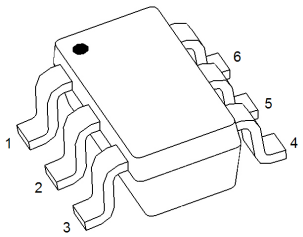
P-channel

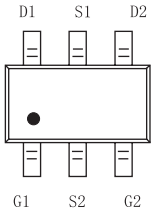
$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
-30V	135mΩ@-10V	-2.3A
	185mΩ@-4.5V	
	265mΩ@-2.5V	

N-channel

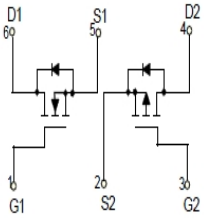
$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
30V	60mΩ@10V	3.4A
	75mΩ@4.5V	
	115mΩ@2.5V	

SOT-23-6L





MARKING



Equivalent Circuit

Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value		Unit
		N-channel	P-channel	
Drain-Source Voltage	V_{DS}	30	-30	V
Gate-Source Voltage	V_{GS}	±12	±12	V
Continuous Drain Current(1)	I_D	3.4	-2.3	A
Pulsed Drain Current (2)	I_{DM}	30	-30	A
Power Dissipation	P_D	0.35	0.35	W
Thermal Resistance from Junction to Ambient(1)	$R_{\theta JA}$	357	357	℃/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

N-channel MOSFET Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static characteristics						
Drain-source breakdown voltage	$V_{(BR)\,DSS}$	V_{GS} = 0V, I_D =250μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =24V,V_{GS} = 0V			1	μA
Gate-source leakage current (note1)	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±100	nA
Drain-source on-resistance (note1)	$R_{DS(on)}$	V_{GS} =10V, I_D =3A		45	60	mΩ
		V_{GS} =4.5V, I_D =3A		50	75	mΩ
		V_{GS} =2.5V, I_D =2A		60	115	mΩ
Forward tranconductance (note1)	g_{FS}	V_{DS} =5V, I_D =3A	5			S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.6		1.4	V
Diode forward voltage (note1)	V_{SD}	I_S=1A,V_{GS}=0V			1	V
Dynamic characteristics (note2)						
Input capacitance	C_{iss}	V_{GS} =0V,V_{DS} =15V ,f =1MHz		390		pF
Output capacitance	C_{oss}			54.5		pF
Reverse transfer capacitance	C_{rss}			41		pF
Gate resistance	R_g	V_{GS} =0V,V_{DS} =0V,f =1MHz		3		Ω
Switching Characteristics(note2)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=10V,V_{DS}=15V, R_L=5Ω,R_{GEN}=6Ω		4		ns
Turn-on rise time	t_r			2		ns
Turn-off delay time	$t_{d(off)}$			22		ns
Turn-off fall time	t_f			3		ns

P-channel MOSFET Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static characteristics						
Drain-source breakdown voltage	$V_{(BR)\,DSS}$	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V,V_{GS} = 0V			-1	μA
Gate-source leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±100	nA
Drain-source on-resistance (note1)	$R_{DS(on)}$	V_{GS} =-10V, I_D =-2.3A		75	135	mΩ
		V_{GS} =-4.5V, I_D =-2A		95	185	mΩ
		V_{GS} =-2.5V, I_D =-1A		140	265	mΩ
Forward tranconductance (note1)	g_{FS}	V_{DS} =-5V, I_D =-2.3A	4.5			S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.6		-1.4	V
Diode forward voltage (note1)	V_{DS}	I_S=-1A,V_{GS}=0V			-1	V
Dynamic characteristics (note2)						
Input capacitance	C_{iss}	V_{GS} =0V,V_{DS} =-15V,f =1MHz		409		pF
Output capacitance	C_{oss}			55		pF
Reverse transfer capacitance	C_{rss}			42		pF
Gate resistance	R_g	V_{GS} =0V,V_{DS} =0V,f =1MHz		12		Ω
Switching Characteristics (note2)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-10V,V_{DS}=-15V, R_L=6Ω,R_{GEN}=6Ω		13		ns
Turn-on rise time	t_r			10		ns
Turn-off delay time	$t_{d(off)}$			28		ns
Turn-off fall time	t_f			13		ns

