

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



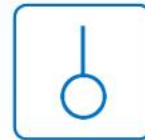
MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	SI2307A
▶ Overseas	Part Number	SI2307A
▶ Equivalent	Part Number	SI2307A

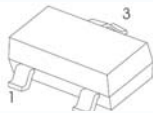
EV is the abbreviation of name EVVO

P-Channel Enhancement MOSFET

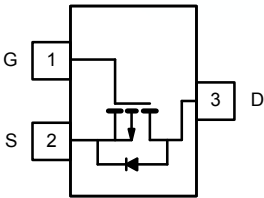
■ Features

- $V_{DS} (V) = -30V$
- $I_D = -3.0A (V_{GS} = -10V)$
- $R_{DS(ON)} < 50m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 70m\Omega (V_{GS} = -4.5V)$

SOT - 23



- 1. GATE
- 2. SOURCE
- 3. DRAIN



■ Absolute Maximum Ratings $T_a = 25^{\circ}C$

Parameter		Symbol	5 sec	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_a = 25^{\circ}C$	I_D	-3	A
	$T_a = 70^{\circ}C$		-2.5	
Pulsed Drain Current		I_{DM}	-12	
Power Dissipation	$T_a = 25^{\circ}C$	P_D	1.25	W
	$T_a = 70^{\circ}C$		0.8	
Thermal Resistance, Junction- to-Ambient	$t \leq 10 \text{ sec}$	R_{thJA}	100	$^{\circ}C/W$
Junction Temperature		T_J	150	$^{\circ}C$
Junction and Storage Temperature Range		T_{stg}	-55 to 150	

