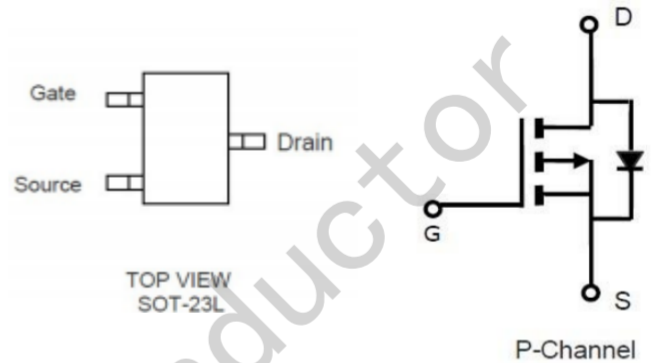


FEATURE

- ◆ -30V/-5.6A, $R_{DS(ON)}=37m\Omega(\text{typ.})@V_{GS}=-10V$
- ◆ -30V/-4.3A, $R_{DS(ON)}=52m\Omega(\text{typ.})@V_{GS}=-4.5V$
- ◆ Super high design for extremely low $R_{DS(ON)}$
- ◆ Exceptional on-resistance and Maximum DC current capability
- ◆ Full RoHS compliance
- ◆ SOT23-3L package design



DESCRIPTION

The JSM2321A is the P-Channel logic enhancement mode power field effect transistor is produced using high cell density advanced trench technology to provide excellent $R_{DS(ON)}$.

This device is suitable for use as a load switch or in PWM and gate charge for most of the synchronous buck converter applications.

APPLICATIONS

- ◆ High Frequency Point-of-load Synchronous
- ◆ Buck Converter for MB/NB/UMPC/VGA
- ◆ DC/DC Converter
- ◆ Load Switch

ABSOLUTE MAXIMUM RATINGS (T_A= 25 °C Unless otherwise noted)

Symbol	Parameter		Typical	Unit
V _{DSS}	Drain-Source Voltage		-30	V
V _{GSS}	Gate-Source Voltage		±20	V
I _D	Continuous Drain Current (T _C =25℃)	V _{GS} =-10V	-5.6	A
	Continuous Drain Current (T _C =70℃)		-5.0	
I _{DM}	Pulsed Drain Current		-20	A
I _S	Continuous Source Current (Diode Conduction)		-1.4	A
P _D	Power Dissipation	T _A =25℃	1.4	W
		T _A =70℃	0.9	
T _J	Operation Junction Temperature		150	℃
T _{STG}	Storage Temperature Range		-55~+150	℃
R _{θJA}	Thermal Resistance Junction to Ambient		120	℃/W

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress rating only and functional device operation is not implied