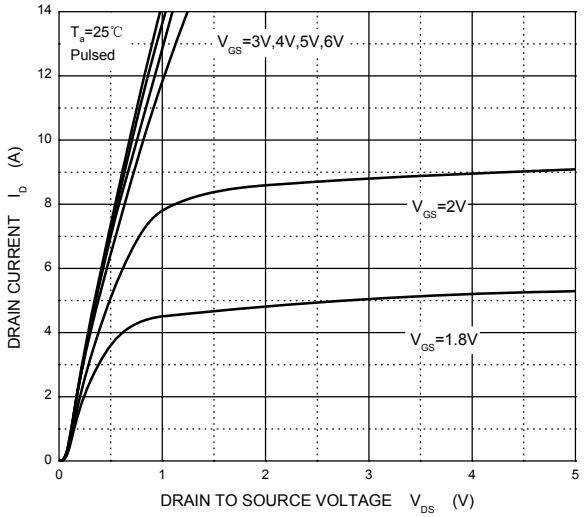
Notes : 1. Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.

2. Guaranteed by design, not subject to production testing.

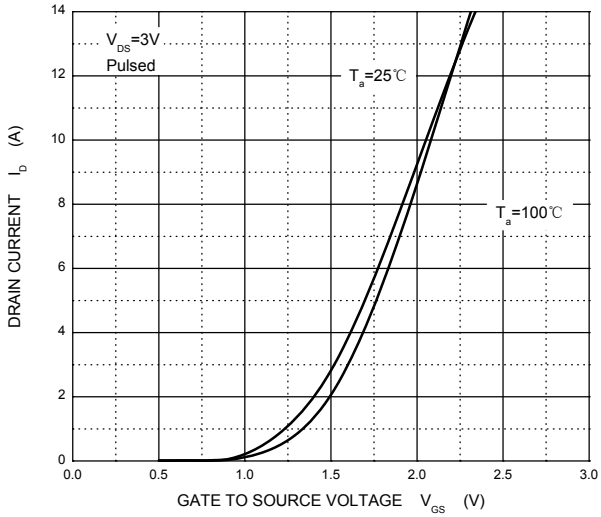
Typical Characteristics

N-Channel-MOS

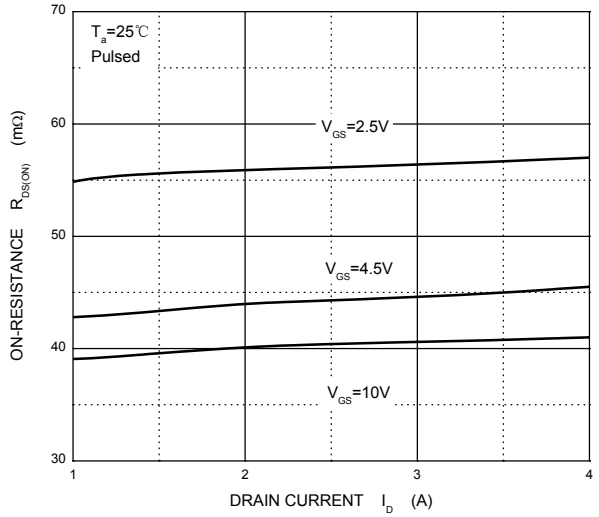
Output Characteristics



