Product Summary

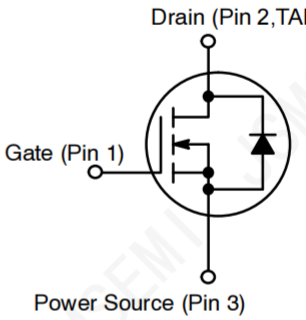
- V_{DS} 30V
- I_D 5.8A
- $R_{DS(ON)}$(at V_{GS}=10V) ＜26mΩ
- 100% EAS Tested
- 100% ▽V_{DS} Tested



SOT-23

General Description

- Trench Power MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free



Applications

- Power switching application
- Uninterruptible power supply
- DC-DC convertor
- Motor drivers

Absolute Maximum Ratings TA=25°C unless otherwise noted

Parameter		Symbol	Maximum	Units
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	±12	V
Continuous Drain Current	T_A=25° C	I_D	5.8	A
	T_A=100° C		3.7	A
Pulsed Drain Current [C]		I_{DM}	23	A
Power Dissipation [B]	T_A=25° C	P_D	1.4	W
	T_A=100° C		0.9	W
Maximum Junction-to-Ambient		$R_{\theta JA}$	89.2	°C/W
Operation Junction Temperature Range		T_J	150	°C
Storage Temperature Range		T_{STG}	-55 to 150	°C

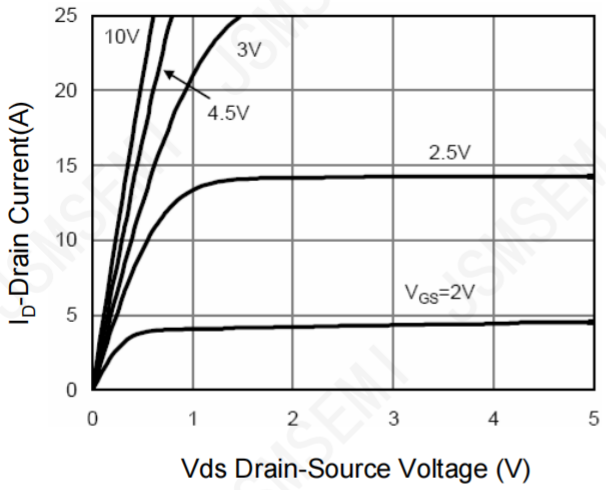
Ordering Information

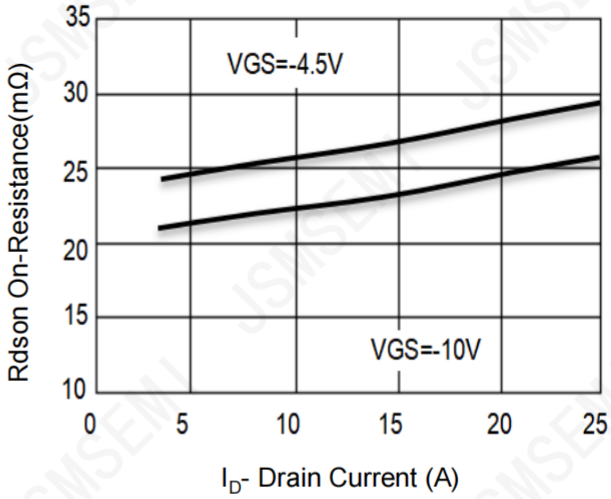
Order number	Package	Marking	Operation Temperature Range	MSL Grade	Ship, Quantity	Green
AO3400-JSM	SOT-23	A09T	-55 to 150°C	1	T&R,3000	Rohs

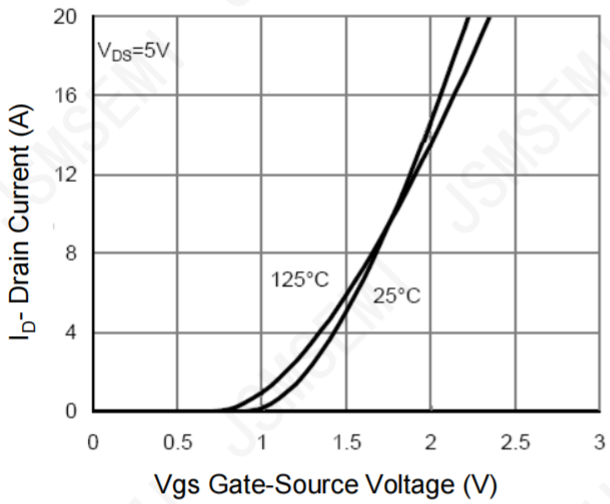
Electrical Characteristics (TJ=25°C unless otherwise noted)

