SOT-23 Plastic-Encapsulate MOSFETS

N-Channel 30-V(D-S) MOSFET

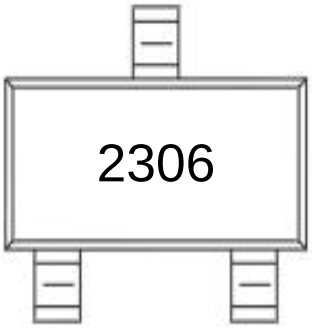
FEATURE

TrenchFET Power MOSFET

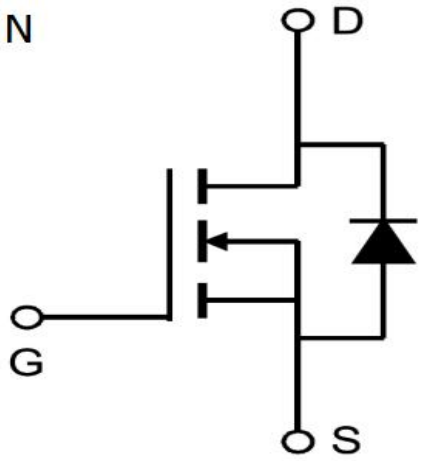
APPLICATIONS

- Load Switch for Portable Devices
- DC/DC Converter

MARKING



Equivalent Circuit



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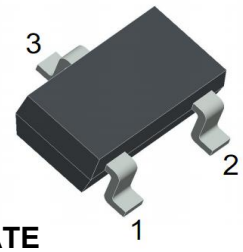


1.GATE
2.SOURCE
3.DRAIN

Maximum ratings (at T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current (T_J=150℃)	I_D	3.16	A
Pulsed Drain Current	I_{DM}	20	
Continuous Source Current(Diode Conduction)	I_S	0.62	
Maximum Power Dissipation[a,b]	P_D	0.75	W
Thermal Resistance from Junction to Ambient (t≤5s)	$R_{\theta JA}$	167	℃/W
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to150	℃

Electrical characteristics (T_a=25℃ unless otherwise noted)

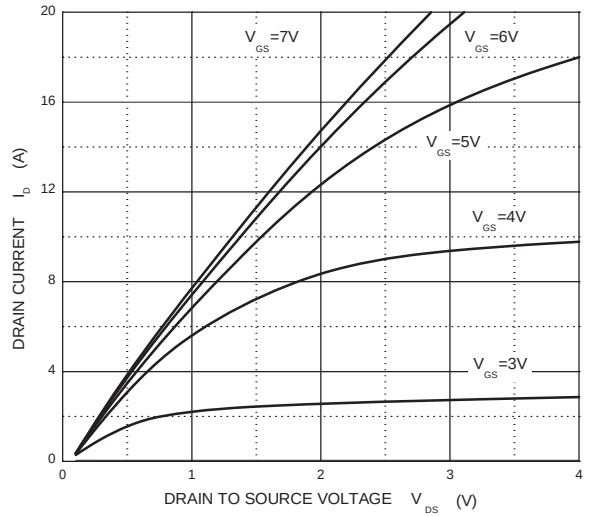
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	V_{GS} = 0V, I_D =250μA	30			V
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1.0		3.0	
Gate-Body Leakage	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =30V, V_{GS} =0V			0.5	μA
Drain-Source On-Resistance[a]	$R_{DS(on)}$	V_{GS} =10V, I_D =3.5A		0.038	0.047	Ω
		V_{GS} =4.5V, I_D =2.8A		0.052	0.065	
Forward Transconductance[a]	g_{fs}	V_{DS} =4.5V, I_D =2.5A		7.0		S
Diode Forward Voltage	V_{SD}	I_S=1.25A,V_{GS}=0V		0.8	1.2	V
Dynamic						
Gate Charge	Q_g	V_{DS} =15V,V_{GS} =5V,I_D =2.5A		3.0	4	nC
Total Gate Charge	Q_{gt}	V_{DS} =15V,V_{GS} =10V,I_D =2.5A		6	9	
Gate-Source Charge	Q_{gs}			1.6		
Gate-Drain Charge	Q_{gd}			0.6		
Gate Resistance	R_g	f =1.0MHz	2.5	5	7.5	Ω
Input Capacitance	C_{iss}	V_{DS} =15V,V_{GS} =0V,f =1MHz		305		pF
Output Capacitance	C_{oss}			65		
Reverse Transfer Capacitance	C_{rss}			29		
Switching						
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=15V, R_L=15Ω, I_D ≈1A, V_{GEN}=10V,Rg=6Ω		7	11	ns
Rise Time	t_r			12	18	
Turn-Off Delay Time	$t_{d(off)}$			14	25	
Fall Time	t_f			6	10	

