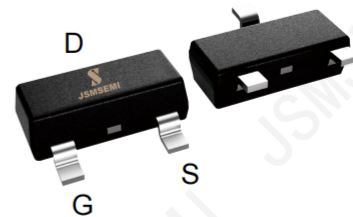


Product Summary

- V_{DS} -60V
- I_D -2A
- $R_{DS(ON)}$ (at $V_{GS}=10V$) <215m Ω
- 100% EAS Tested
- 100% ∇V_{DS} Tested



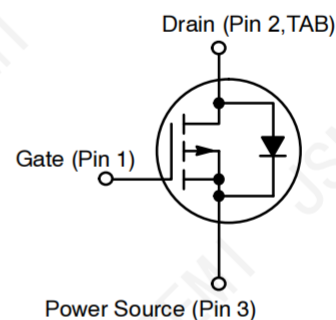
SOT-23

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)

Symbol	Parameter		Rating	Unit
Common Ratings (TC=25°C Unless Otherwise Noted)				
V _{DS}	Drain-Source Breakdown Voltage		-60	V
V _{GS}	Gate-Source Voltage		±20	V
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55 to 150	°C
I _S	Diode Continuous Forward Current	Tc=25°C	-2	A
Mounted on Large Heat Sink				
I _{DM}	Pulse Drain Current Tested	Tc=25°C	-8	A
I _D	Continuous Drain Current@GS=10V	Tc=25°C	-2	A
P _D	Maximum Power Dissipation	Tc=25°C	1.4	W
R _{θJA}	Thermal Resistance Junction-to-Ambient		90	°C/W

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

Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	VGS=0V, ID=-250μA	-60	--	--	V
IDSS	Zero Gate Voltage Drain Current	VDS=-60V, VGS=0V	--	--	-1	uA
IGSS	Gate-Body Leakage Current	VGS=±20V, VDS=0V	--	--	±100	nA
VGS(th)	Gate Threshold Voltage	VDS=VGS, ID=-250μA	-0.9	-1.7	-2.5	V
RDS(on)	Drain-Source On-State Resistance	VGS=-10V, ID=-3A	--	160	215	mΩ
		VGS=-4.5V, ID=-2A	--	200	280	
Dynamic Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
CISS	Input Capacitance	VDS=-30V, VGS=0V, f=1MHz	--	430	--	pF
COSS	Output Capacitance		--	33	--	pF
CRSS	Reverse Transfer Capacitance		--	22	--	pF
Switching Characteristics						
Qg	Total Gate Charge	VDD=-30V, ID=-2A, VGS=-10V	--	8.5	--	nC
Qgs	Gate Source Charge		--	2.1	--	nC
Qgd	Gate Drain Charge		--	1.6	--	nC
td(on)	Turn-on Delay Time	VDD=-30V, ID=-1A, VGS=-10V, RG=6Ω	--	5.3	--	nS
tr	Turn-on Rise Time		--	20	--	nS
td(off)	Turn-Off Delay Time		--	33	--	nS
tf	Turn-Off Fall Time		--	10	--	nS
Source- Drain Diode Characteristics						
VSD	Forward on voltage	Tj=25℃, Is=-2A,	--	--	-1.2	V

Ordering Information

Order number	Package	Operation Temperature Range	MSL Grade	Ship,Quantity	Green
PMV100EPAR-JSM	SOT-23	-55 to 150°C	1	T&R,3000	RoHS