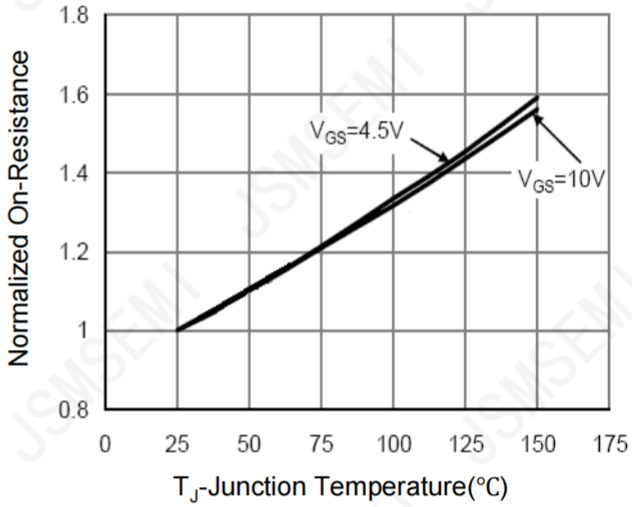
Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
Stactrical Parameter						
BV_{DSS}	Drain-Source Breakdown Voltage	I_D=250μA, V_{GS}=0V	30			V
I_{GSS}	Gate-Body leakage current	V_{DS}=0V, V_{GS}= ±12V			100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=30V, V_{GS}=0V			1	μA
		TJ=55° C			5	
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS} I_D=250μA	0.6	0.9	1.2	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V, I_D=5.0A		22	26	mΩ
	Static Drain-Source On-Resistance	V_{GS}=4.5V, I_D=3.0A		28	33	mΩ
Diode Characteristics						
V_{SD}	Diode Forward voltage	I_S=1.0A V_{GS}=0V		0.7	1.2	V
Dynamic Characteristics						
Ciss	Input Capacitance	V_{GS}=0V, V_{DS}=15V, f=1MHz		620		pF
Coss	Output Capacitance	V_{GS}=0V, V_{DS}=15V, f=1MHz		99		pF
Crss	Reverse Transfer Capacitance	V_{GS}=0V, V_{DS}=15V, f=1MHz		77		pF
Switching Characteristics						
$t_{d(on)}$	Turn-on Delay Time	V_{DD}=15V, R_L=2.7Ω V_{GS}=10V,R_{GEN}=3Ω		3 .3		nS
t_r	Turn-on Rise Time			4.8		nS
$t_{d(off)}$	Turn-off Delay Time			26		nS
t_f	Turn-off Fall Time			4		nS
Q_g	Total Gate Charge	V_{DS}=15V,I_D=5.8A, V_{GS}=4.5V		9.5		nC
Q_{gs}	Gate-Source Charge			1.5		nC
Q_{gd}	Gate-Drain Charge			3		nC

