Elektronische Bauelemente

SSF319W

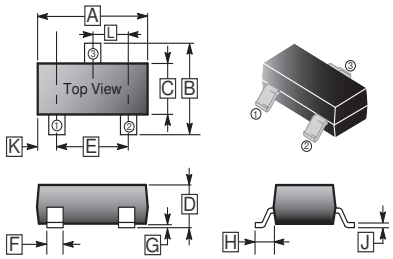
50V, 200mA, $R_{DS(ON)}$ 3.5Ω
N-Ch Enhancement Mode Power MOSFET

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

Typical applications are DC/DC converters, power management in portable and battery–powered products such as computers, printers, PCMCIA cards, cellular and cordless telephones.

SOT-323



REF.	Millimeter Min.	Millimeter Max.	REF.	Millimeter Min.	Millimeter Max.
A	1.80	3.00	G	0.1 REF.	
B	1.80	2.55	H	0.525 REF.	
C	1.1	1.4	J	0.05	0.25
D	0.80	1.15	K	0.8 TYP.	
E	1.20	2.00	L	0.65 TYP.	
F	0.15	0.50			

FEATURES

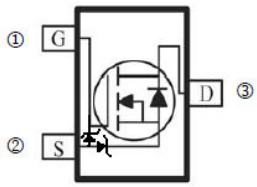
- Lower threshold Voltage
- ESD protection: 1500V

MARKING

J2

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch



ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	50	V
Continuous Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_A=25℃	I_D	200	mA
Pulsed Drain Current@ tp≦10μs		I_{DM}	800	mA
Total Power Dissipation [1]	T_A=25℃	P_D	150	mW
	Derate above 25℃		1.2	mW / ℃
Thermal Resistance from Junction to Ambient [1]		$R_{\theta JA}$	833	℃ / W
Maximum Lead Temperature for Soldering Purposes@ for 10 seconds		T_L	260	℃
Operating Junction and Storage Temperature Range		T_J, T_{STG}	150, -55~150	℃

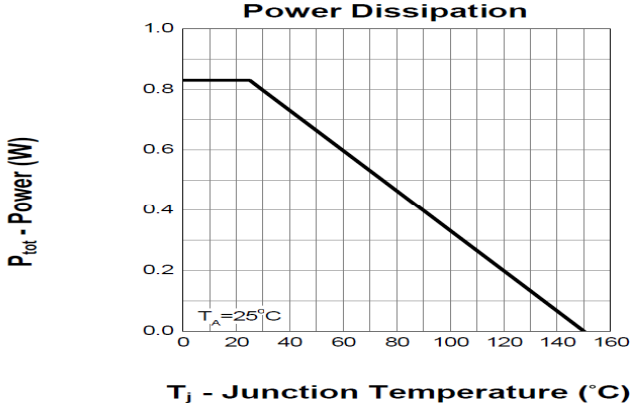
ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	50	-	-	V	V_{GS}=0, I_D=250μA
Drain-Source Leakage Current	I_{DSS}	-	-	0.1	μA	V_{DS}=25V, V_{GS}=0
		-	-	0.5		V_{DS}=50V, V_{GS}=0
Forward Gate-Body Leakage Current	I_{GSSF}	-	-	10	μA	V_{GS}=20V
Reverse Gate-Body Leakage Current	I_{GSSR}	-	-	-10	μA	V_{GS}= -20V
On Characteristics [2]						
Gate-Threshold Voltage	$V_{GS(th)}$	0.5	-	1.5	V	V_{DS}=V_{GS}, I_D=1mA
Static Drain-Source On-Resistance	$R_{DS(ON)}$	-	5.6	10	Ω	V_{GS}=2.75V, I_D<200mA, T_A= -40℃ ~85℃
		-	-	3.5		V_{GS}=5V, I_D=200mA
Forward Transconductance	g_{fs}	100	-	-	mS	V_{DS}=25V, I_D=200mA, f=1KHz
Switch Characteristics						
Turn-on Delay Time	$T_{d(on)}$	-	3.8	-	nS	V_{DD}=30V V_{GEN}=10V R_G=25Ω R_L=60Ω I_D=500mA
Turn-off Delay Time	$T_{d(off)}$	-	19	-		
Dynamic Characteristics						
Input Capacitance	C_{iss}	-	22.8	-	pF	V_{GS}=0 V_{DS}=25V f=1MHz
Output Capacitance	C_{oss}	-	3.5	-		
Reverse Transfer Capacitance	C_{rss}	-	2.9	-		

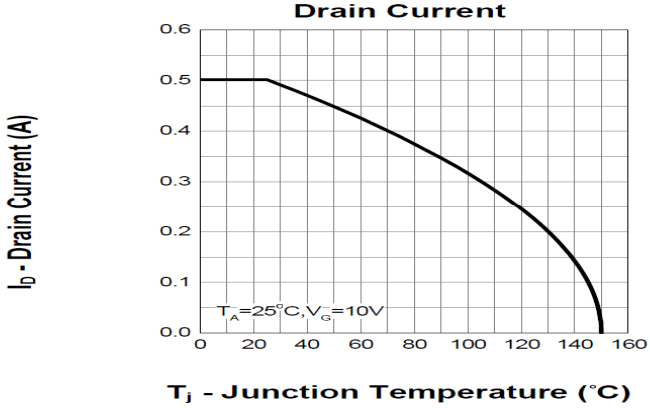
Notes:
1. On a 1×0.75×0.062 inch FR4-board.
2. Pulse Test: Pulse width≦300 μs, duty cycle≦2%.