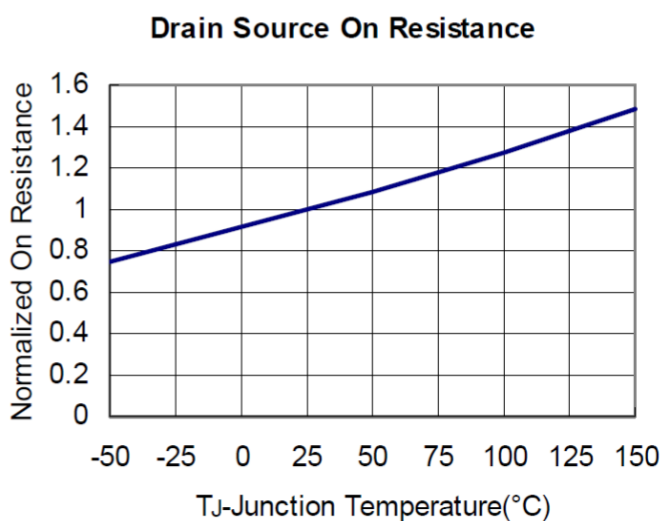
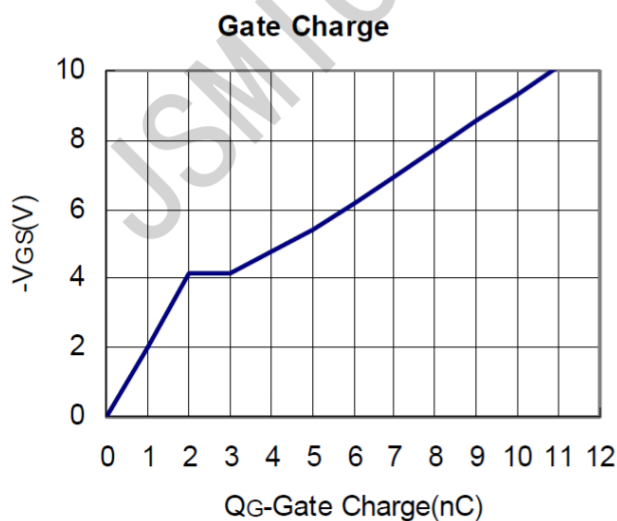
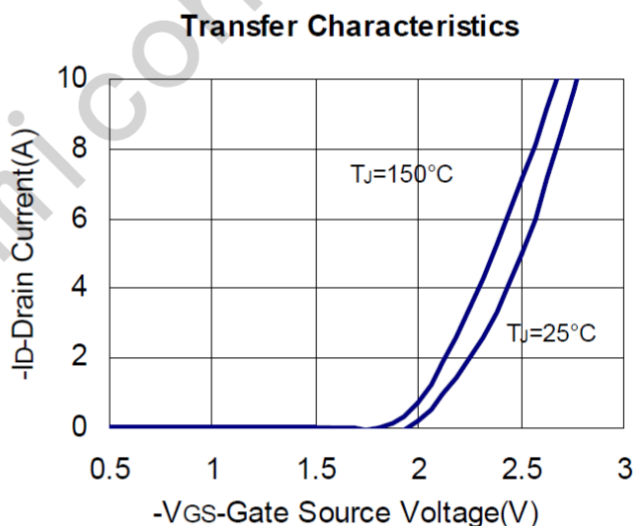
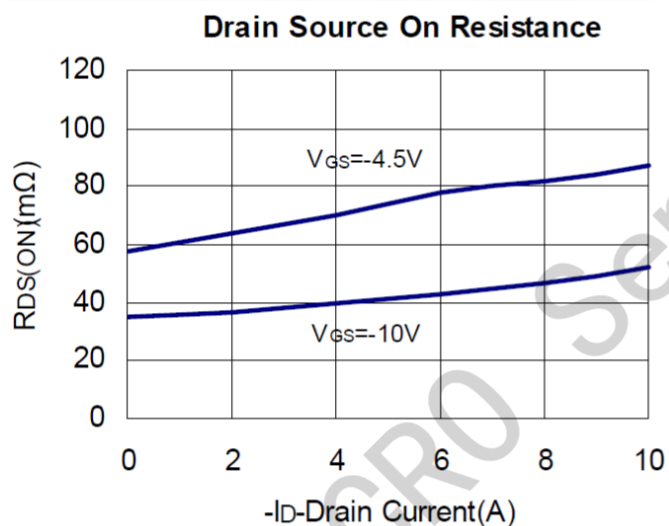
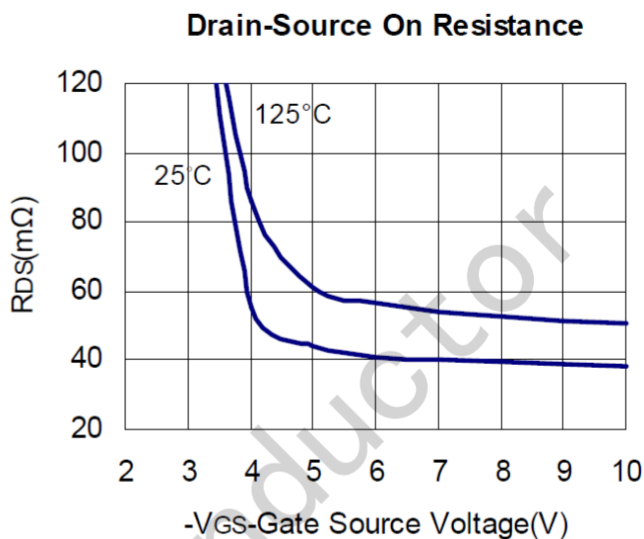
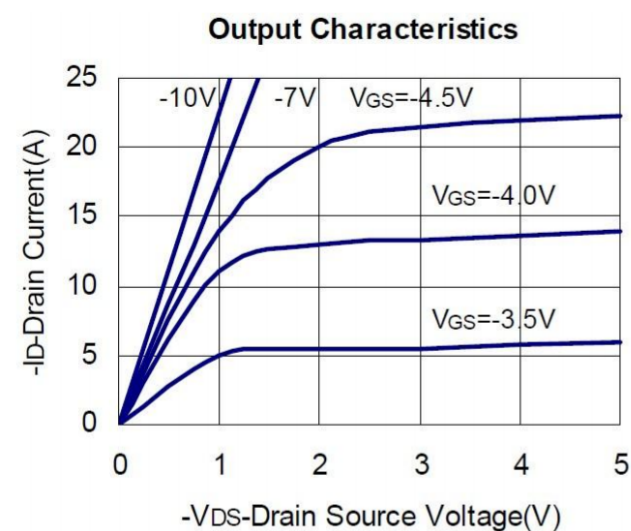
ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