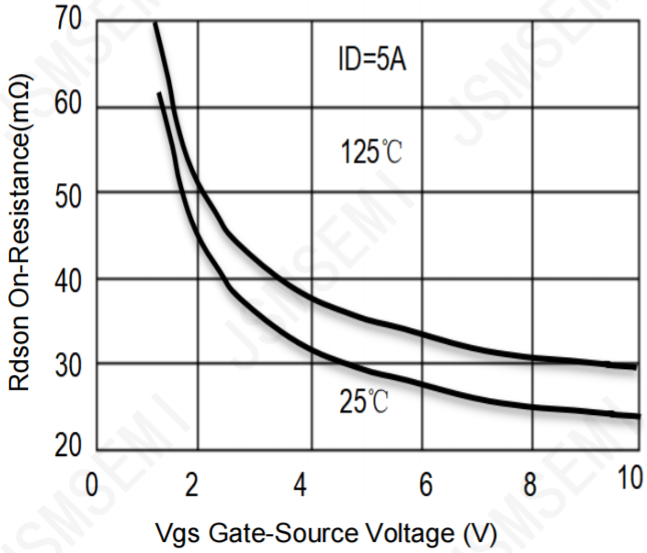
Typical Characteristics Description

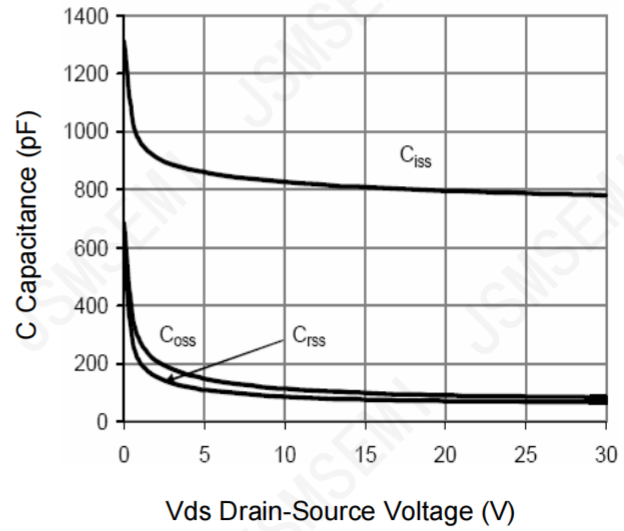




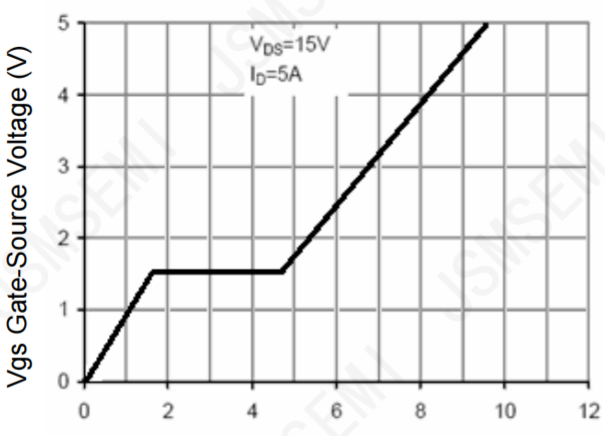


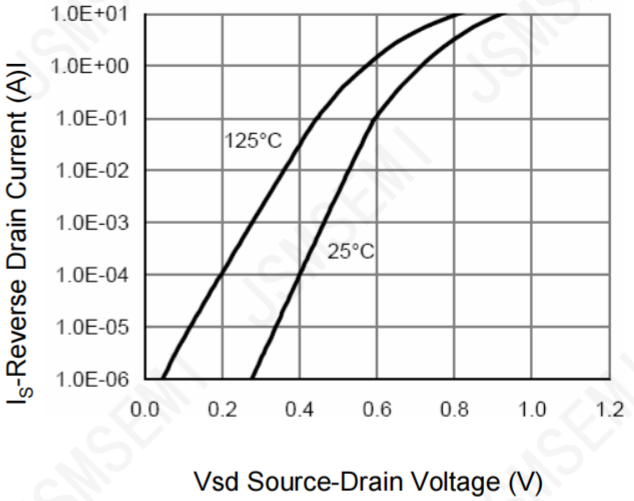


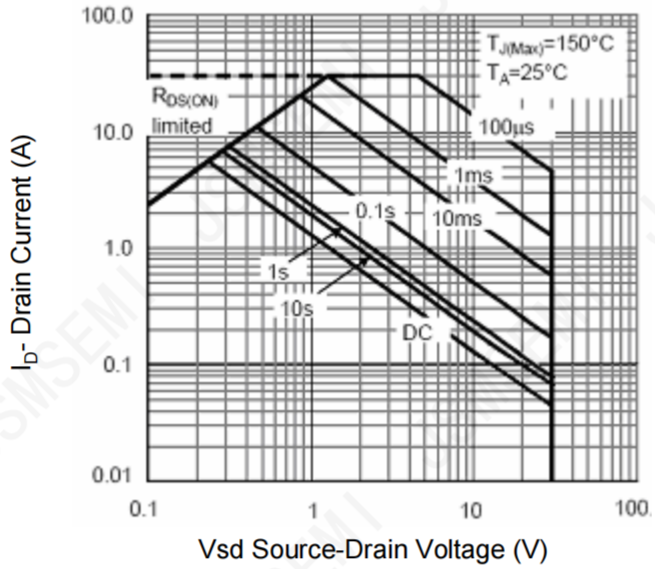