CHARACTERISTIC CURVE

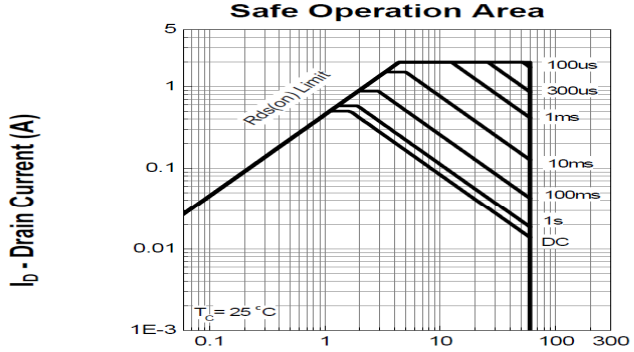
Power Dissipation



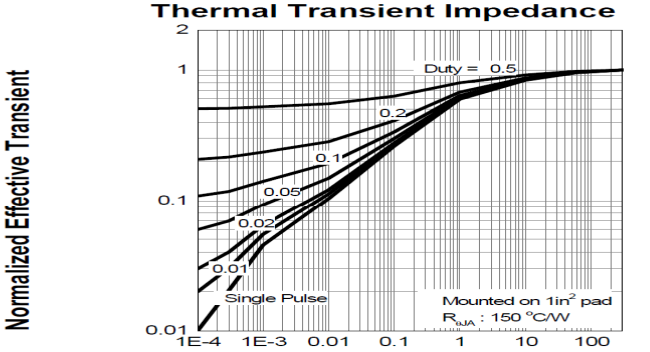
Drain Current



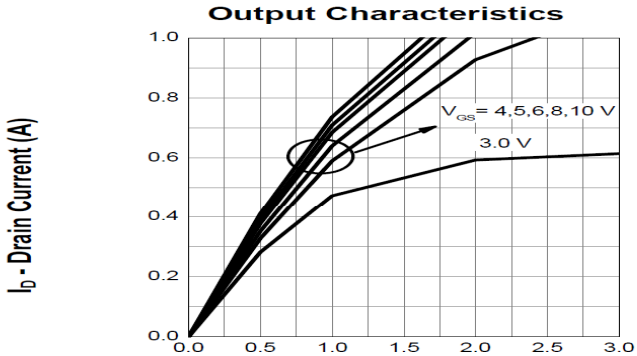
Safe Operation Area



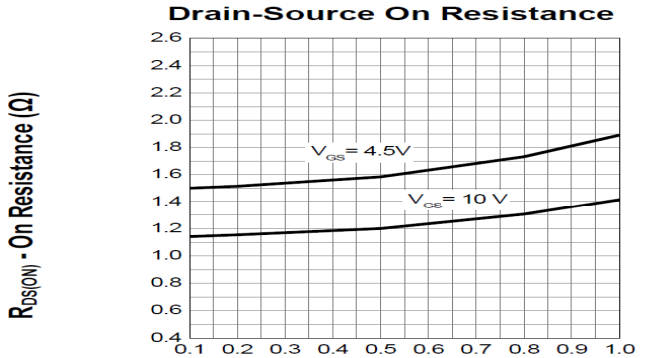
Thermal Transient Impedance



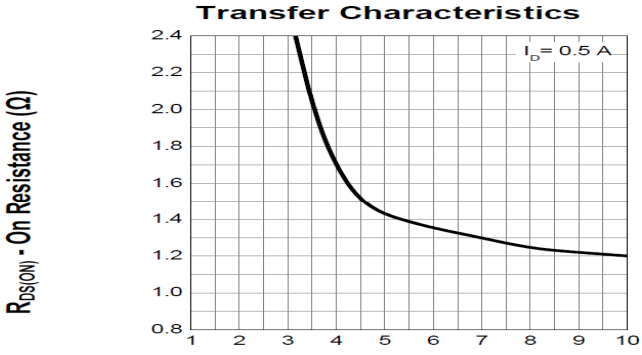
Output Characteristics



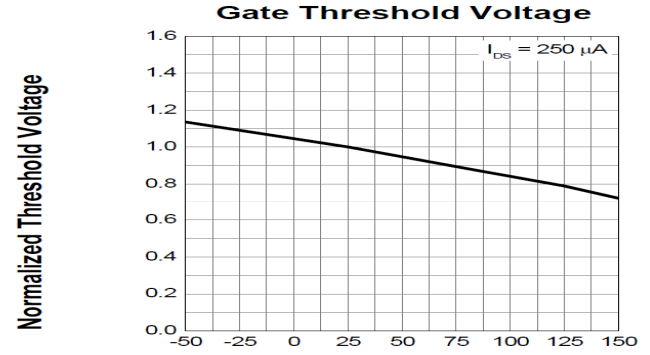
Drain-Source On Resistance



Transfer Characteristics



Gate Threshold Voltage



