

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	SI2319
▶ Overseas	Part Number	SI2319
▶ Equivalent	Part Number	SI2319

EV is the abbreviation of name EVVO

SOT-23 Plastic-Encapsulate MOSFETS

SI2319

P-Channel 40-V(D-S) MOSEFET

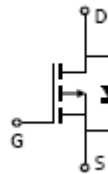
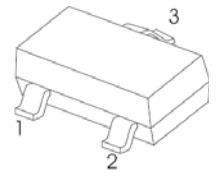
V(BR)DSS	RDS(on)MAX	ID
- 40 V	45mΩ @ - 10V	- 4.4A
	65mΩ @ - 4.5V	

FEATURE

- TrenchFET Power MOSFET
- Low RDS(ON)
- Surface Mount Package

APPLICATION

- ※ Load Switch for Portable Devices
- ※ DC/DC Converter
- ※ Battery Switch

Equivalent Circuit**SOT - 23**

1. GATE
2. SOURCE
3. DRAIN

Maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	-40	V
Gate-Source Voltage	VGS	±20	
Continuous Drain Current	ID	-4.4	A
Pulsed Diode Current	IDM	-12	
Continuous Source-Drain Current(Diode Conduction)	IS	-1.25	
Power Dissipation	PD	1.25	W
Thermal Resistance from Junction to Ambient (t≤5s)	RθJA	166	°C/W
Operating Junction	TJ	150	°C
Storage Temperature	TSTG	-55~+150	°C

SOT-23 Plastic-Encapsulate MOSFETS

MOSFET ELECTRICAL CHARACTERISTICS

Static Electrical Characteristics (Ta = 25 °C Unless Otherwise Noted)