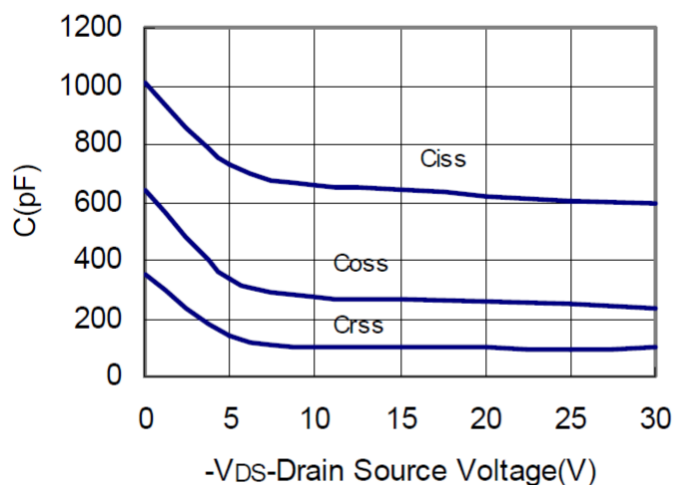
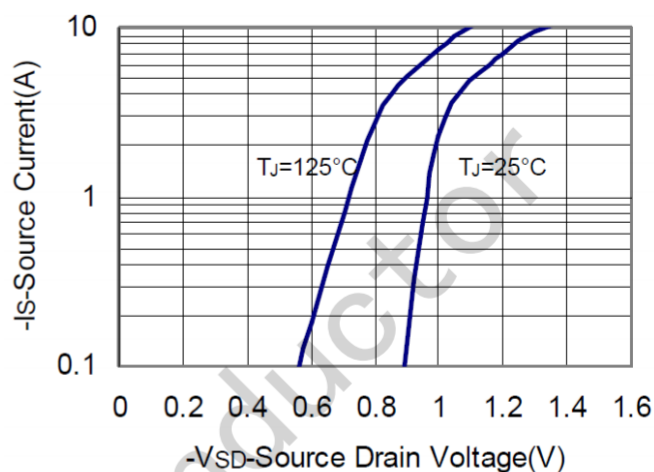
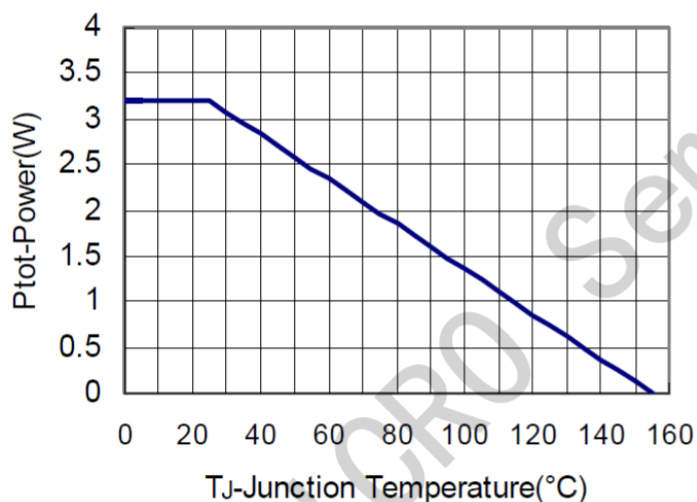
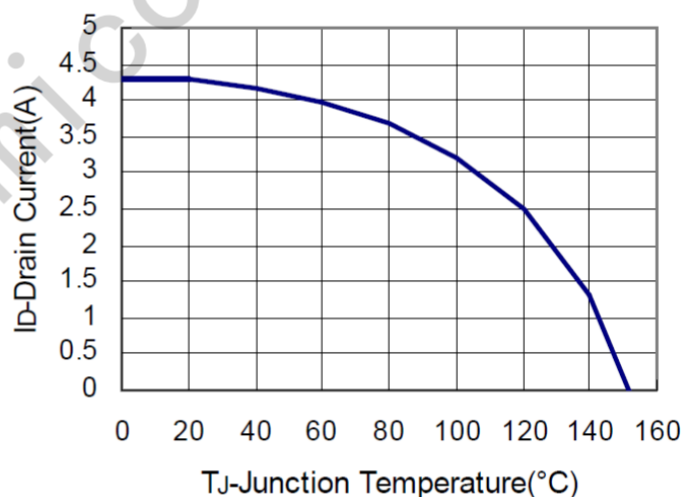
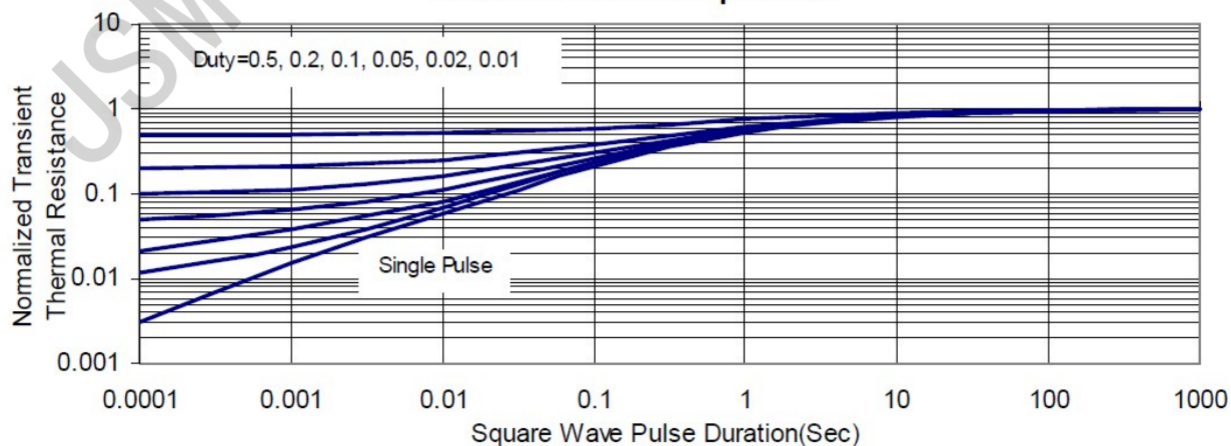
Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Parameters						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250Ua	-30			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250uA	-1.0		-2.0	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} =±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-24V, V _{GS} =0			-1	uA
		V _{DS} =-24V, V _{GS} =0 T _J =55℃			-5	
R _{DS(ON)}	Drain-Source On-Resistance	V _{GS} =-10V, I _D =-5.6A		37	50	mΩ
		V _{GS} =-4.5V, I _D =-4.3A		52	75	
Source-Drain Diode						
V _{SD}	Diode Forward Voltage	I _S =-1.0A, V _{GS} =0V		-0.7	-1.0	V
Dynamic Parameters						
Q _g	Total Gate Charge	V _{DS} =-20V V _{GS} =-4.5V I _D =-4.0A		6		nC
Q _{gs}	Gate-Source Charge			2.7		
Q _{gd}	Gate-Drain Charge			3.1		
C _{iss}	Input Capacitance	V _{DS} =-25V V _{GS} =0V f=1MHz		645		pF
C _{oss}	Output Capacitance			272		
C _{rss}	Reverse Transfer Capacitance			105		
T _{d(on)}	Turn-On Time	V _{DS} =-12V I _D =-4A		9		nS
T _r				16.5		
T _{d(off)}	Turn-Off Time	V _{GEN} =-10V R _G =3.3Ω		22		
T _f				21		

