



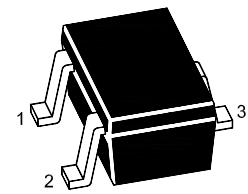
# PJM3018NSI

## N-Channel Enhancement Mode Power MOSFET

### Features

- Fast switching speed
- Low voltage drive makes this device ideal for Portable equipment
- Easily designed drive circuits
- $V_{DS} = 30V, I_D = 0.1A$
- $R_{DS(on)} < 8\Omega @ V_{GS} = 4V$

SOT-323



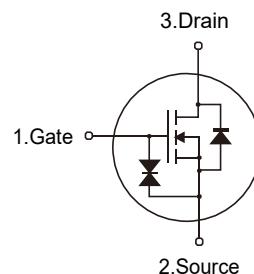
1. Gate 2. Source 3. Drain

**Marking Code:KN**

### Applications

- Interfacing , Switching

**Schematic Diagram**



### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Drain Current-Continuous	$I_D$	0.1	A
Maximum Power Dissipation	$P_D$	0.2	W
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C

### Thermal Characteristics

Thermal Resistance,Junction-to-Ambient <sup>Note2</sup>	$R_{\theta JA}$	625	°C/W
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## Electrical Characteristics

(Ta=25°C unless otherwise specified)

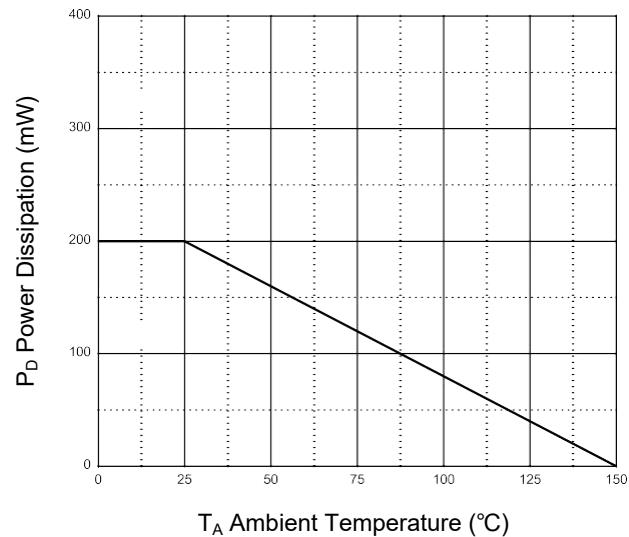
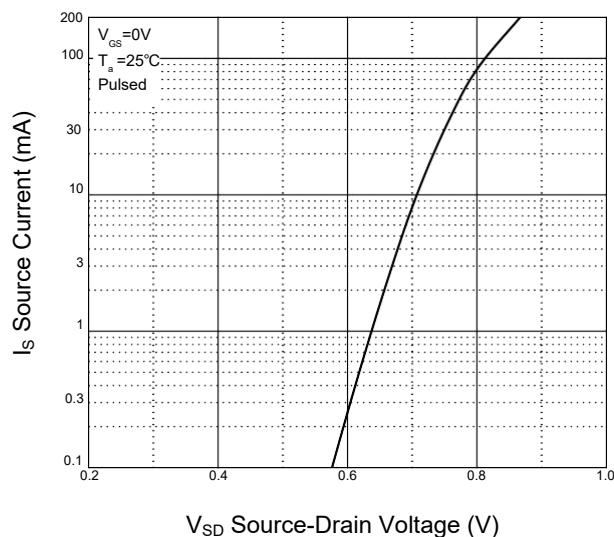
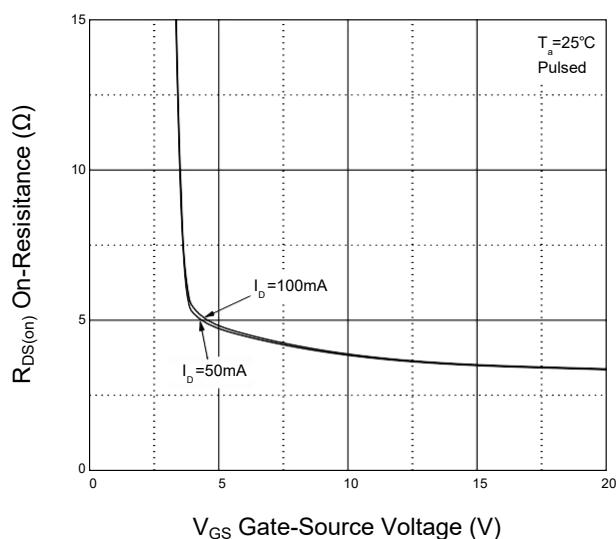
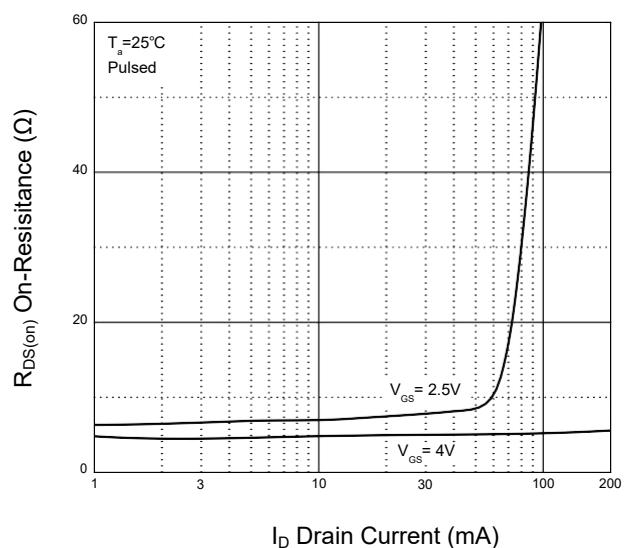
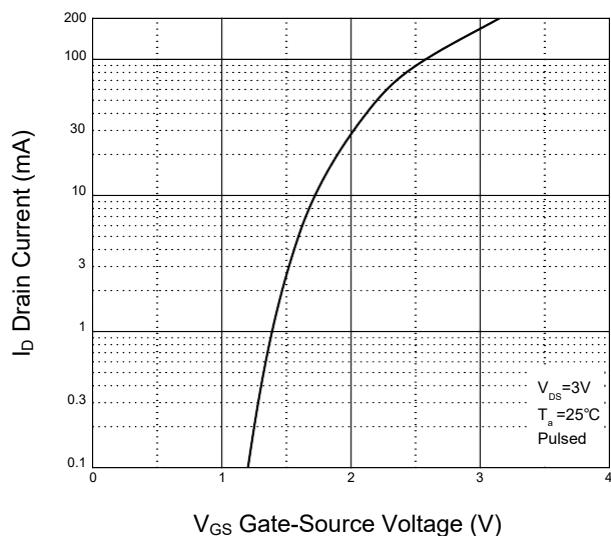
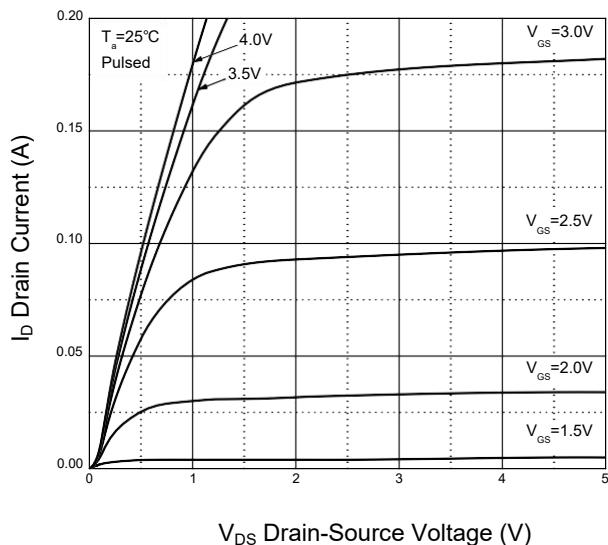
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =10μA	30	--	--	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =30V, V <sub>GS</sub> =0V	--	--	0.2	μA
Gate-Body Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V	--	--	±2	μA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =3V, I <sub>D</sub> =100μA	0.8	--	1.5	V
Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =4V, I <sub>D</sub> =10mA	--	--	8	Ω
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =1mA	--	--	13	Ω
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =3V, I <sub>D</sub> =10mA	20	--	--	mS
<b>Dynamic Characteristics</b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz	--	13	--	pF
Output Capacitance	C <sub>oss</sub>		--	9	--	pF
Reverse Transfer Capacitance	C <sub>rss</sub>		--	4	--	pF
<b>Switching Characteristics</b>						
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> =5V, I <sub>D</sub> =10mA V <sub>GS</sub> =5V, R <sub>G</sub> =10Ω, R <sub>L</sub> =500Ω	--	15	--	nS
Turn-on Rise Time	t <sub>r</sub>		--	35	--	nS
Turn-off Delay Time	t <sub>d(off)</sub>		--	80	--	nS
Turn-off Fall Time	t <sub>f</sub>		--	80	--	nS



