



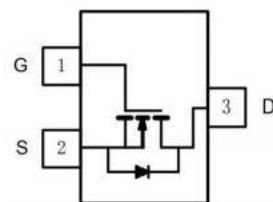
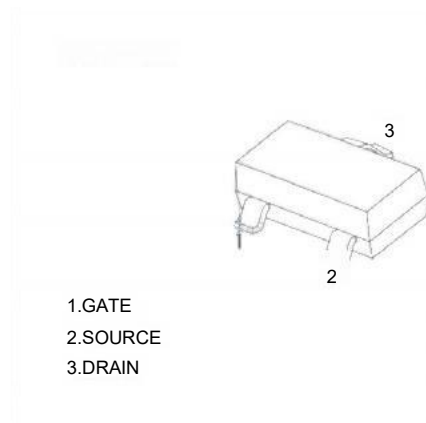
SI2308A

N-Channel MOSFET

SOT-23

Features

- $V_{DS}(V)=60V$
- $I_D=3A(V_{GS}=10V)$
- $R_{DS(ON)}<80m\Omega(V_{GS}=10V), I_D=3A$
- $R_{DS(ON)}<95m\Omega(V_{GS}=4.5V), I_b=1.9A$



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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{OS}	60	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_a=25^{\circ}C$	I_D	3	A
	$T_a=70^{\circ}C$		1.9	
Pulsed Drain Current		I_{DM}	10	
Power Dissipation	$T_a=25^{\circ}C$	PD	1.25	W
	$T_a=70^{\circ}C$		0.8	
Thermal Resistance, Junction-to-Ambient	(Note. 1)	R_{thJA}	100	$^{\circ}C/W$
	(Note. 2)		166	
Junction Temperature		T_J	150	$^{\circ}C$
Storage Temperature Range		T_{stg}	-55 to 150	

Note.1:Surface Mounted on FR4 Board, $t_s \leq 5$ sec.

