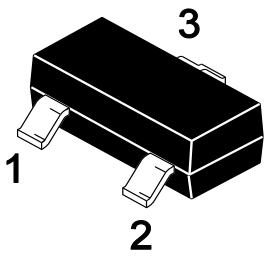
PJM3018NSA
N- Enhancement Mode Field Effect Transistor

Features

- Surface Mount Package
- Low $R_{DS(ON)}$
- ESD protected(HBM) up to 2KV

SOT-23

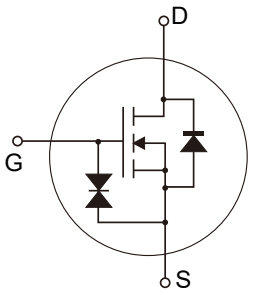


1.Gate 2.Source 3.Drain

Marking: 3018K

Applications

- Switching Application



Absolute Maximum Ratings

(T_C=25℃, unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current Note1	I_D	0.1	A
Power Dissipation	P_D	0.35	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C
Thermal Characteristics			
Parameter	**Symbol**	**Typ.**	**Units**
Maximum Junction-to-Ambient Note1	$R_{\theta JA}$	357	°C/W

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Electrical Characteristics

(T_A=25℃, unless otherwise noted)

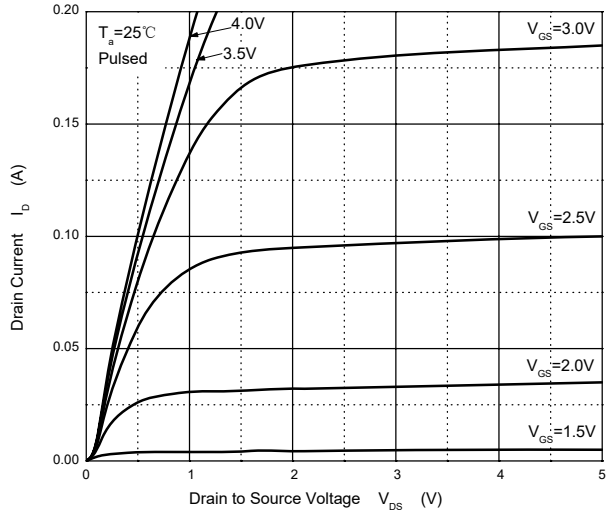
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Parameters						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 250μA	30	-	-	V
Gate Leakage Current	I_{GSS}	V_{DS} = 0V, V_{GS} = ±20V	-	-	±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =30V, V_{GS} = 0V	-	-	1	μA
Gate Threshold Voltage Note2	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250μA	1	-	2	V
Drain-Source On-Resistance Note2	$R_{DS(ON)}$	V_{GS} = 4.5V, I_D =10mA	-	-	8	Ω
		V_{GS} = 2.5V, I_D =1mA	-	-	13	Ω
Forward transconductance Note2	g_{fs}	V_{DS} = 3V, I_D =10mA	20	-	-	mS
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{DS}=5V, V_{GS}=0V, f=1MHz	-	13	-	pF
Output Capacitance	C_{oss}		-	9	-	
Reverse Transfer Capacitance	C_{rss}		-	4	-	
Switching Parameters						
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=5V, V_{GS}=5V R_G=10Ω, R_L=500Ω, I_D=10mA	-	15	-	ns
Turn-On Rise Time	t_r		-	35	-	
Turn-Off Delay Time	$t_{d(off)}$		-	80	-	
Turn-Off Fall Time	t_f		-	80	-	

Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Pulse Test: Pulse width≤300μs, duty cycle≤2%.

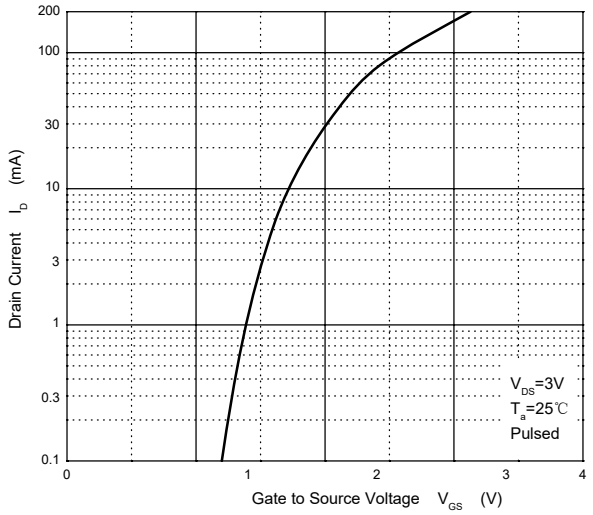
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Ratings And Characteristic Curves