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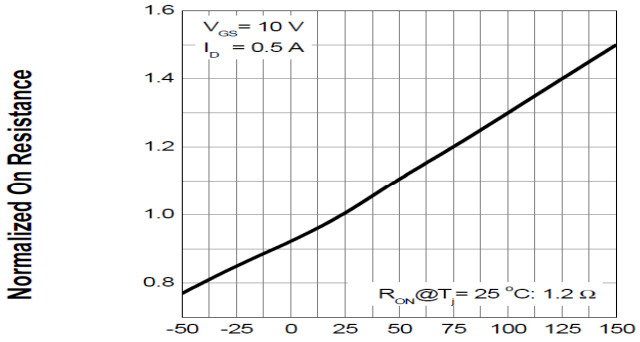
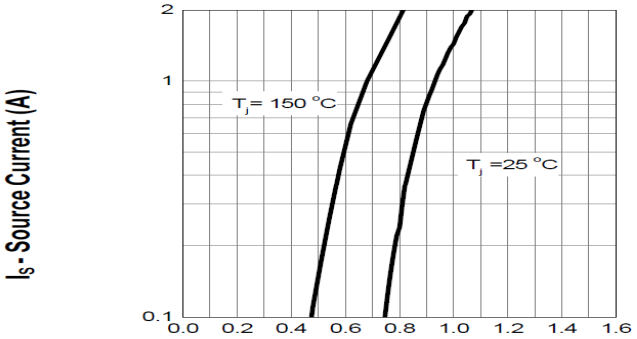
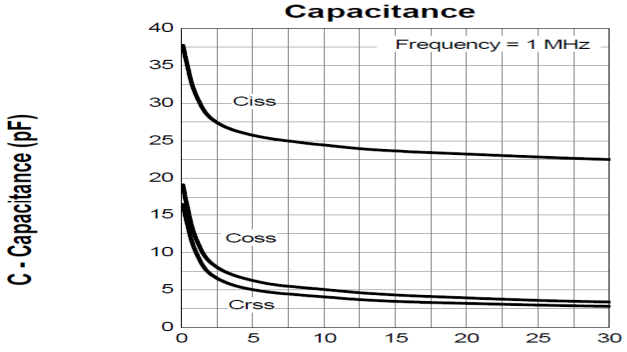


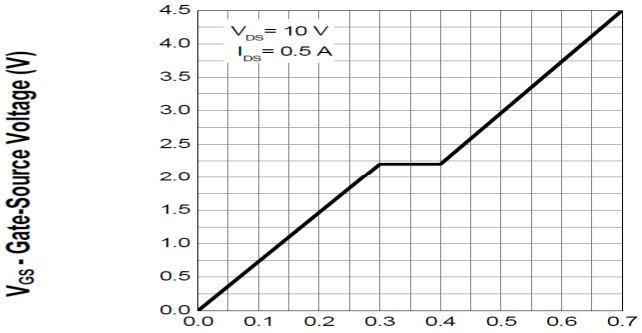
Source-Drain Diode Forward



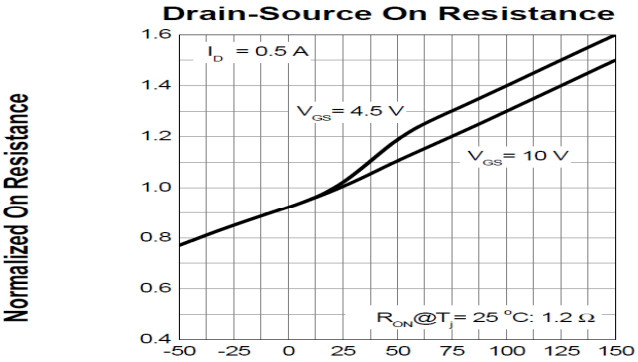
Capacitance



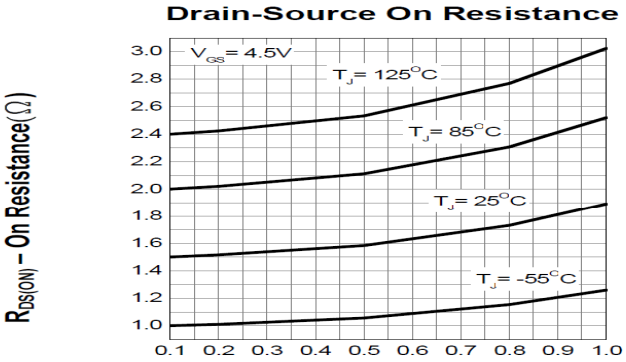
Gate Charge



Drain-Source On Resistance



Drain-Source On Resistance



Drain-Source On Resistance