Note.2:Surface Mounted on FR4 Board

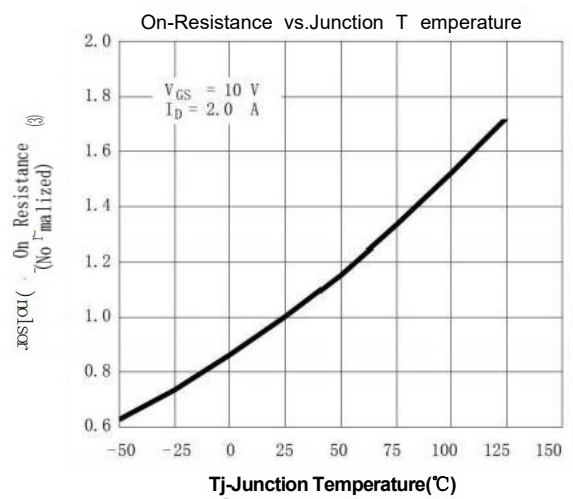
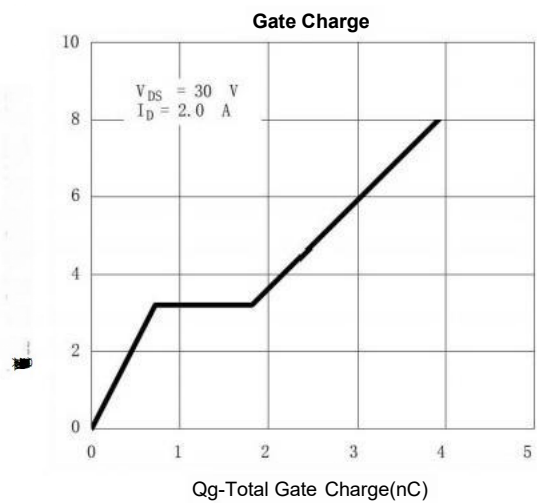
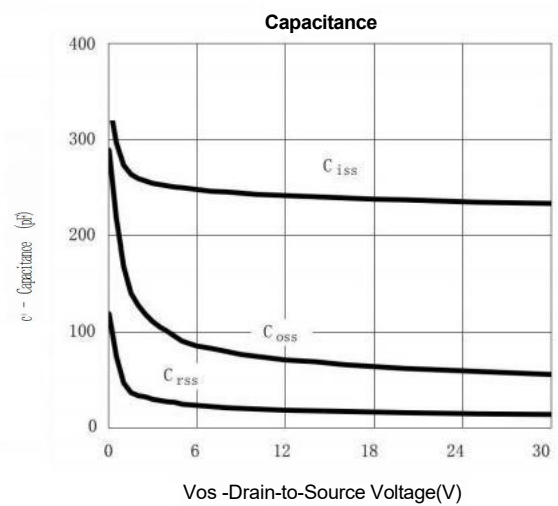
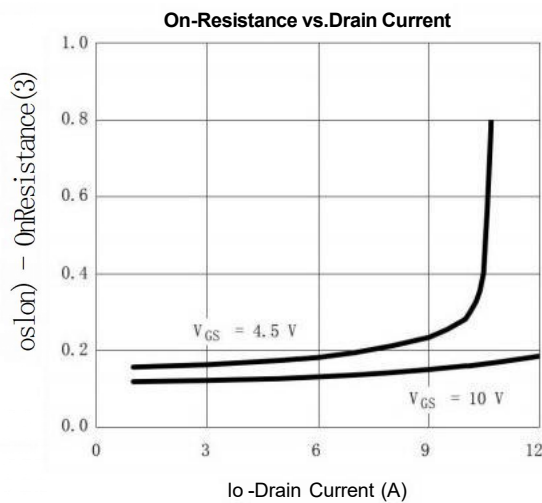
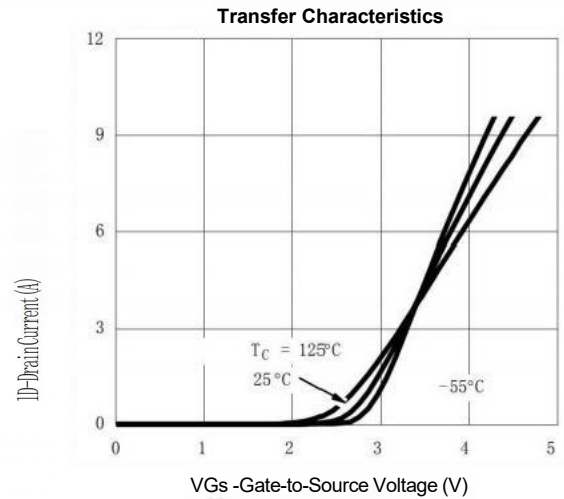
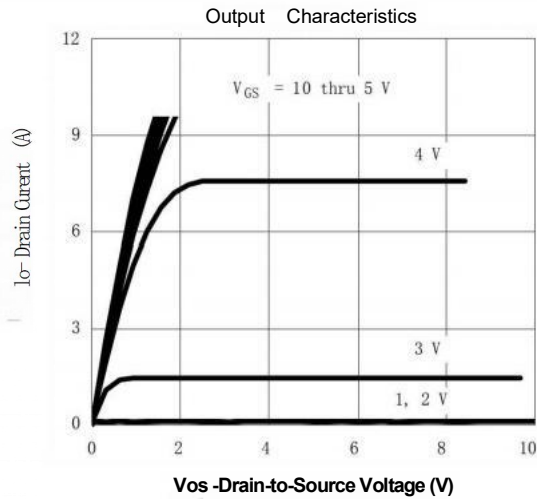
Electrical Characteristics Ta=25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	VDSS	ID=250 μ A, VGs=0V	60			V
Zero Gate Voltage Drain Current	Ibss	VDs=60V, VGs=0V			0.5	uA
		VDs=60V, VGs=0V, TJ=55℃			10	
Gate-Body Leakage Current	IGSS	VDs=0V, VGs=±20V			±100	nA
Gate Threshold Voltage	VGS(th)	VDs=VGs, ID=250 μ A	1		3	V
Static Drain-Source On-Resistance	RDS(on)	VGs=10V, ID=3A			80	mΩ
		VGs=4.5V, ID=1.9A			95	
On State Drain Current	ID(ON)	VGs≥4.5V, VDs=10V	6			A
		VGs≥4.5V, VDs=4.5V	4			
Forward Transconductance	gFS	VDs=4.5V, ID=2A		4.6		S
Input Capacitance	Ciss	VGs=0V, VDs=25V, f=1MHz		240		pF
Output Capacitance	Coss			50		
Reverse Transfer Capacitance	Crss			15		
Gate Resistance	Rg	VGs=0V, VDs=0V, f=1MHz	0.5		3.3	Q
Total Gate Charge	Qg	VGs=10V, Vbs=30V, ID=2A		4.8	10	nC
Gate Source Charge	Qgs			0.8		
Gate Drain Charge	Qgd			1		
Turn-On DelayTime	td(on)	VGs=4.5V, VDs=30V, ID=1A, RL=30 Ω , RG=6 Ω		7	15	ns
Turn-On Rise Time	tr			10	20	
Turn-Off DelayTime	td(off)			17	35	
Turn-Off Fall Time	tf			6	15	
Maximum Body-Diode Continuous Current	Is				1	A
Diode Forward Voltage	VsD	Is=1A, VGs=0V			1.2	V

