



# PJM7002NSA

## N-Enhancement Field Effect Transistor

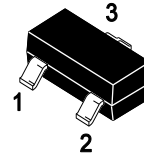
### Features

- High density cell design for low  $R_{DS(ON)}$
- Voltage controlled small signal switching
- High saturation current capability
- High speed switching

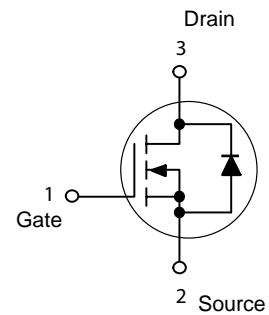
### Application

- PWM applications
- Load switch
- Power management

SOT-23



### Schematic diagram



### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	115	mA
Pulsed Drain Current	$I_{DM}$	800	mA
Total Power Dissipation	$P_D$	200	mW
Operating Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	- 55 to + 150	°C



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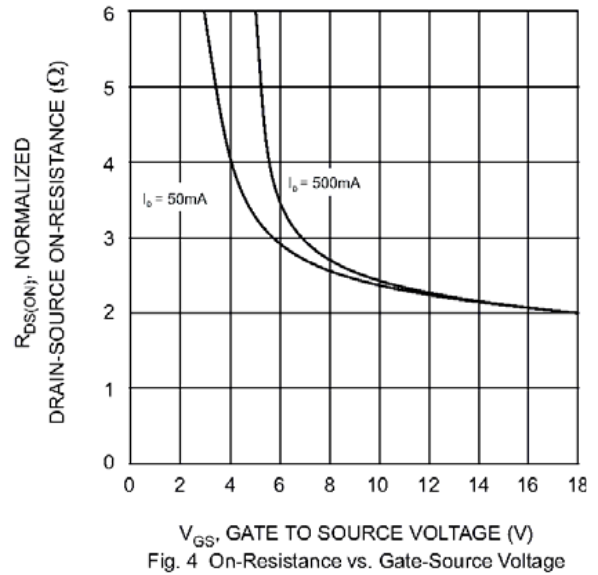
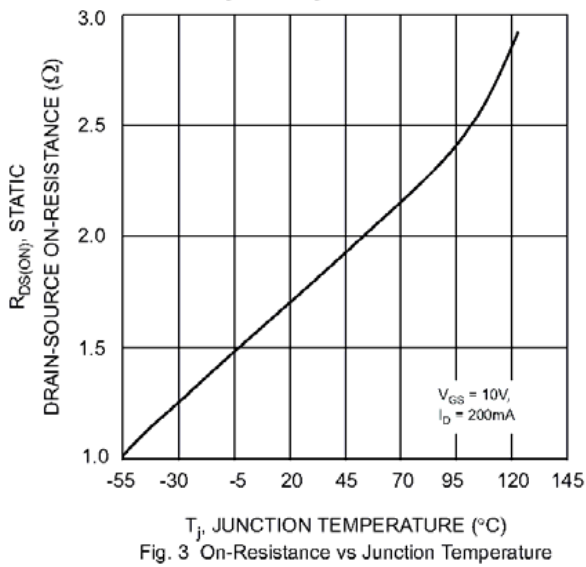
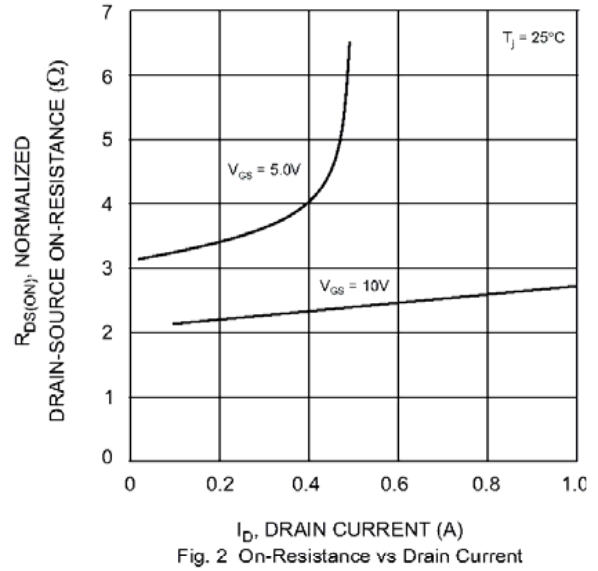
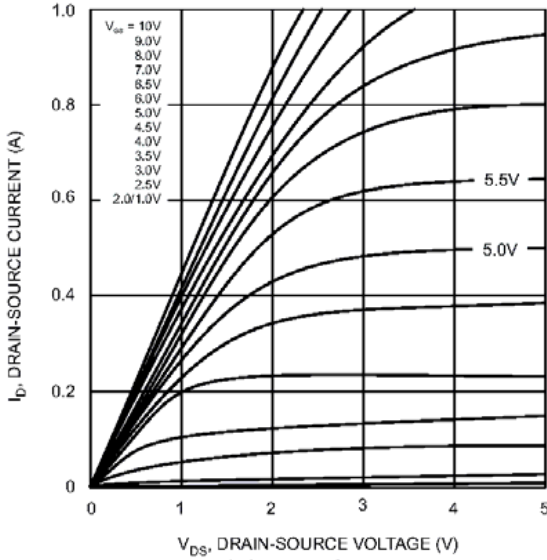
### Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DS}$	$V_{GS} = 0\text{ V}, I_D = 10\mu\text{A}$	60	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 60\text{ V}, V_{GS} = 0\text{V}$	-	-	1	$\mu\text{A}$
Gate-to-source Leakage Current	$I_{GSS}$	$V_{DS} = 0\text{ V}, V_{GS} = \pm 20\text{V}$	-	-	$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}, I_D = 250\mu\text{A}$	1	-	2.5	V
Drain-to-source On-resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}, I_D = 500\text{mA}$	-	-	7.5	$\Omega$
Forward Transconductance	$g_{FS}$	$V_{DS} = 10\text{V}, I_D = 200\text{mA}$	80	-	-	mS
Input Capacitance	$C_{iss}$	$V_{GS} = 0\text{ V}, f = 1.0\text{ MHz},$ $V_{DS} = 25\text{ V}$	-	-	50	pF
Output Capacitance	$C_{oss}$		-	-	25	
Reverse Transfer Capacitance	$C_{rss}$		-	-	5	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 30\text{V}, I_D = 200\text{mA},$ $R_G = 25\Omega, R_L = 150\Omega,$ $V_{GS} = 10\text{V},$	-	-	20	ns
Turn-Off Delay Time	$t_{d(off)}$		-	-	20	