Typical Operating Characteristics

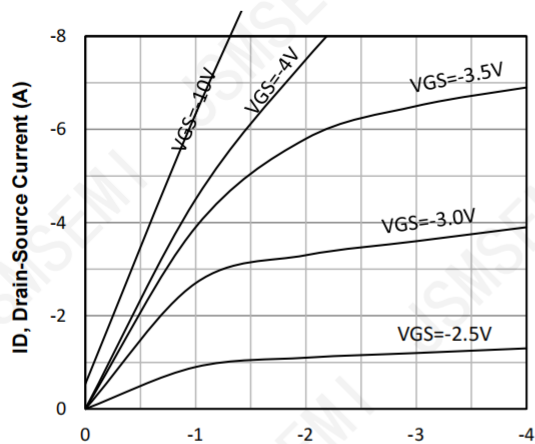


Fig1. Typical Output Characteristics

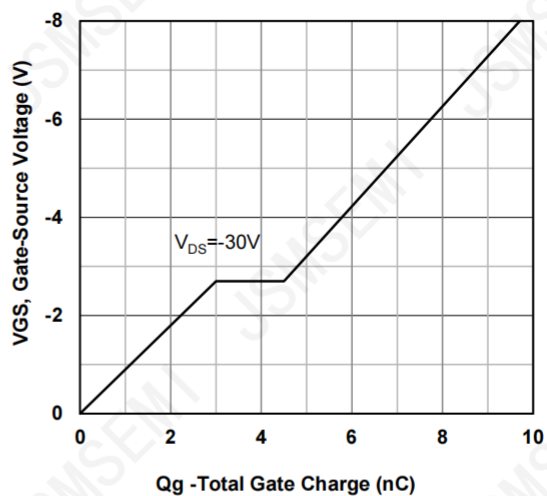


Fig2. Typical Gate Charge Vs. Gate-Source Voltage

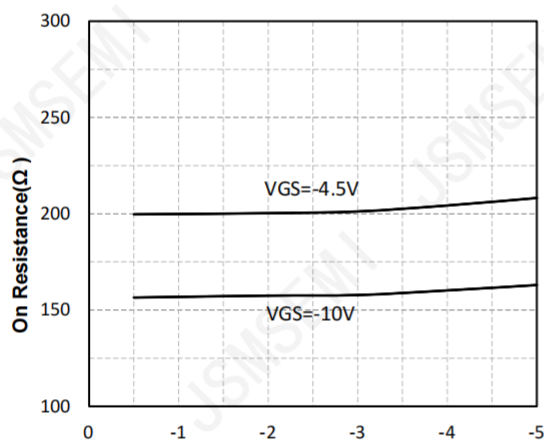


Fig3. Drain-Source on Resistance

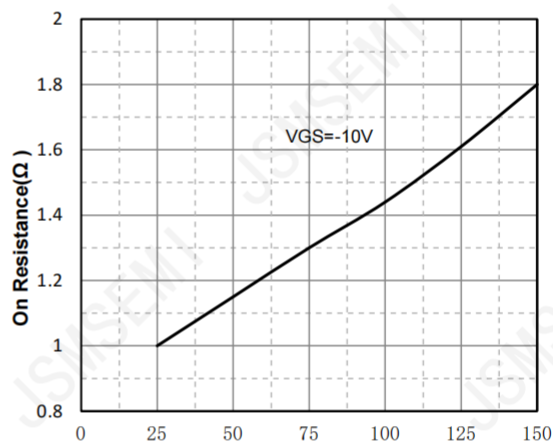


Fig4. Normalized On-Resistance Vs. Temperature

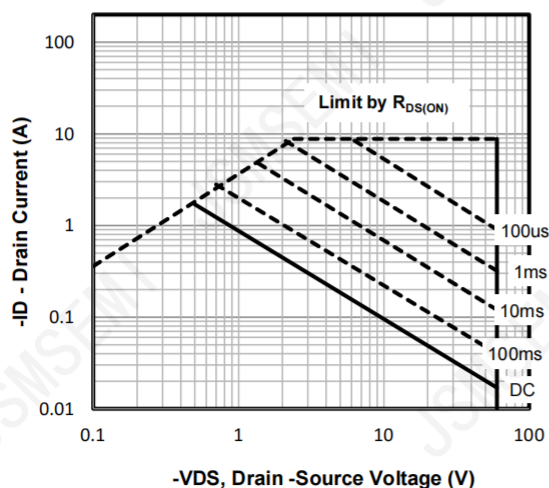


Fig7. Maximum Safe Operating Area

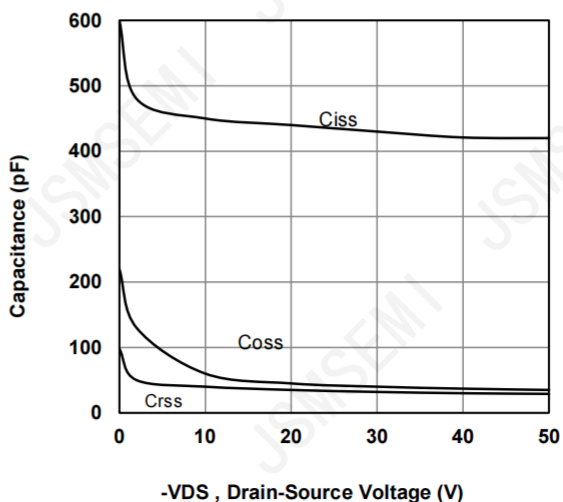
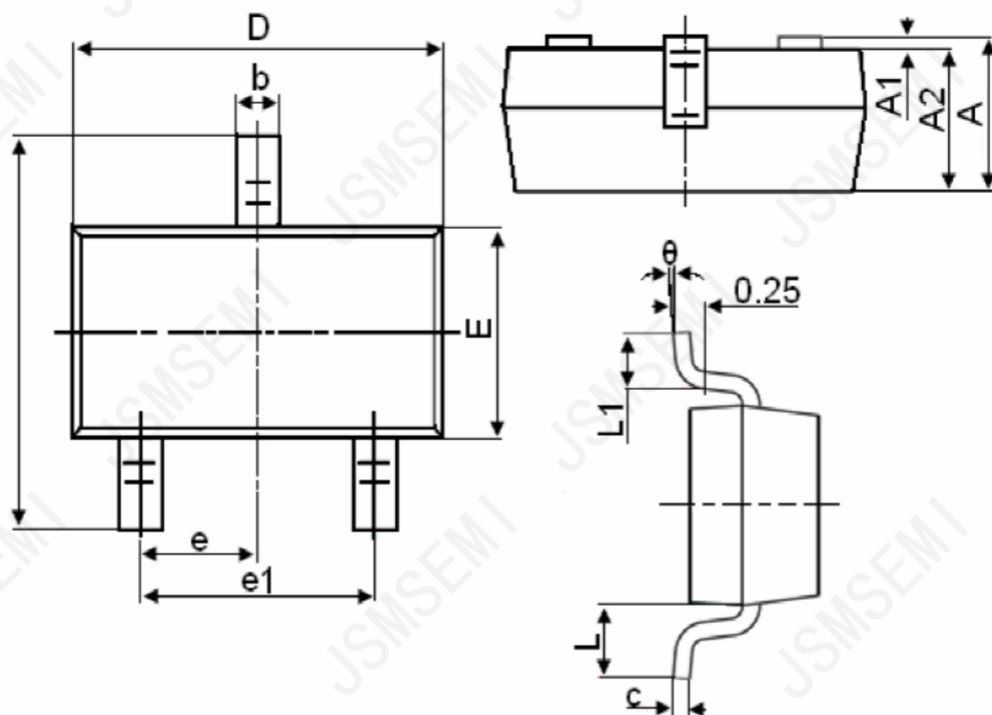


Fig6 Typical Capacitance Vs. Drain-Source Voltage

SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		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	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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