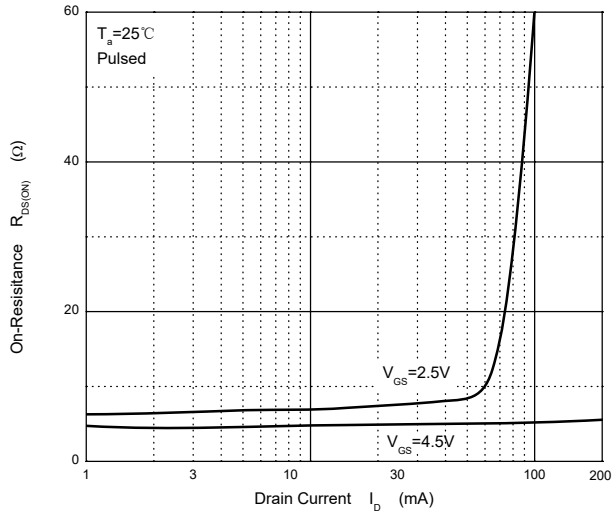
Output Characteristics



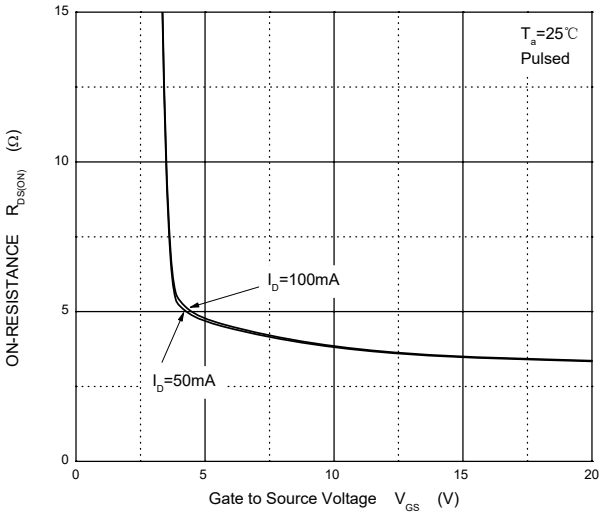
Transfer Characteristics



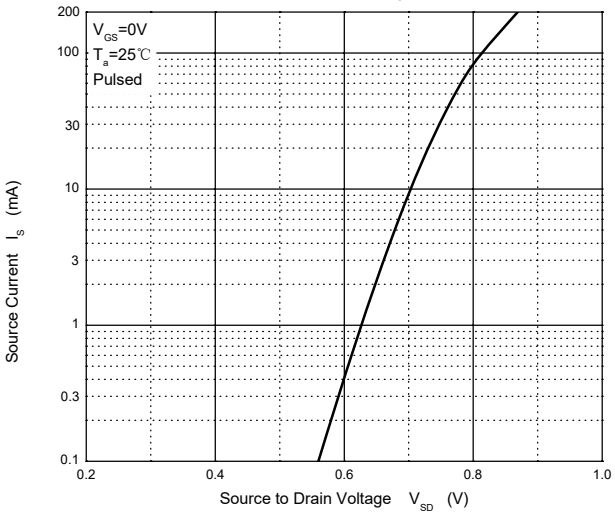
$R_{DS(ON)}$ —— I_D



$R_{DS(ON)}$ —— V_{GS}



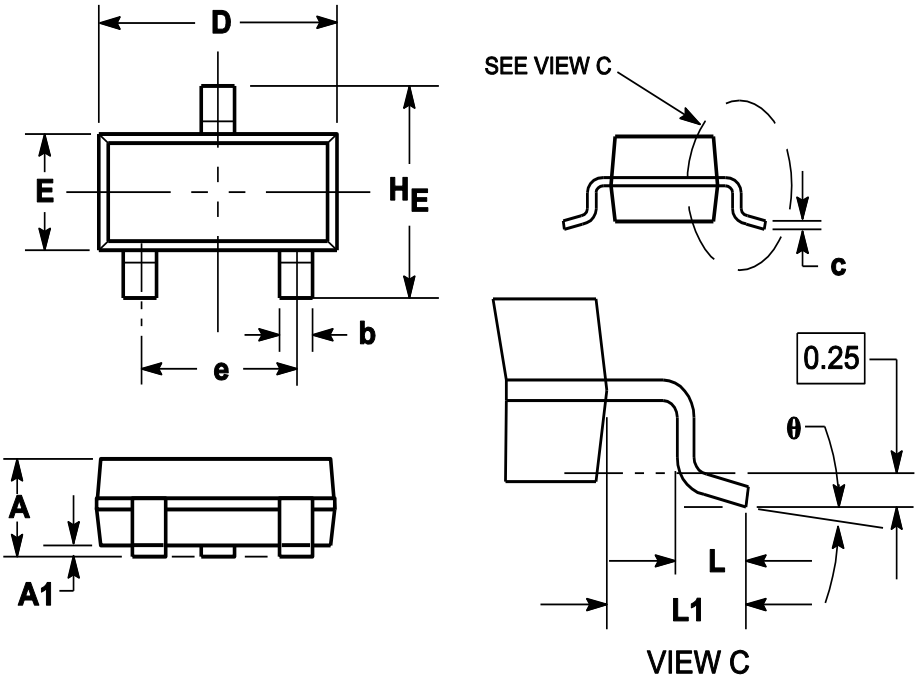
I_S —— V_{SD}



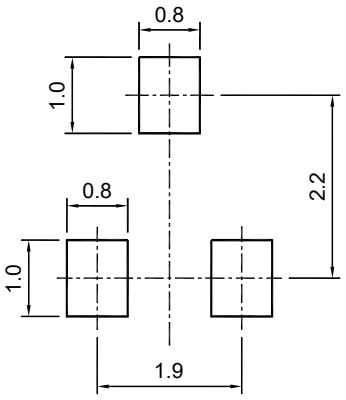
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Package Outline