P-Channel Enhancement MOSFET

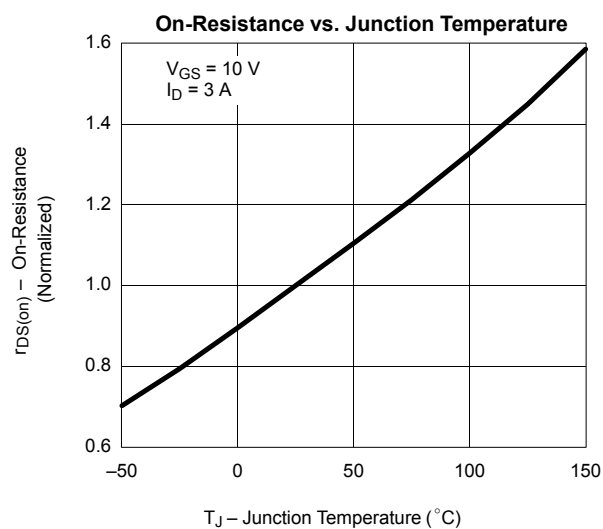
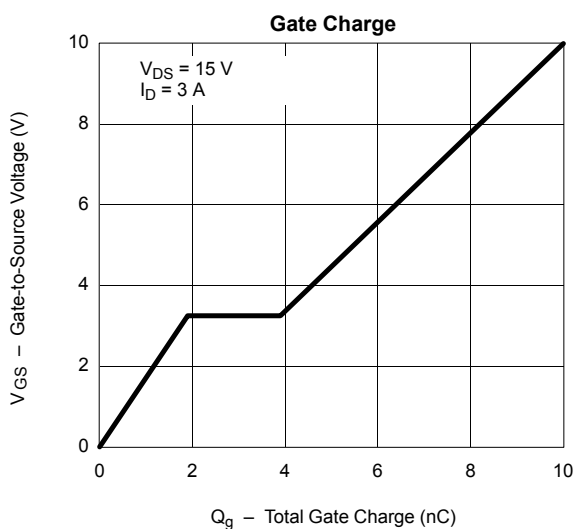
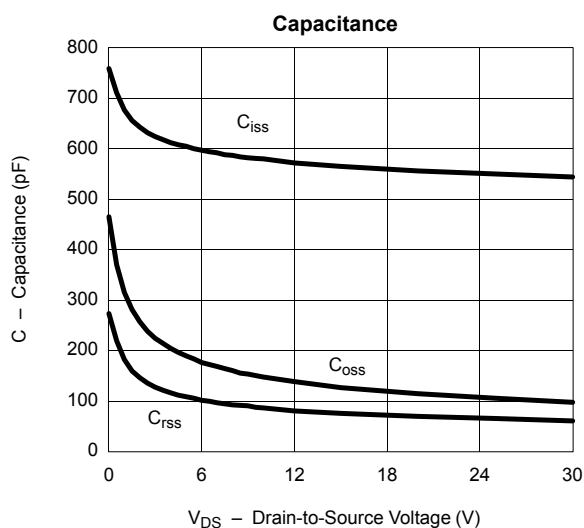
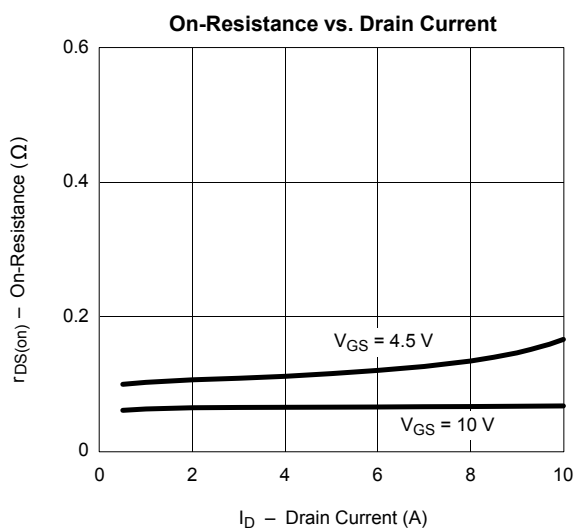
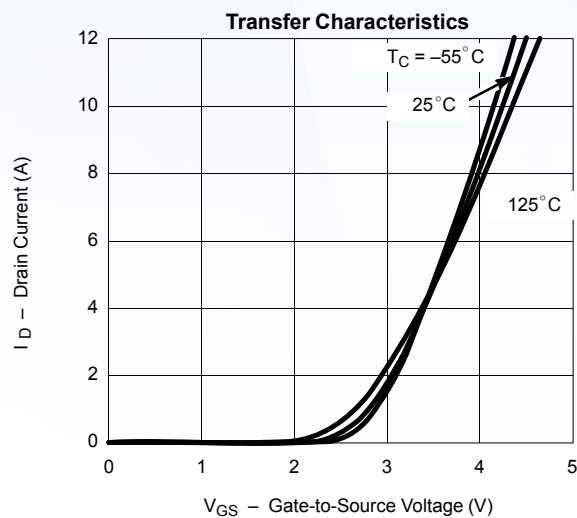
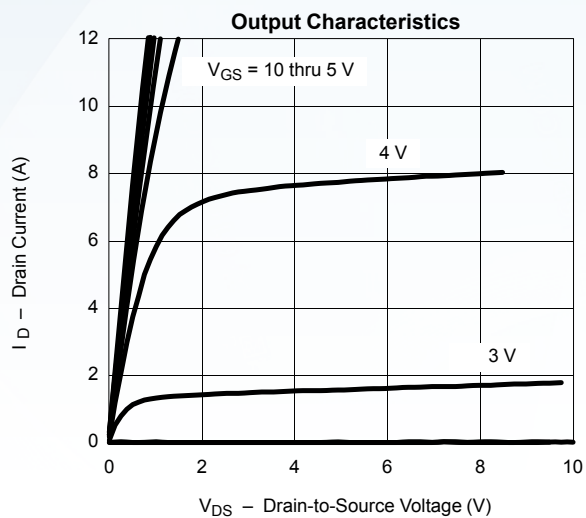
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μ A, V _{GS} =0V	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _D =-24V, V _{GS} =0V			-1	μ A
		V _D =-24V, V _{GS} =0V, T _J =55°C			-10	
Gate-Body leakage current	I _{GSS}	V _D =0V, V _{GS} = $\pm$ 20V			$\pm$ 100	nA
Gate Threshold Voltage	V _{GS(th)}	V _D =V _{GS} I _D =-250 μ A	-1.0		-3.0	V
Static Drain-Source On-Resistance *1	R _{DS(on)}	V _{GS} =-10V, I _D =-3A			50	m Ω
		V _{GS} =-4.5V, I _D =-2.5A			70	
On state drain current *1	I _{D(on)}	V _{GS} =-10V, V _D =-5V	-6			A
Forward Transconductance *1	g _{FS}	V _D =-10V, I _D =-3A		4.5		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _D =-15V, f=1MHz		565		pF
Output Capacitance	C _{oss}			126		
Reverse Transfer Capacitance	C _{rss}			75		
Total Gate Charge	Q _g	V _{GS} =-15V, V _D =-15V, I _D =-3A		10	15	nC
Gate Source Charge	Q _{gs}			1.9		
Gate Drain Charge	Q _{gd}			2		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-10V, V _D =-15V, R _L =15 Ω , R _{GEN} =6 Ω I _D =-1.0A		10	20	ns
Turn-On Rise Time	t _r			9	20	
Turn-Off DelayTime	t _{d(off)}			27	50	
Turn-Off Fall Time	t _f			7	16	
Maximum Body-Diode Continuous Current	I _S				-1.25	A
Diode Forward Voltage	V _{SD}	I _S =-1.25A, V _{GS} =0			-1.2	V

*1Pulse test: PW $\leq$ 300 μ s duty cycle $\leq$ 2%.

