



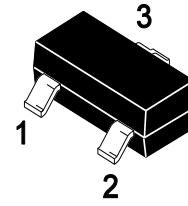
PJM2321PSA

P-Channel Power MOSFET

Features

- $V_{DS} = -20V$ $I_D = -2.9A$
- $R_{DS(ON)} = 57m\Omega(max)$ @ -4.5V

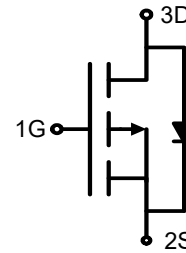
SOT-23



Marking: S21

Application

- Load switch and in PWM applications
- Power management



Absolute Maximum Ratings ($T_a = 25^\circ C$ unless otherwise specified)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-to-Source Voltage	-20	V
V_{GS}	Gate-to-Source Voltage	± 12	V
I_D	Continuous Drain Current	-2.9	A
	Pulsed Drain Current	-12	A
I_S	Continuous Source-Drain Diode Current	-0.59	A
P_D	Power Dissipation	1.4	W
T_J, T_{STG}	Operating Junction and Storage Temperature Range	150, -55 to 150	$^\circ C$

Symbol	Parameter	Typ	Unit
$R_{\theta JA}$	Junction-to-Ambient	89	$^\circ C/W$

Note: 1. Repetitive rating; pulse width limited by maximum junction temperature



Electrical Characteristics (Ta=25°C unless otherwise specified)

