



Product Summary

V _{(BR)DSS}	R _{DS(on)TYP}	I _D
-20V	47mΩ@-4.5V	-3A
	67mΩ@-2.5V	
	99mΩ@-1.8V	

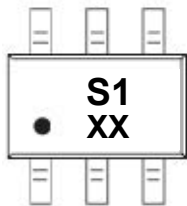
Feature

- Trench Technology Power MOSFET
- Low R_{DS(ON)}
- Low Gate Charge
- Low Gate Resistance

Application

- DC/DC Converter
- Load Switch

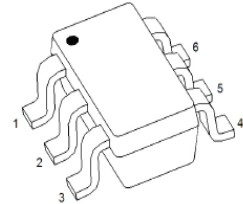
MARKING:



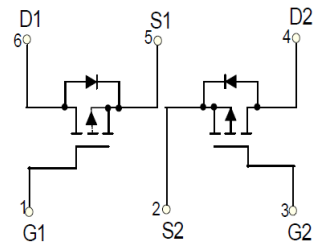
S1 = Device Code
XX = Date Code

PIN1

SOT-23-6L



Schematic diagram



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain - Source Voltage	V _{DS}	-20	V
Gate - Source Voltage	V _{GS}	±12	V
Continuous Drain Current ^{1,5}	I _D	-3	A
Pulsed Drain Current ²	I _{DM}	-12	A
Power Dissipation ^{4,5}	P _D	0.96	W
Thermal Resistance from Junction to Ambient ⁵	R _{θJA}	130	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

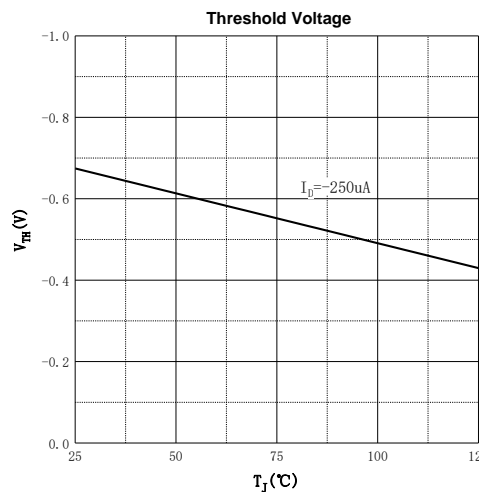
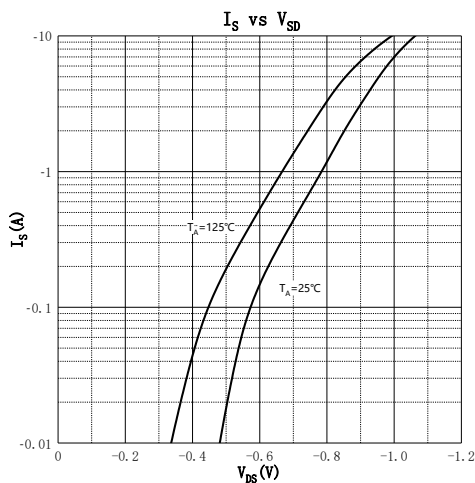
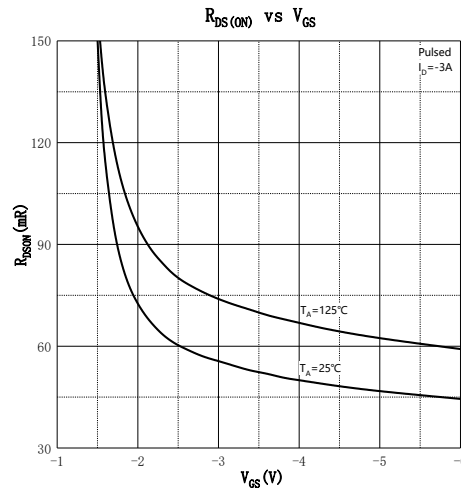
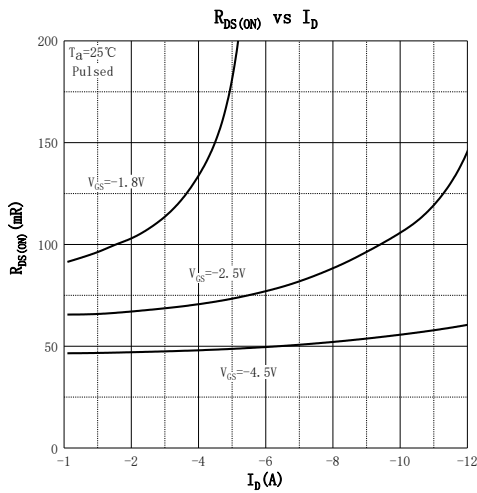
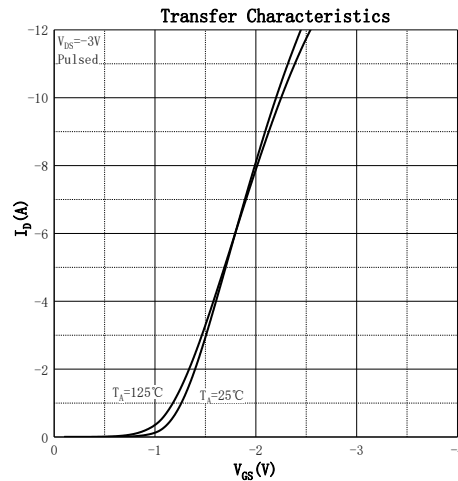
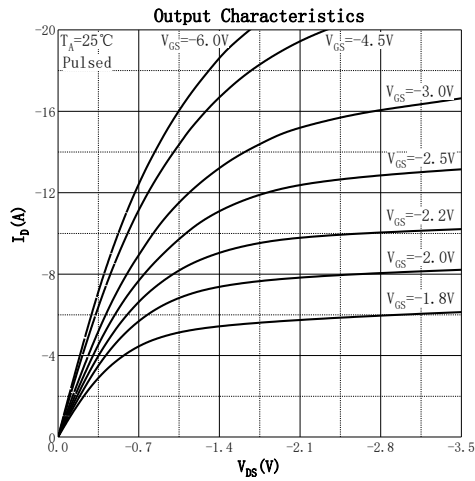
MOSFET ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