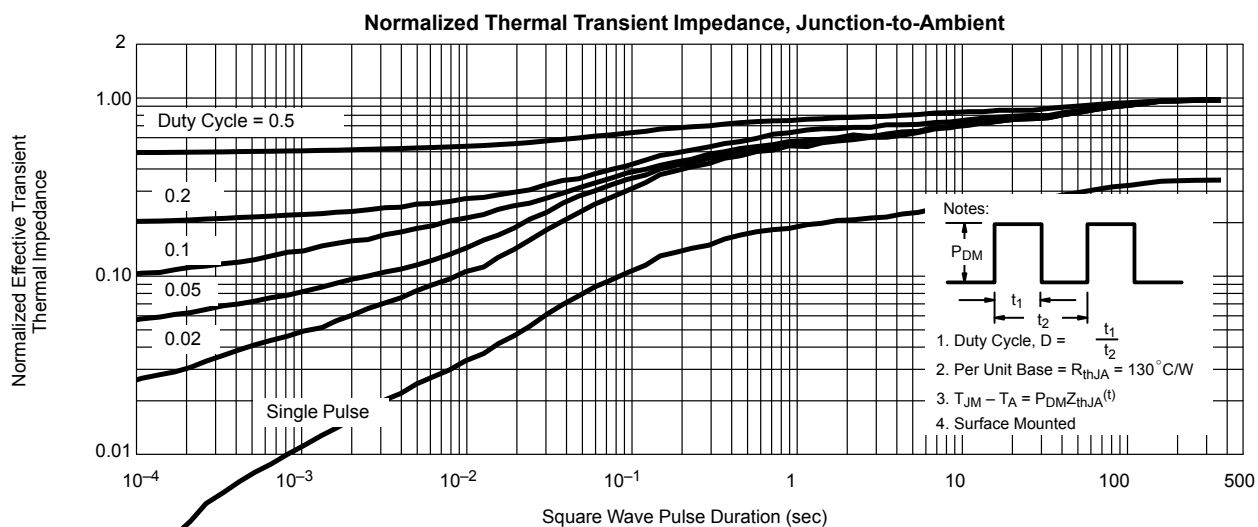
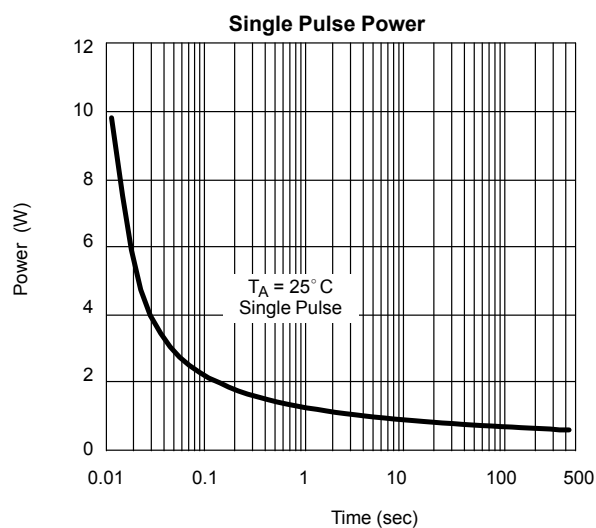
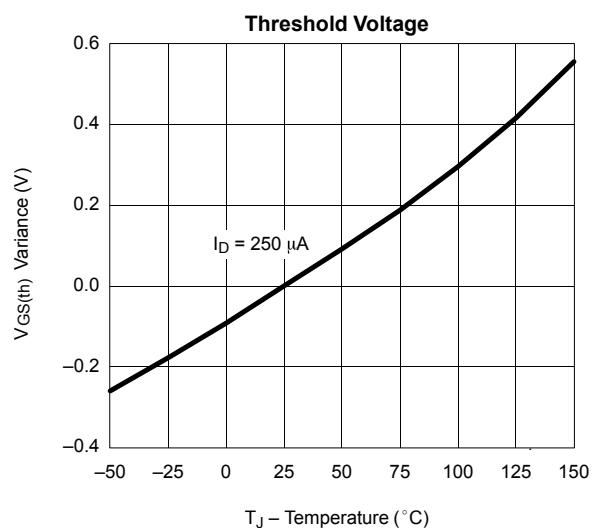
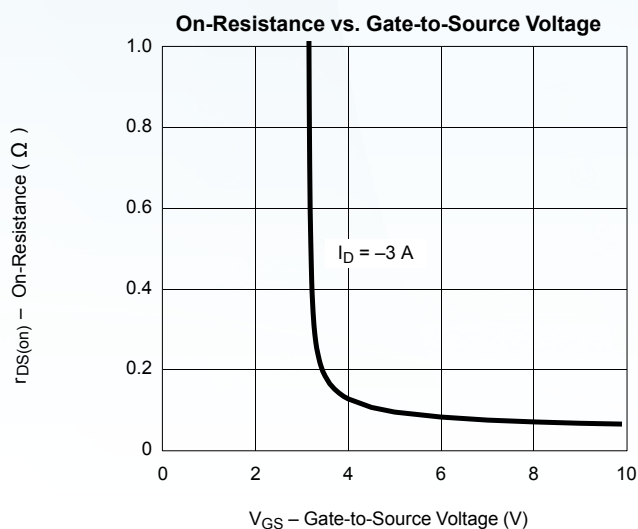
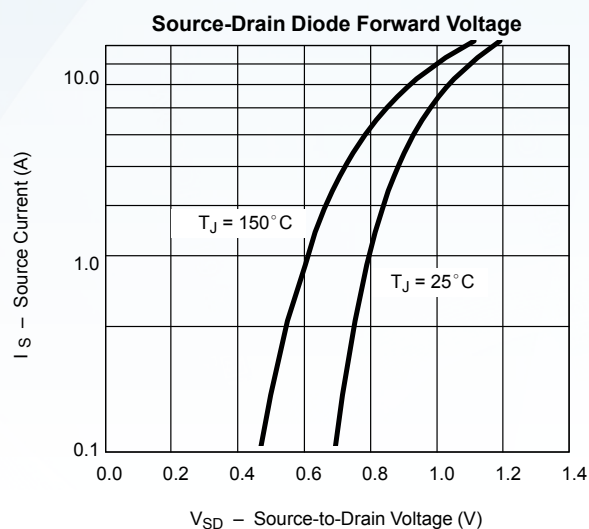
P-Channel Enhancement MOSFET