Note.Pulse test;pulse width≤300 us,duty cycles≤2%.

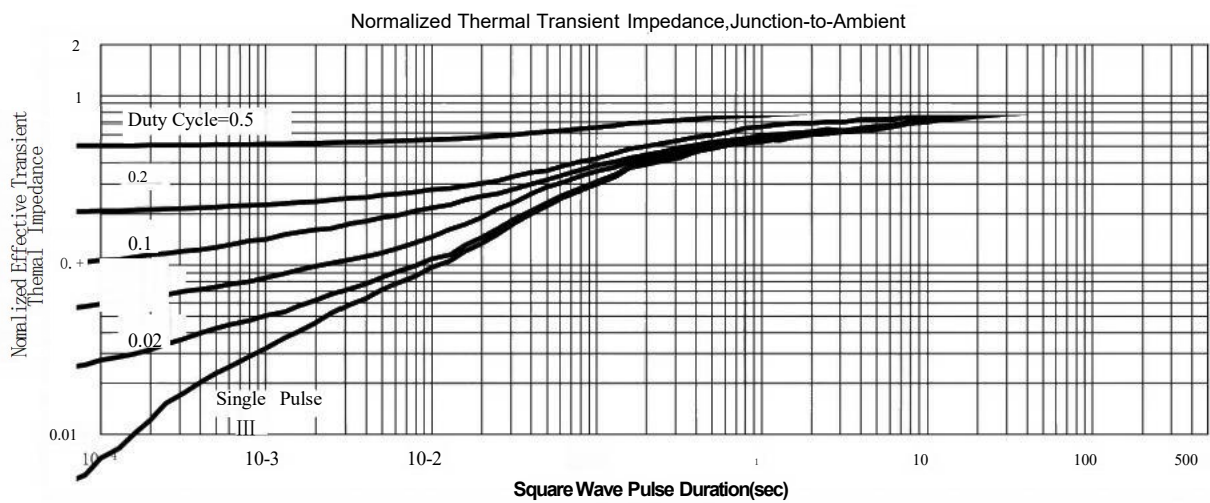
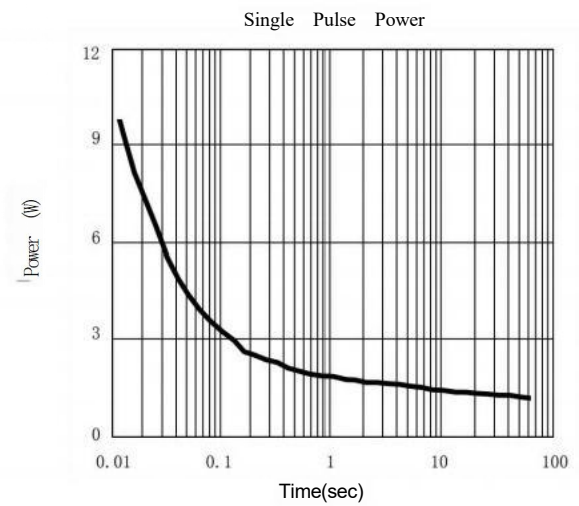
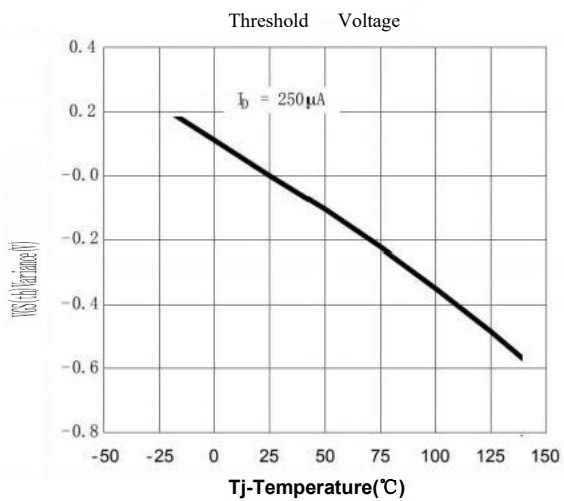
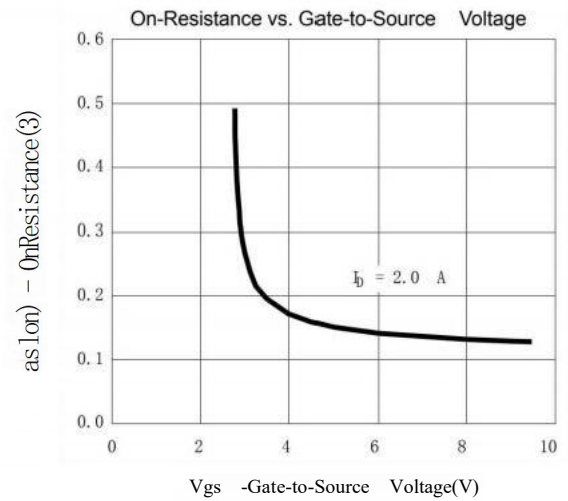
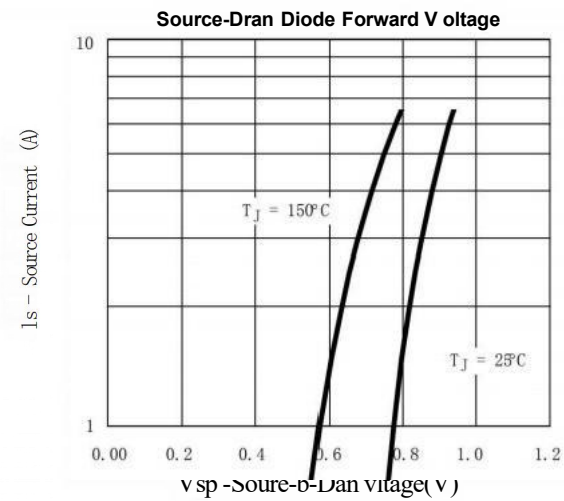
Typical Characteristics