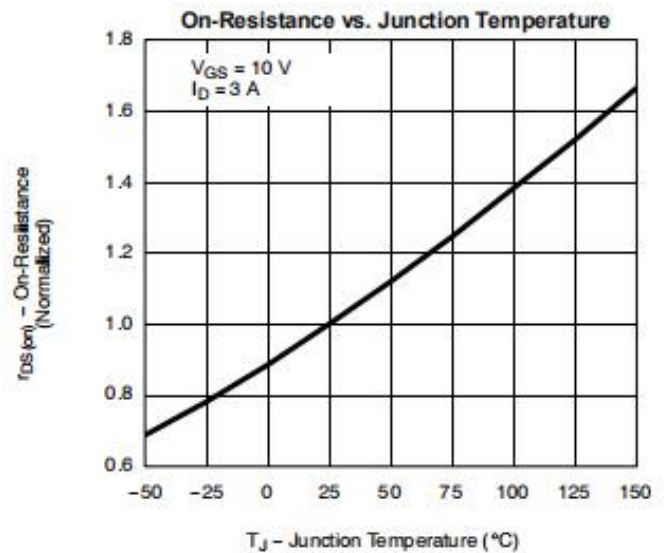
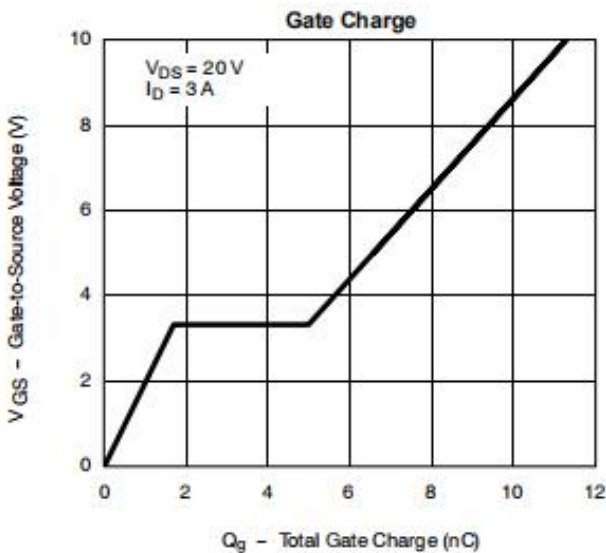
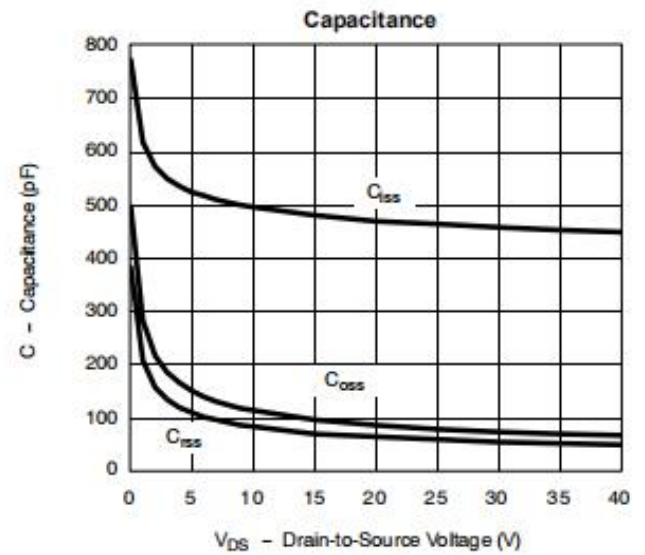
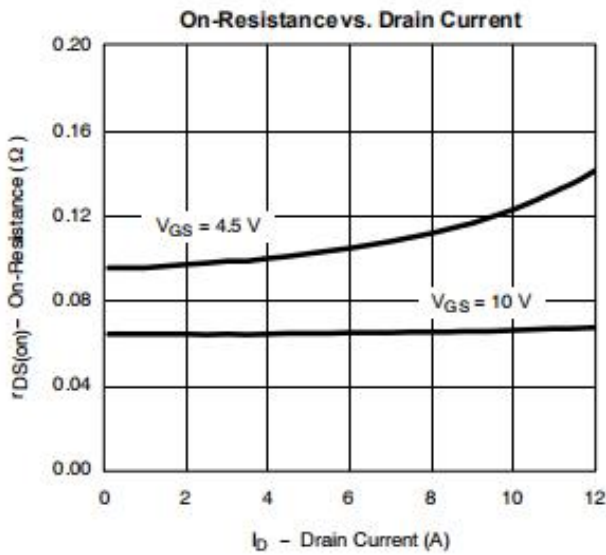
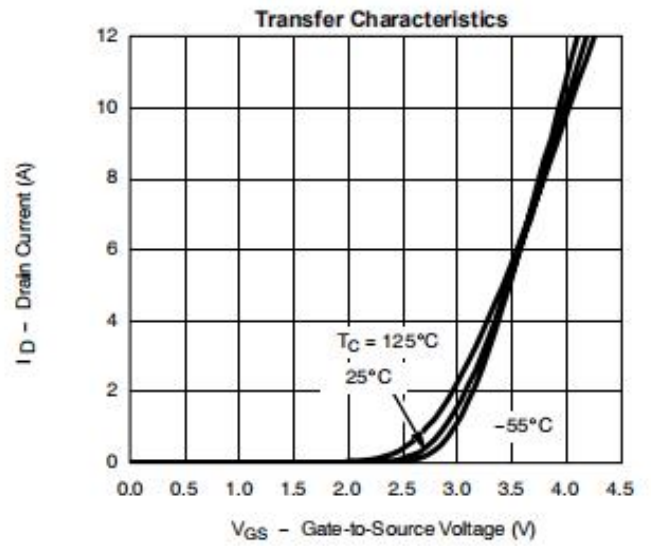
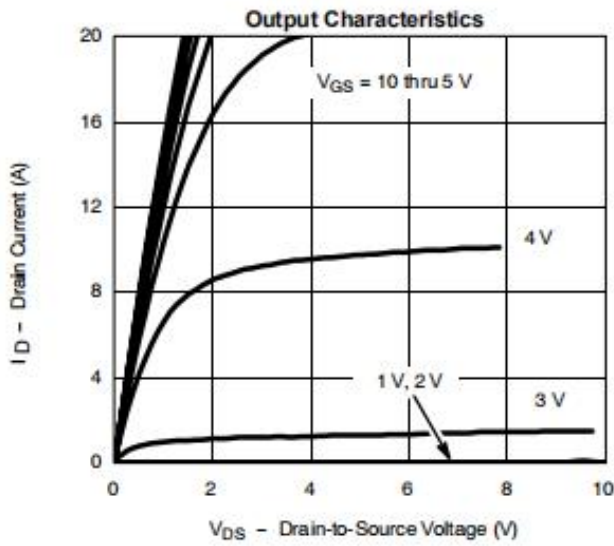
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = -250μA	-40			V
Gate-source threshold voltage	VGS(th)	VDS = VGS, ID = -250μA	-1		-3	V
Gate-source leakage	IGSS	VDS = 0V, VGS = ±20V			±100	nA
Zero gate voltage drain current	IDSS	VDS = -40V, VGS = 0V			-1	μA
Drain-source on-state resistancea	RDS(on)	VGS = -10V, ID = -3A		40	45	mΩ
		VGS = -4.5V, ID = -2.5A		56	65	mΩ
Forward transconductancea	gfs	VDS = -5V, ID = -3A		7		S
Diode forward voltage	VSD	IS = -1.25A, VGS = 0V		-0.8	-1.25	V
Dynamic						
Input capacitance	Ciss	VDS = -20V, VGS = 0V, f = 1MHz		470		pF
Output capacitance	Coss			85		pF
Reverse transfer capacitanceb	Crss			65		pF
Total gate charge	Qg	VDS = -20V, VGS = - 10V, ID = -3A		11.5	17	nC
Gate-source charge	Qgs			1.8		nC
Gate-drain charge	Qgd			3.3		nC
Gate resistance	Rg	f = 1MHz		9		Ω
Switchingb						
Turn-on delay time	td(on)	VDS = -20V RL = 20Ω, ID = -1A, VGEN = -4.5 V, Rg = 6Ω		7	15	ns
Rise time	tr			15	25	ns
Turn-off delay time	td(off)			25	40	ns
Fall time	tf			25	42	ns
Drain-source body diode characteristics						
Continuous Source-Drain Diode Current	IS	Tc = 25°C			-1.25	A
Pulsed Diode forward Current	ISM				-20	A