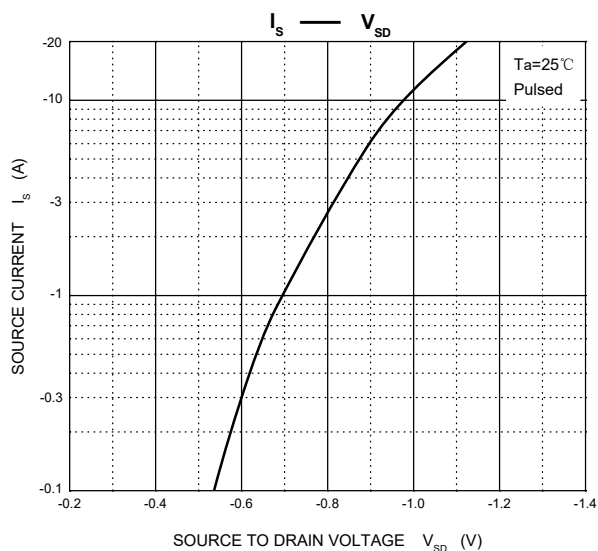
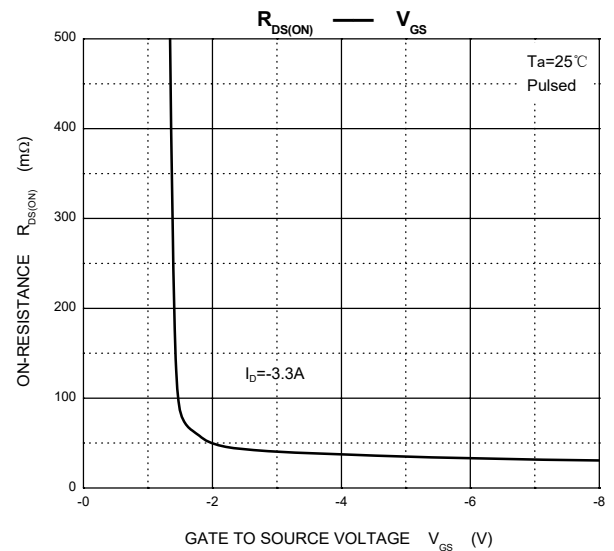
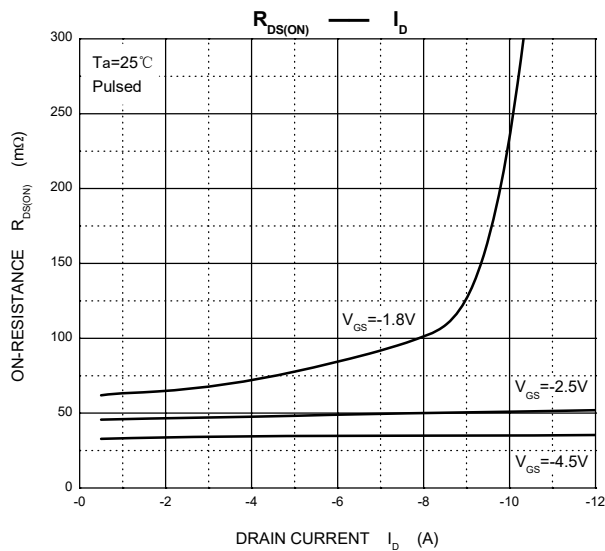
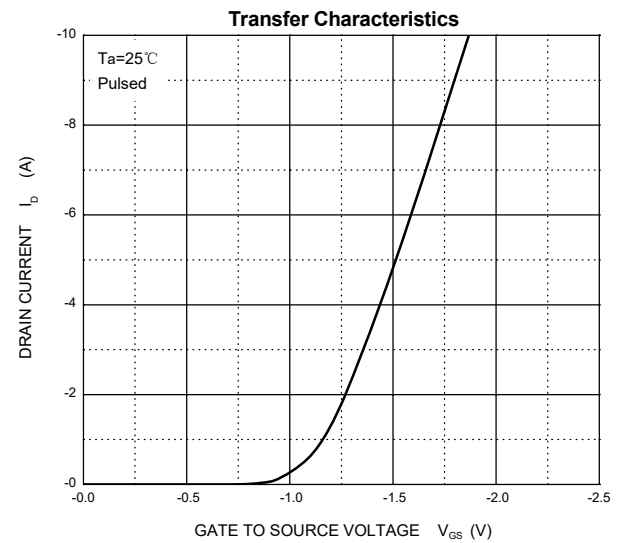
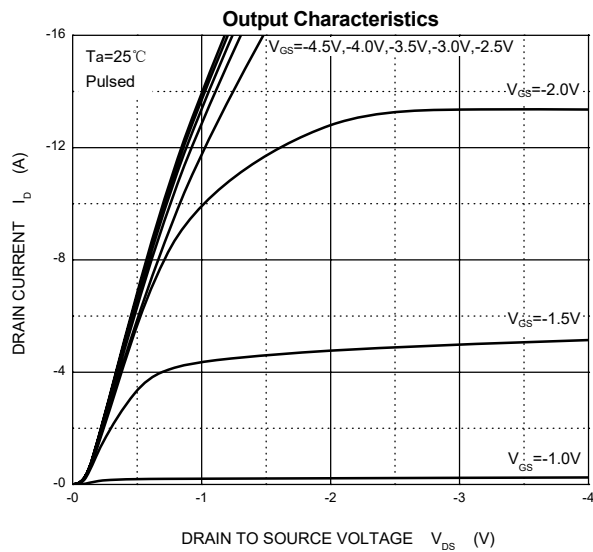
Parameter	Symbol	Test Condition	Min	Type	Max	Units
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =-250μA	-20			V
Drain to Source Leakage Current	I _{DSS}	V _{DS} =-16V,V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±12V, V _{DS} = 0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.4		-0.9	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-3.3A			57	mΩ
Drain-source on-resistance	R _{DS(on)}	V _{GS} =-2.5V, I _D =-2.8A			76	mΩ
Drain-source on-resistance	R _{DS(on)}	V _{GS} =-1.8V, I _D =-2.3A			100	mΩ
Forward tranconductance	g _{FS}	V _{DS} =-5V, I _D =-3.3A	3			S
Dynamic characteristics ^(1.2)						
Input Capacitance	C _{iss}	V _{DS} =-6V,V _{GS} =0V,f=1MHz		715		pF
Output Capacitance	C _{oss}			170		
Reverse Transfer Capacitance	C _{rss}			120		
Switching Characteristics						
Turn-on delay time ^(1.2)	t _{d(on)}	I _D =-1A, V _{DD} =-6V, V _{GS} =-4.5V, R _{GEN} =1Ω, R _L =6Ω,			25	ns
Turn-on rise time ^(1.2)	t _r				55	
Turn-off delay time ^(1.2)	t _{d(off)}				90	
Turn-off fall time ^(1.2)	t _f				60	
Total gate charge ⁽¹⁾	Q _g	V _{DD} =-6V,V _{GS} =-4.5V,I _D =-4.3A			13	nC
Gate-source charge ⁽¹⁾	Q _{gs}			1.2		
Gate-drain charge ⁽¹⁾	Q _{gd}			1.6		
Source-Drain Diode characteristics						
Diode Forward voltage	V _{DS}	V _{GS} =0V, I _S =-1.6A			1.2	V

