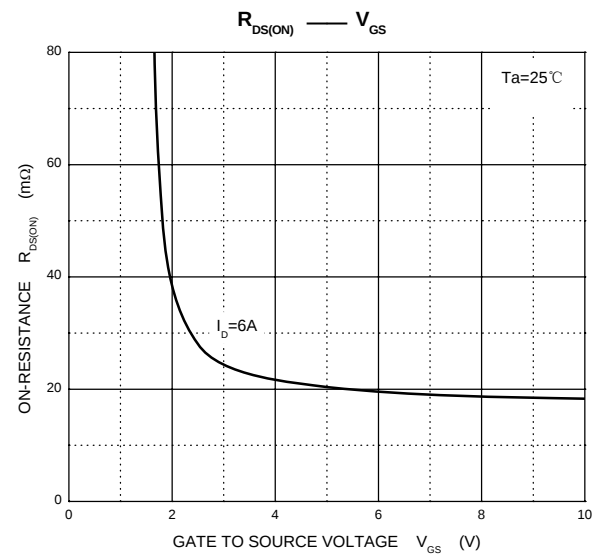
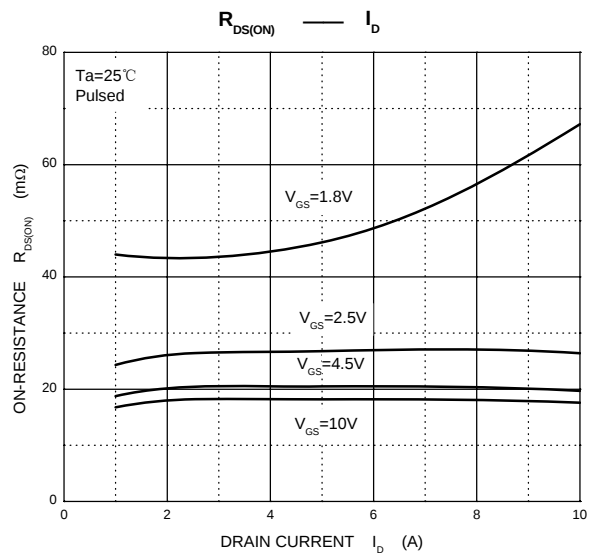
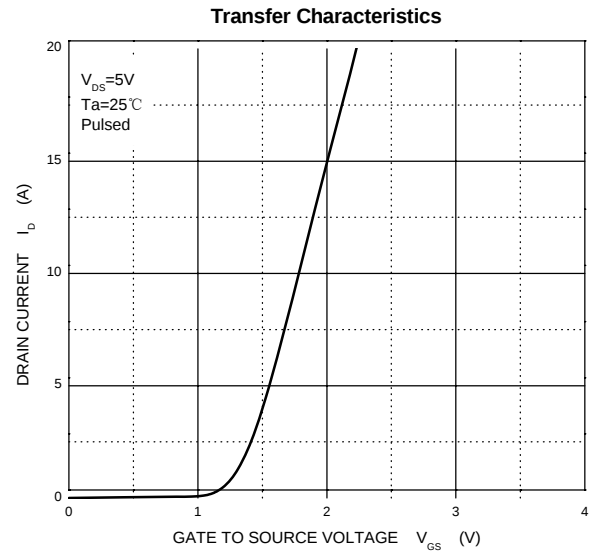
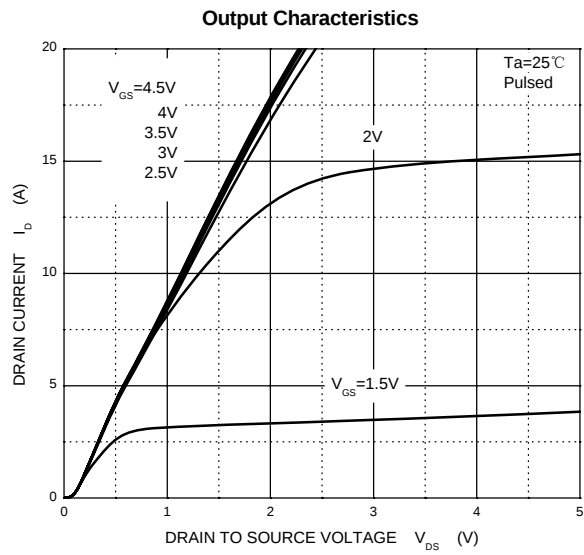
MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{DS}	Drain-Source-Voltage	25	V
V _{GS}	Gate-Source- Voltage	±12	V
I _D	Drain-Current -Continuous	5.2	A
I _S	Continuous Source-Drain Current	2	A
P _D	Maximum Power Dissipation	350	mW
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C
R _{θJA}	Thermal Resistance,Junction-to-Ambient	357	°C/W