Typical Characteristics



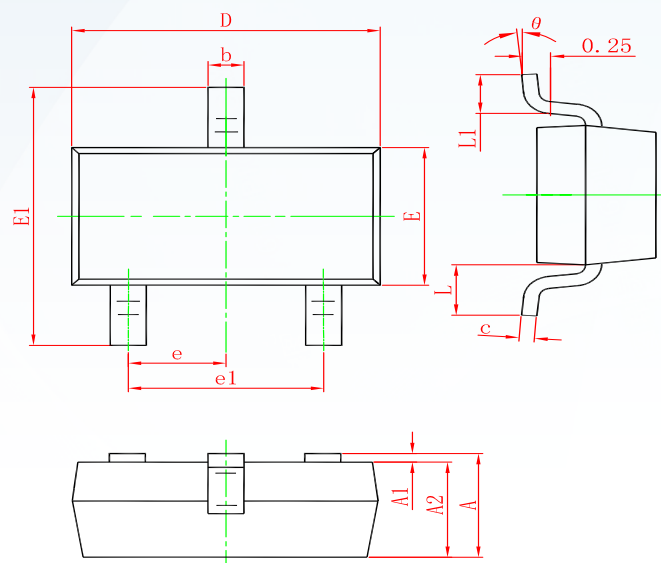
P-Channel Enhancement MOSFET

■ Typical Characteristics



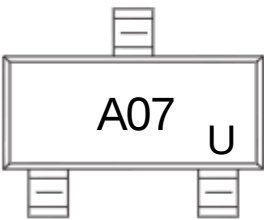
P-Channel Enhancement MOSFET

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
θ	0°	8°	0°	8°

Marking



Ordering information

Order code	Package	Baseqty	Deliverymode
SI2307A	SOT-23	3000	Tape and reel

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