Note :

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

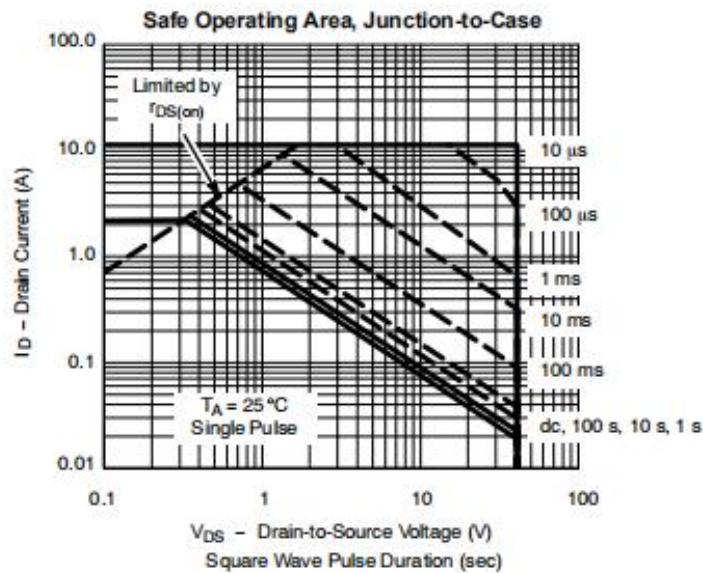
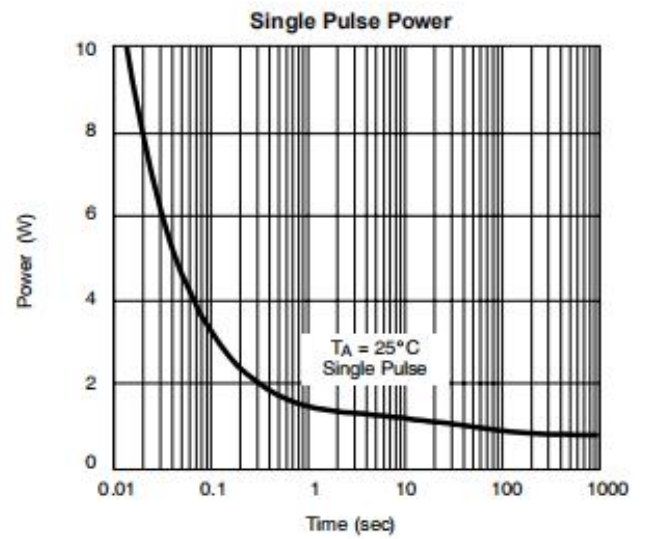
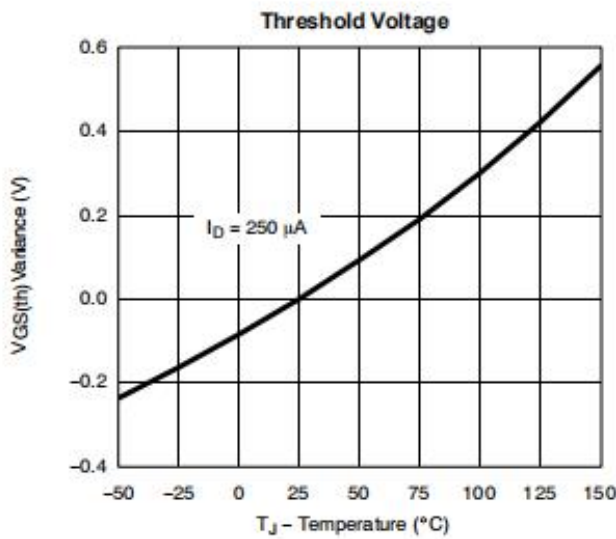
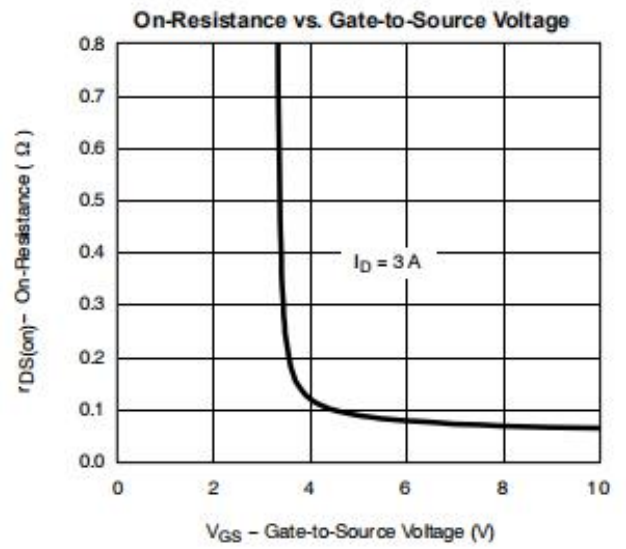
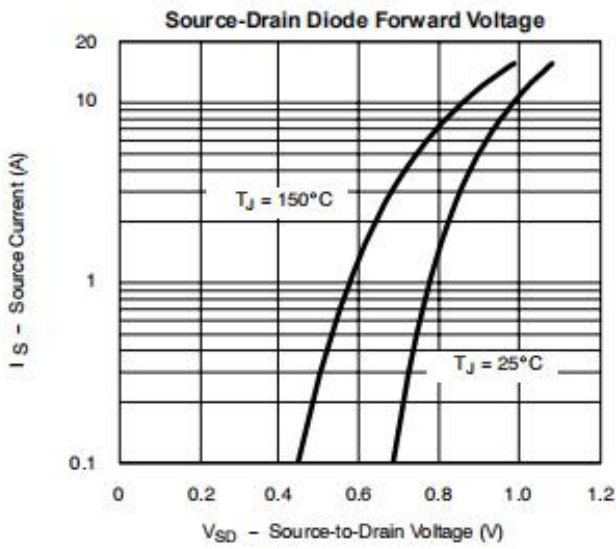
SOT-23 Plastic-Encapsulate MOSFETS