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
H_E	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

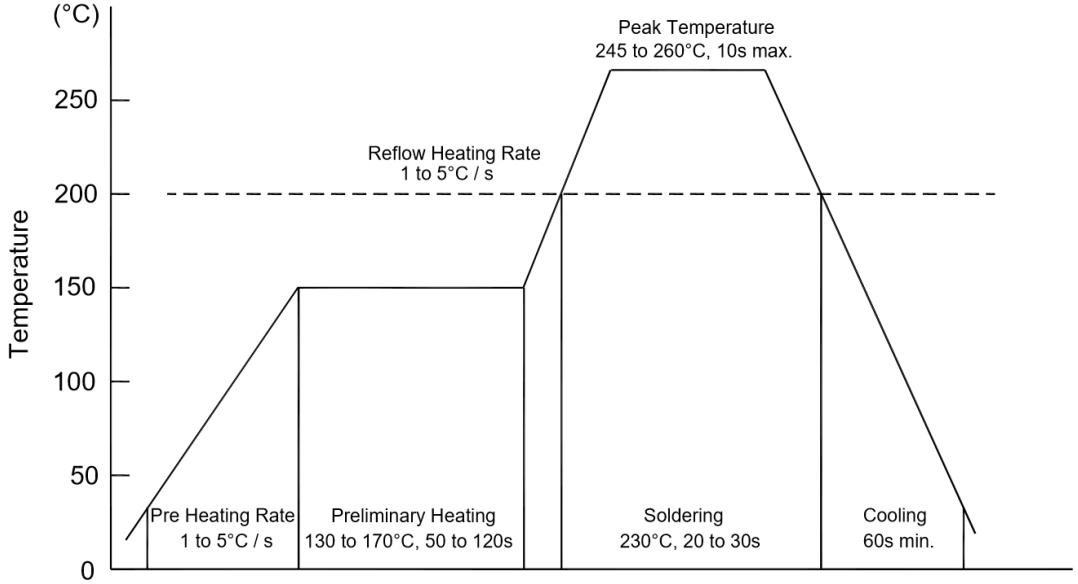
Ordering Information

Device	Package	Shipping
PJM3018NSA	SOT-23	3000/Reel&Tape(7inch)

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Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 ˚C. If peak temperature is below 245 ˚C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