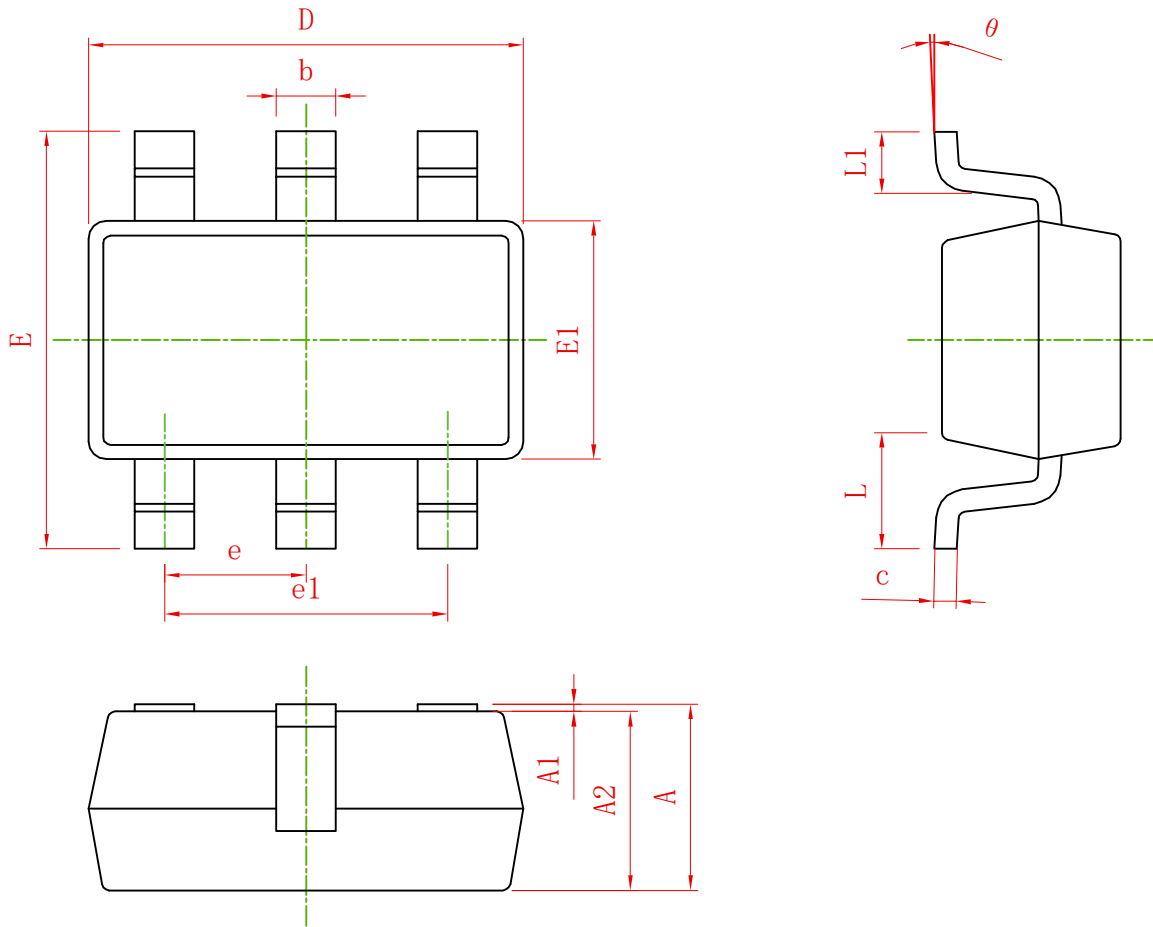
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain - Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -16V, V_{GS} = 0V$			-1	μA
Gate - Body Leakage Current	I_{GSS}	$V_{GS} = \pm 8V, V_{DS} = 0V$			± 100	nA
On Characteristics³						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.7	-1.0	V
Drain-source On-resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -2.5A$		47	70	m Ω
		$V_{GS} = -2.5V, I_D = -2.0A$		67	100	
		$V_{GS} = -1.8V, I_D = -1.6A$		99	150	
Forward Transconductance	g_{FS}	$V_{DS} = -4.5V, I_D = -2A$	3			S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$		378		pF
Output Capacitance	C_{oss}			84		
Reverse Transfer Capacitance	C_{rss}			76		
Gate Resistance	R_g	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		5		Ω
Switching Characteristics						
Total Gate Charge	Q_g	$V_{DS} = -10V, V_{GS} = -4.5V, I_D = -3A$		5		nC
Gate-source Charge	Q_{gs}			0.5		
Gate-drain Charge	Q_{gd}			1.6		
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = -10V, V_{GS} = -4.5V,$ $R_L = 4\Omega, R_G = 3\Omega$		9		ns
Turn-on Rise Time	t_r			9		
Turn-off Delay Time	$t_{d(off)}$			50		
Turn-off Fall Time	t_f			20		
Source - Drain Diode Characteristics						
Diode Forward Voltage ³	V_{SD}	$V_{GS} = 0V, I_S = -1A$			-1.2	V

Notes :

- 1.The maximum current rating is limited by package.
- 2.Pulse Test : Pulse Width $\leq 10\mu s$, duty cycle $\leq 1\%$.
- 3.Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.
- 4.The power dissipation P_D is limited by $T_{J(MAX)} = 150^\circ\text{C}$.
- 5.Device mounted on $1in^2$ FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ\text{C}$.

Typical Characteristics



SOT-23-6L Package Information


Symbol	Dimensions In Millimeters		Dimensions In Inche	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950 (BSC)		0.037 (BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
L1	0.600REF.		0.024REF.	
θ	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)