Notes: 1. Pulse test ; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

2. These parameters have no way to verify.



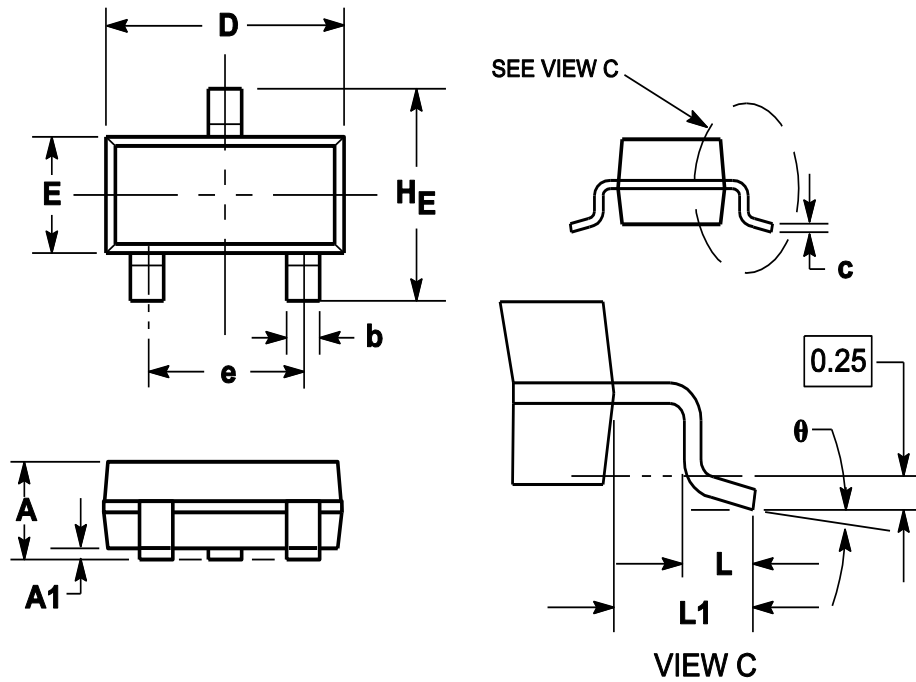
Typical Characteristic Curves



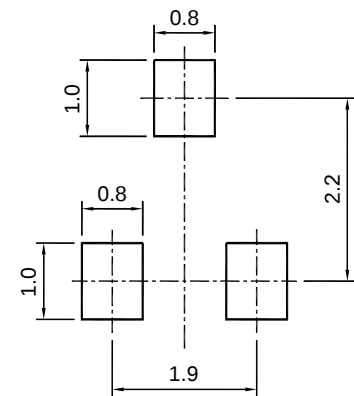


Package Outline

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 (TO-236)