- Temperature: 370 ˚C
- Time: 3s max.
- Times: one time

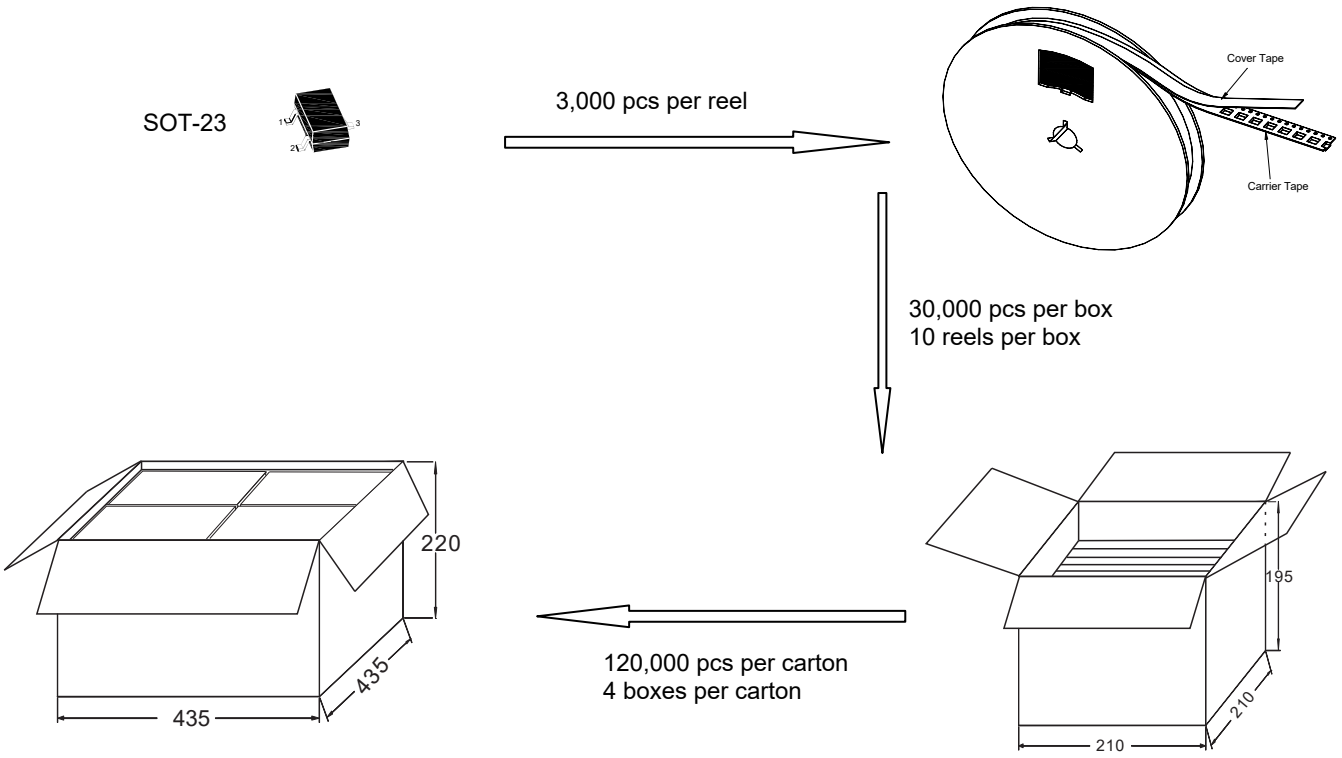
◆ Storage conditions

- **Temperature**
  5 to 40 ˚C
- **Humidity**
  30 to 80% RH
- **Recommended period**
  One year after manufacturing

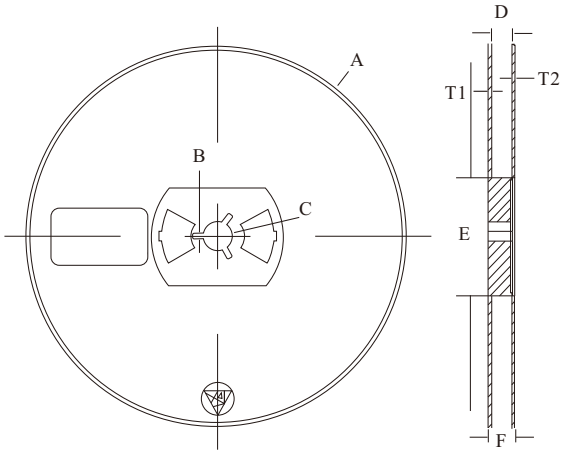
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Package Specifications

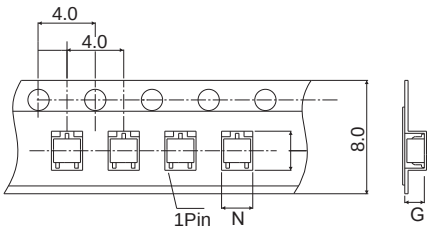
- The method of packaging



◆ **Embossed tape and reel data**



Reel (7")



Tape (8mm)

Symbol	Value (unit: mm)
A	Ø 177.8±1
B	2.7±0.2
C	Ø 13.5±0.2
E	Ø 54.5±0.2
F	12.3±0.3
D	9.6+2/-0.3
T1	1.0±0.2
T2	1.2±0.2
N	3.15±0.1
G	1.25±0.1

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