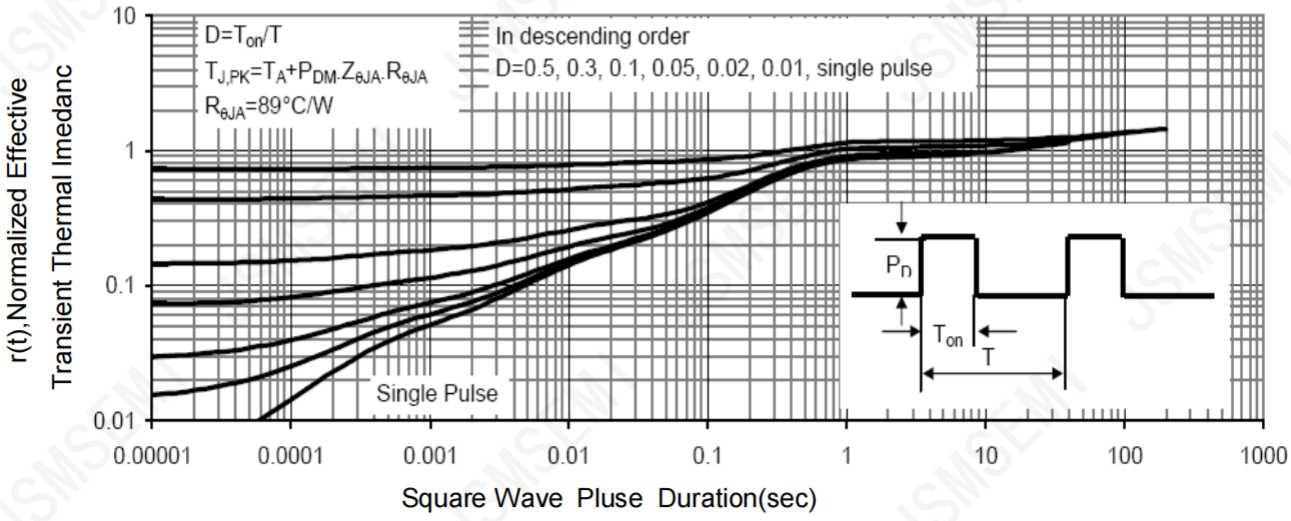


Typical Characteristics Description



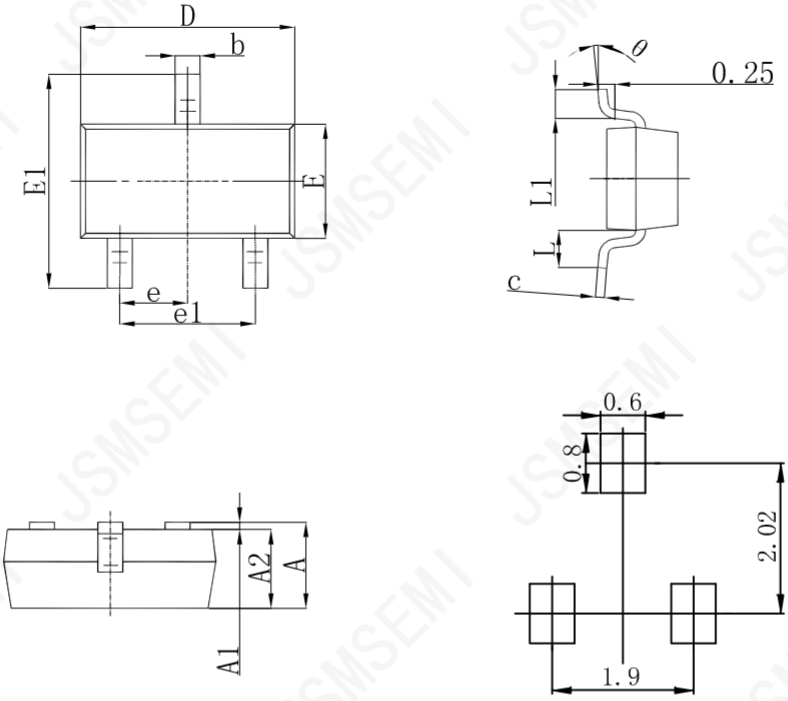






Package Information

SOT-23



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

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°