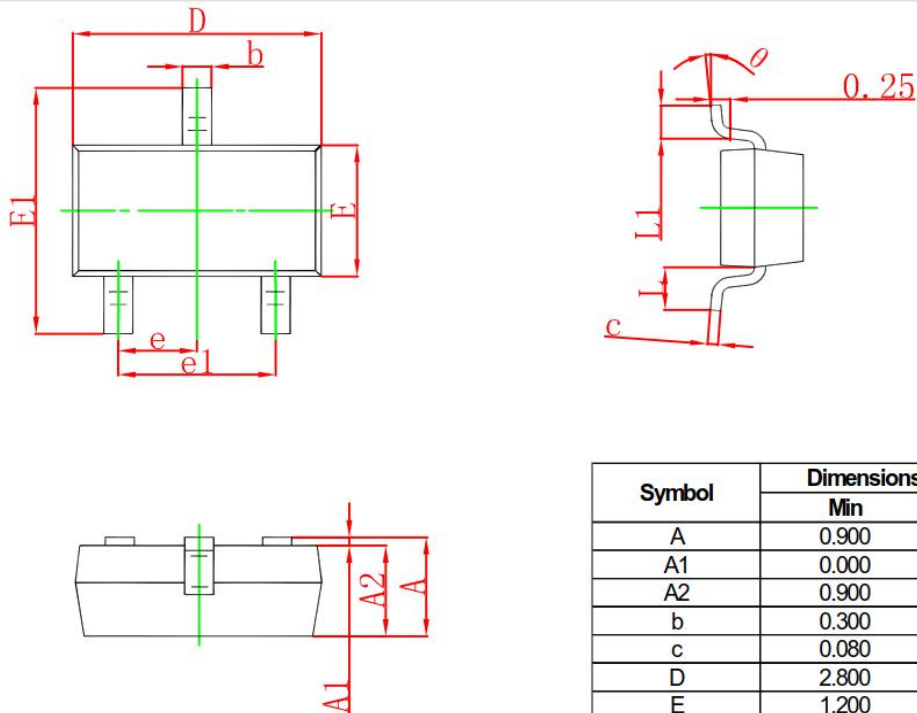
ELECTEICAL CHARACTERISTICS(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static parameters						
Drain-Source-breakdown Voltage	BVDss	VGS=0V, ID=250μA	25			V
Gate-Threshold- Voltage	VGS(th)	VDS=VGS, ID=250μA	0.6	0.65	1.0	V
Zero Gate Voltage Drain Current	IDSS	VDS=25V, VGS=0			1	μA
Collector cut-off current	IGSS	VGS=±12V, VDS=0			±0.1	μA
Drain-Source On-State Resistance	RDS(ON)1	VGS=6V, ID=2.5A		21	50	mΩ
	RDS(ON)2	VGS=4.5V, ID=2.5A		22	26	mΩ
	RDS(ON)3	VGS=2.5V, ID=2.5A		30	60	mΩ
Diode Forward voltage	VSD	VGS=0V, IS=10mA		0.62	1.2	V
Forward transconductance	gFS	VDS=5V, ID=3.8A	4			S

Typical Characteristics

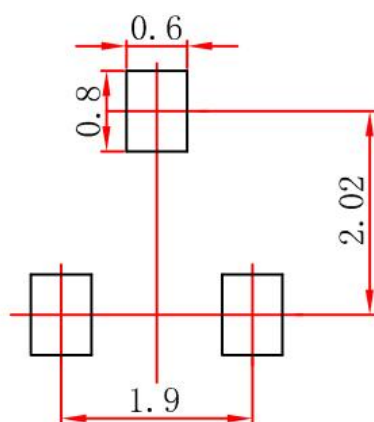


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.