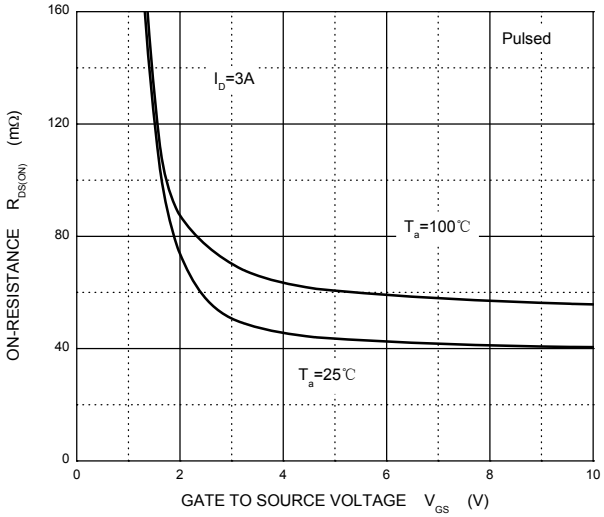
Transfer Characteristics



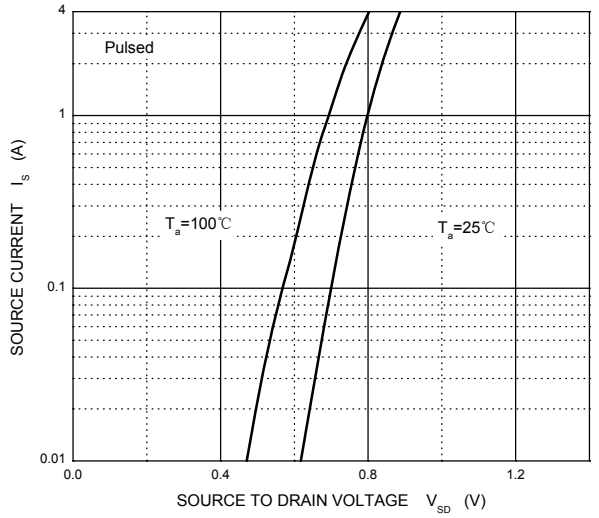
$R_{DS(ON)}$ —— I_D



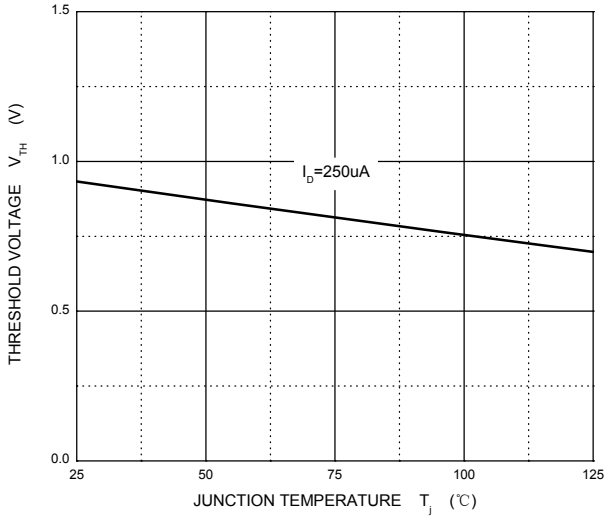
$R_{DS(ON)}$ —— V_{GS}



I_S —— V_{SD}



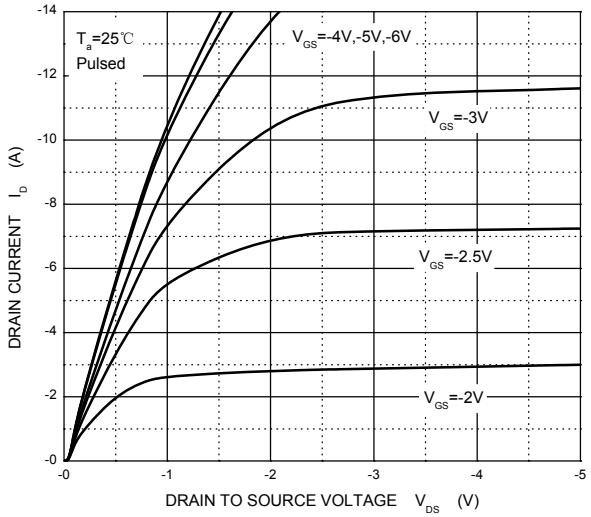
Threshold Voltage



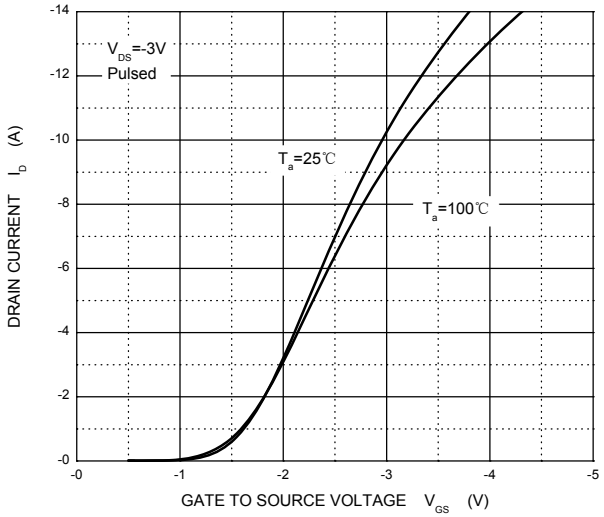
Typical Characteristics