Notes :

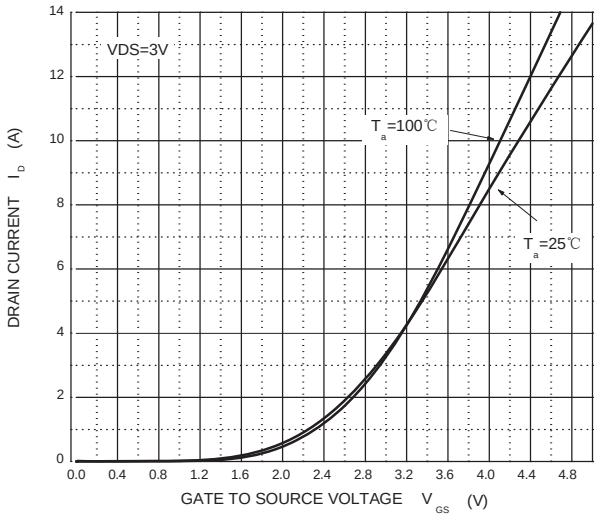
a.Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.

Typical Characteristics

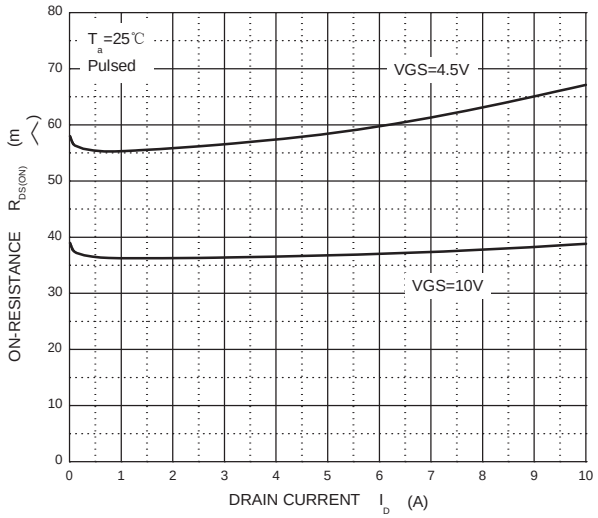
Output Characteristics



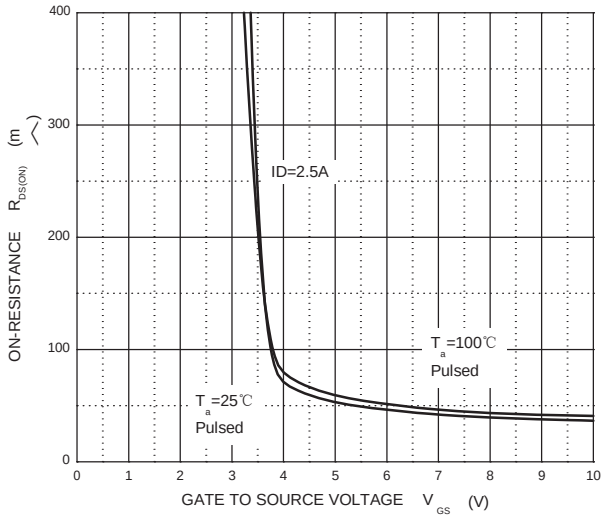
Transfer Characteristics



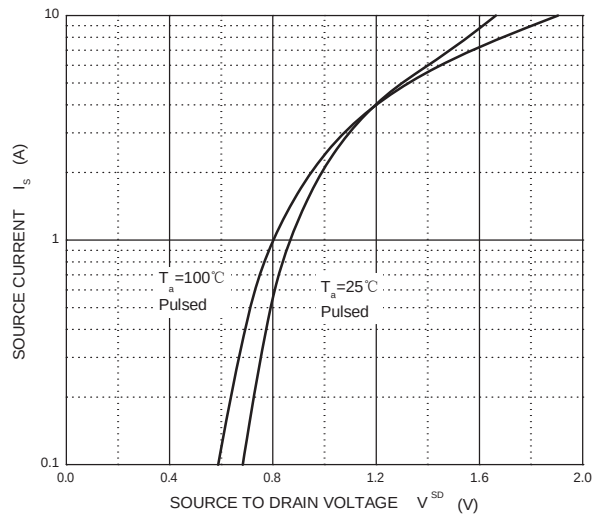
$R_{DS(ON)}$ — I_D



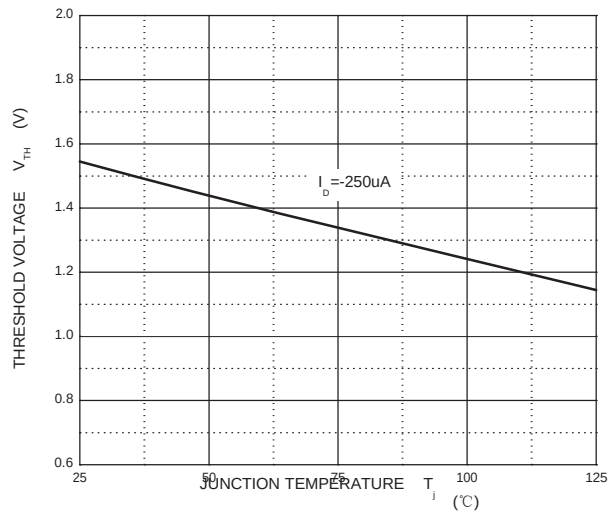