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## Typical Characteristic Curves

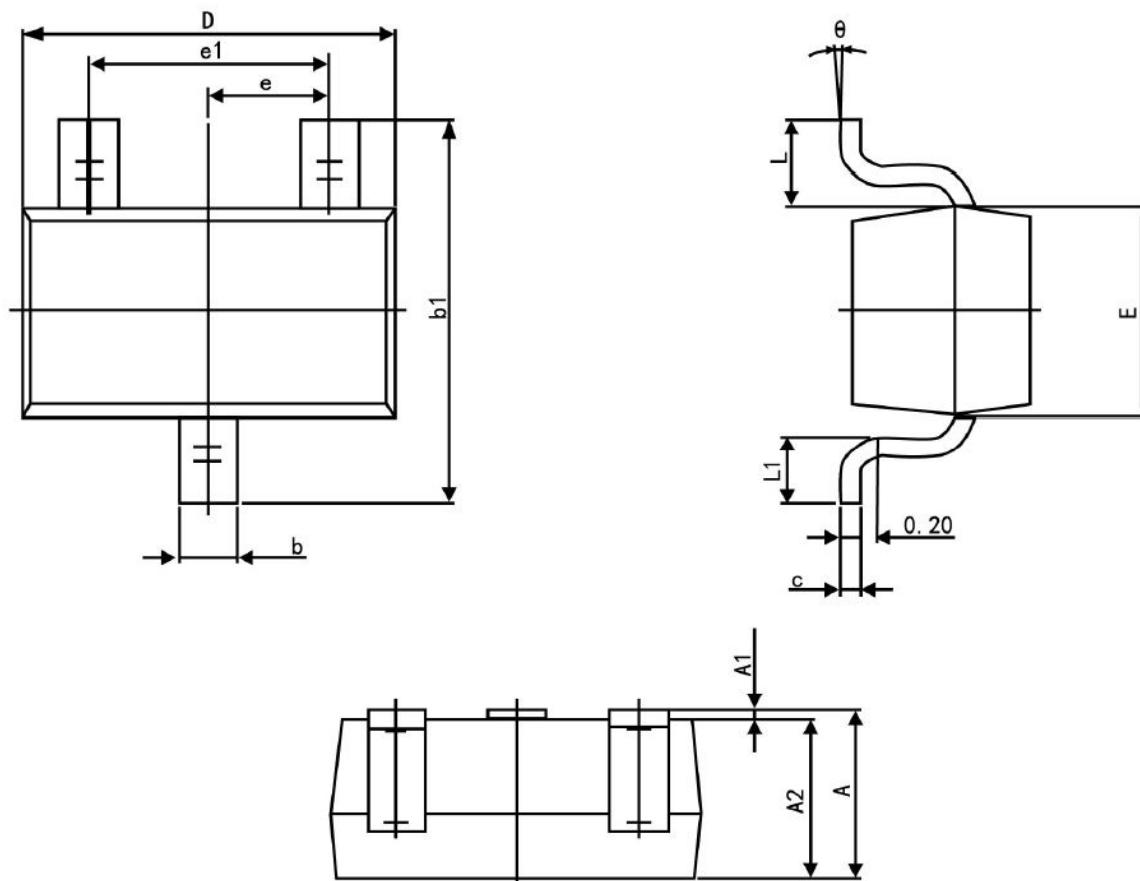




## Package Outline

SOT-323

Dimensions in mm



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.200	0.400
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°