Recommended soldering pad

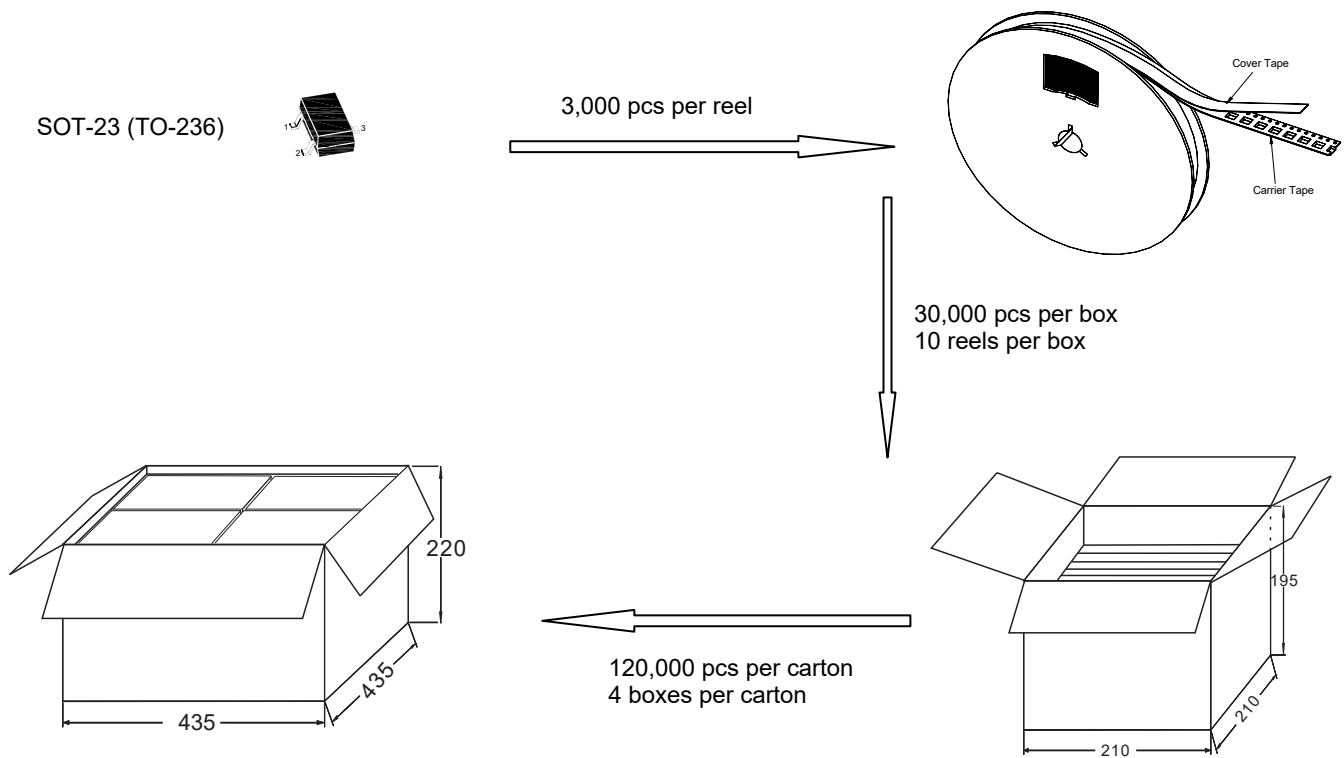
Ordering Information

Device	Package	Shipping
PJM2321PSA	SOT-23	3000PCS/Reel&Tape

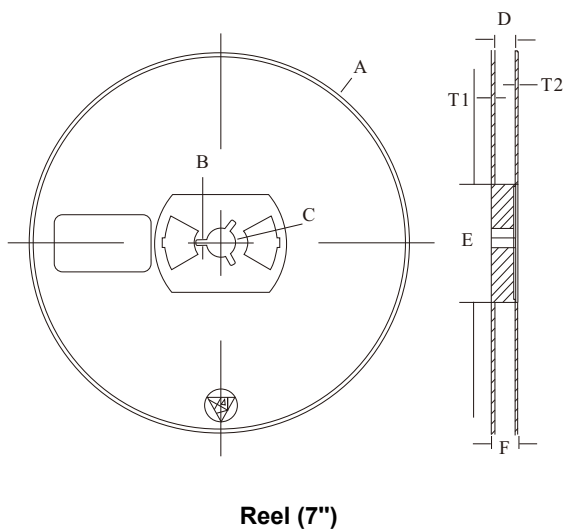


Package Specifications

- The method of packaging



◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	$\varnothing 177.8 \pm 1$
B	2.7 ± 0.2
C	$\varnothing 13.5 \pm 0.2$
E	$\varnothing 54.5 \pm 0.2$
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