### RATINGS AND CHARACTERISTIC CURVES



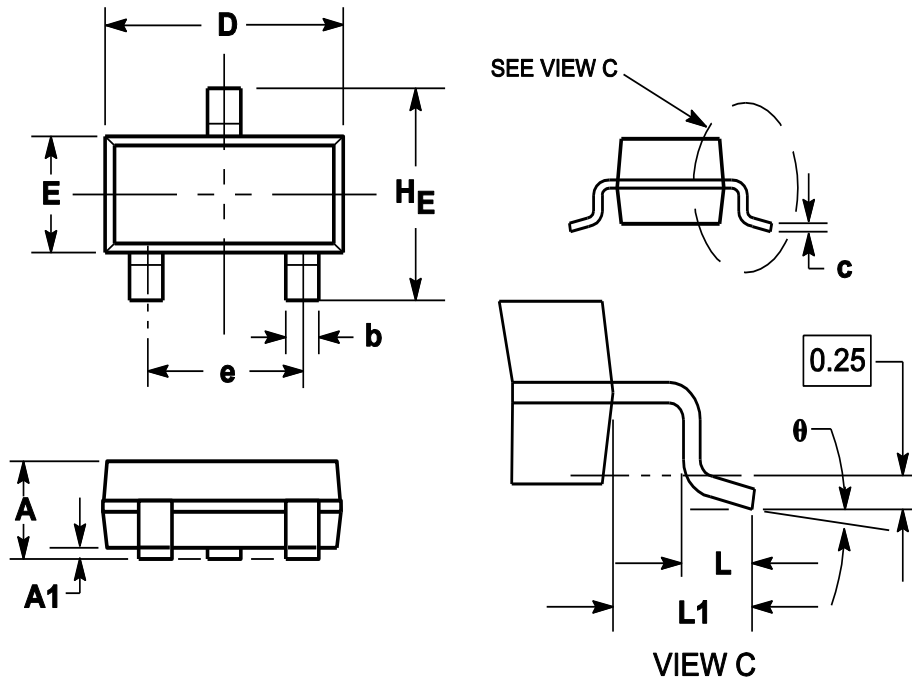


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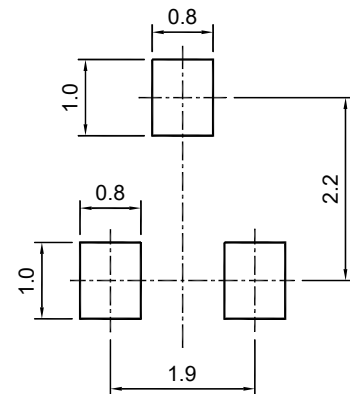
## N-Enhancement Field Effect Transistor

### Package Outline

SOT-23



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.050	0.100
b	0.300	0.400	0.500
c	0.080	0.115	0.150
D	2.800	2.900	3.000
E	1.200	1.300	1.400
HE	2.250	2.400	2.550
e	1.800	1.900	2.000
L1	0.550REF		
L	0.300		0.500
θ	0°		8°



**SOT-23**  
**Recommended soldering pad**

### Ordering Information

Device	Package	Reel Dimension (inch)	Shipping
PJM7002NSA	SOT-23	7	3,000