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



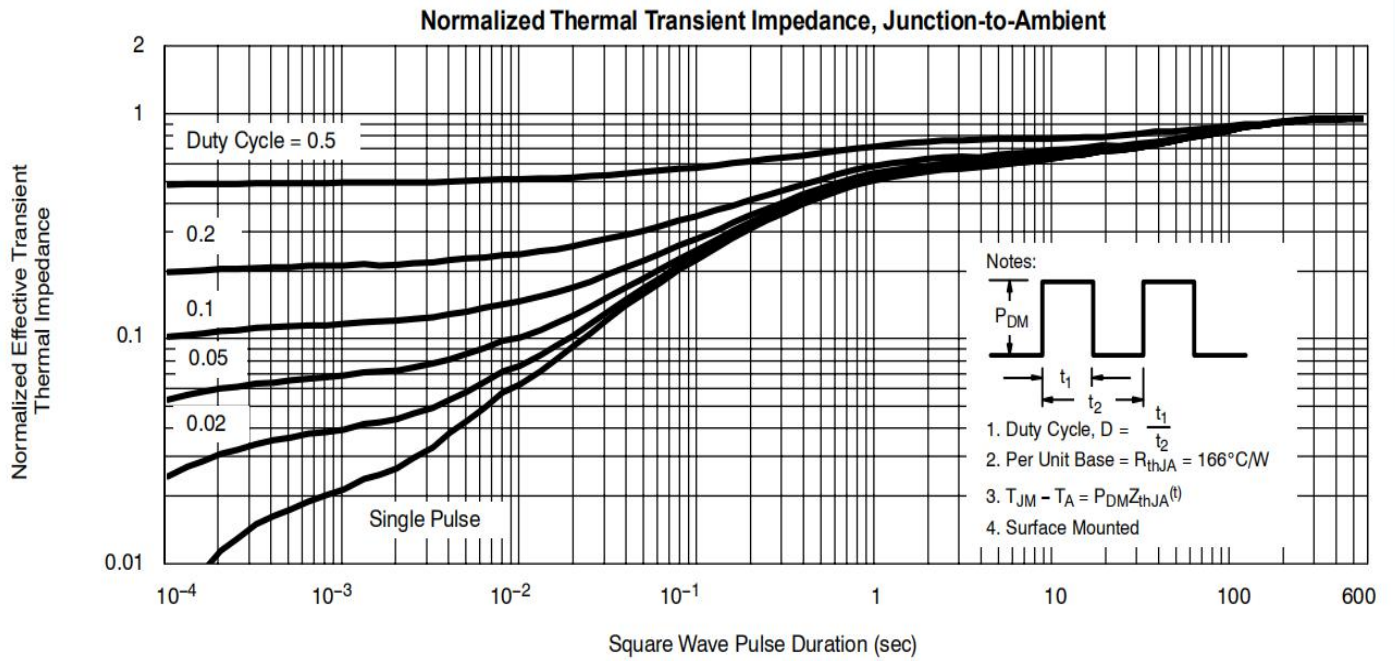
SOT-23 Plastic-Encapsulate MOSFETS

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



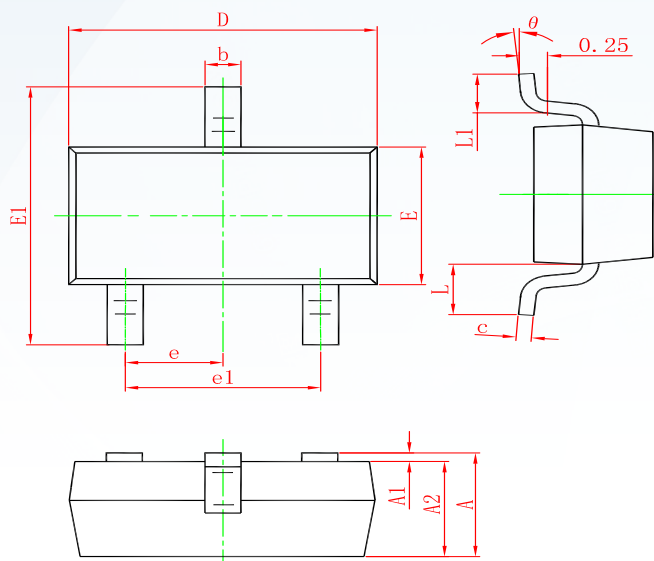
SOT-23 Plastic-Encapsulate MOSFETS

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



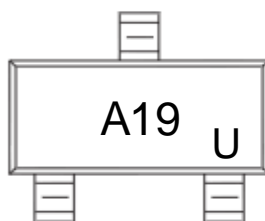
SOT-23 Plastic-Encapsulate MOSFETS

SOT-23 PACKAGE OUTLINE DIMENSIONS



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
theta	0°	8°	0°	8°

Marking



Ordering information

Order code	Package	Baseqty	Deliverymode
SI2319	SOT-23	3000	Tape and reel

Disclaimer

EVVOSEMI ("EVVO") reserves the right to make corrections, enhancements, improvements, and other changes to its products and services at any time, and to discontinue any product or service without notice.

EVVO warrants the performance of its hardware products to the specifications applicable at the time of sale in accordance with its standard warranty. Testing and other quality control techniques are used as deemed necessary by EVVO to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

Customers should obtain and confirm the latest product information and specifications before final design, purchase, or use. EVVO makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does EVVO assume any liability for application assistance or customer product design. EVVO does not warrant or accept any liability for products that are purchased or used for any unintended or unauthorized application.

EVVO products are not authorized for use as critical components in life support devices or systems without the express written approval of EVVOSEMI.

The EVVO logo and EVVOSEMI are trademarks of EVVOSEMI or its subsidiaries in relevant jurisdictions. EVVO reserves the right to make changes without further notice to any products herein.