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

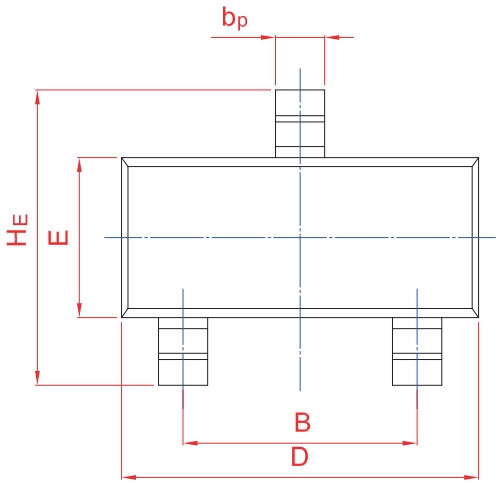


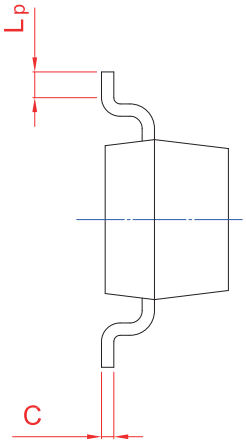
Threshold Voltage

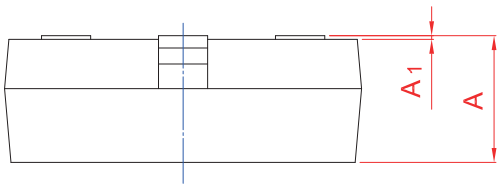


PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**







UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20

单击下面可查看定价，库存，交付和生命周期等信息

>>TWGMC(台湾迪嘉)