P-Channel-MOS

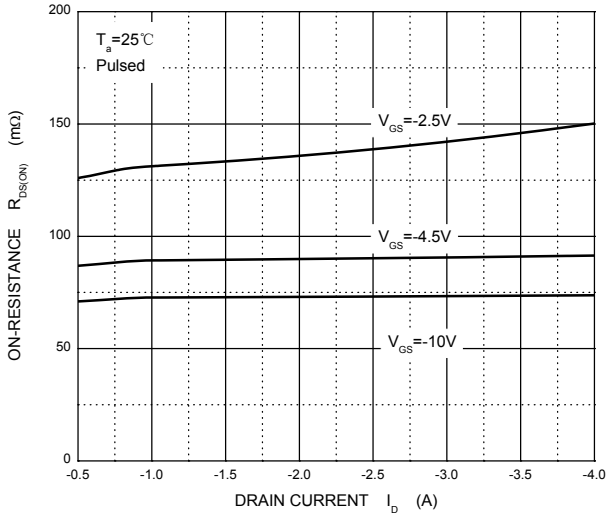
Output Characteristics



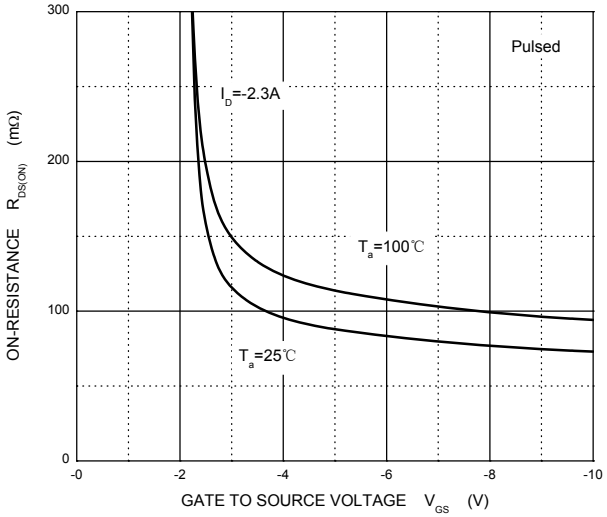
Transfer Characteristics



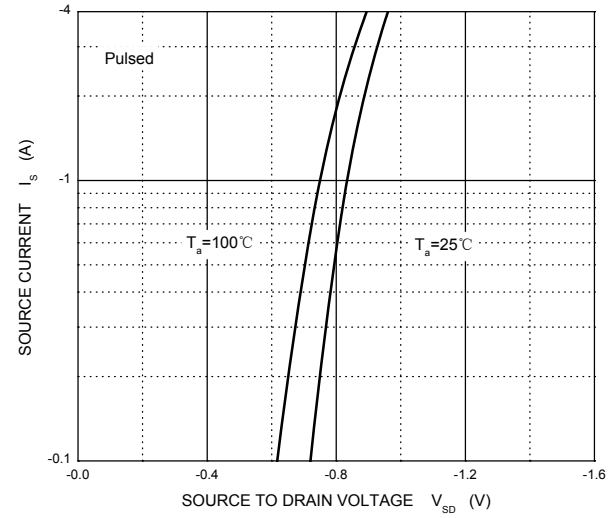
$R_{DS(ON)}$ —— I_D



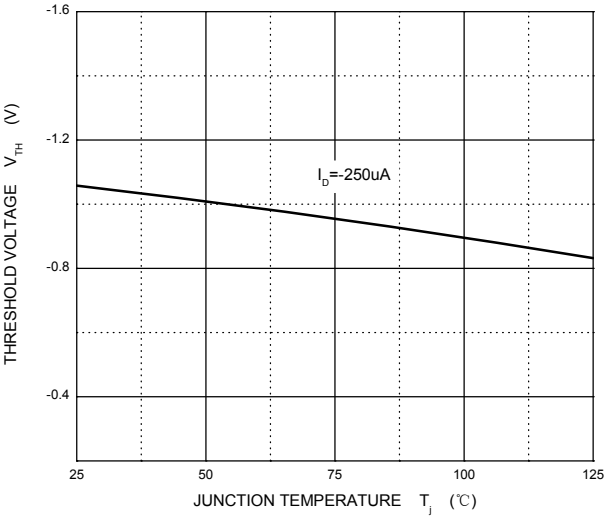
$R_{DS(ON)}$ —— V_{GS}



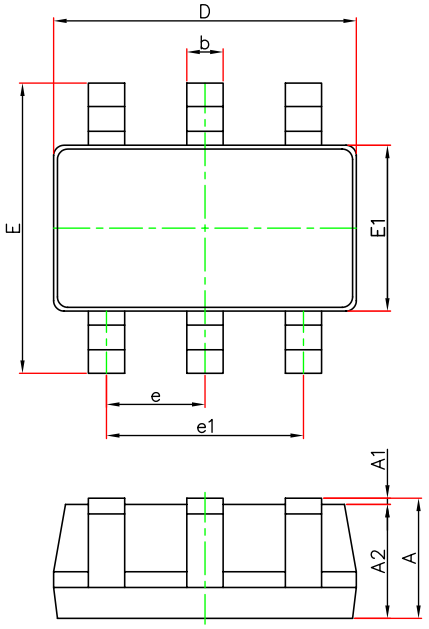
I_S —— V_{SD}

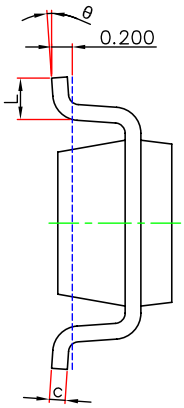


Threshold Voltage



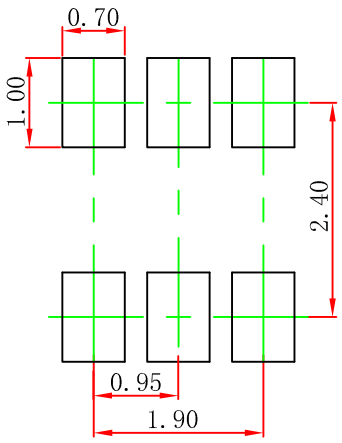
SOT-23-6L Package Outline Dimensions





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	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
θ	0°	8°	0°	8°

SOT-23-6L Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.