SI2308A

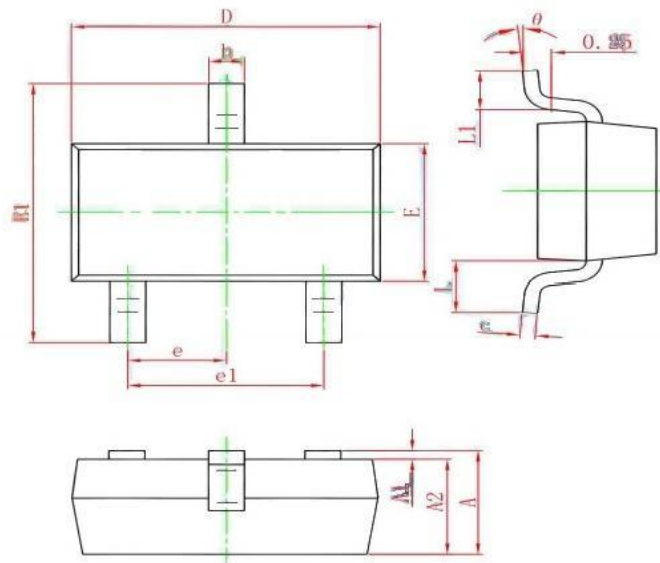


Typical Characteristics

SI2308A



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°