Note: 1. Pulse test: pulse width≤300uS, duty cycle≤2%

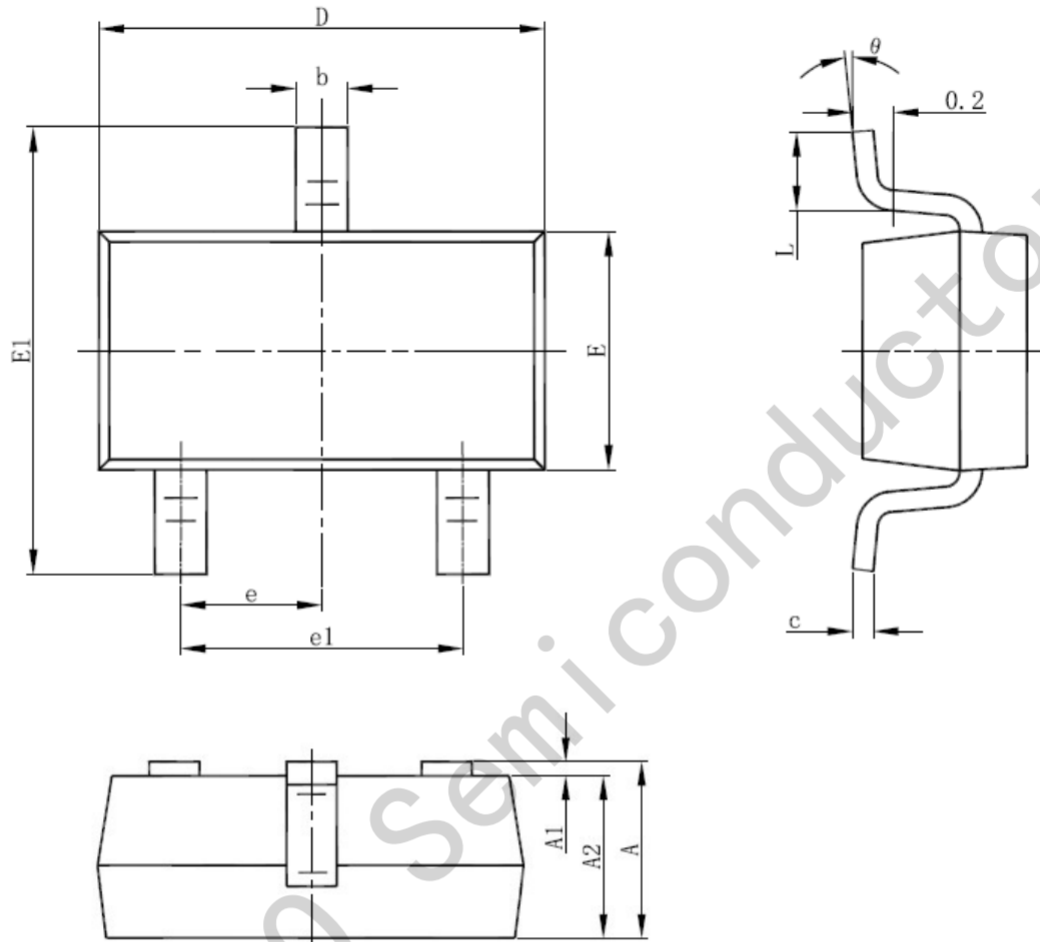
2.Static parameters are based on package level with recommended wire bonding

TYPICAL CHARACTERISTICS (25°C Unless Note)



TYPICAL CHARACTERISTICS (continuous)
Capacitance

Source Drain Diode Forward

Power Dissipation

Drain Current

Thermal Transient Impedance


SOT23-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

[>>JSMSEMI\(杰盛微\)](#)