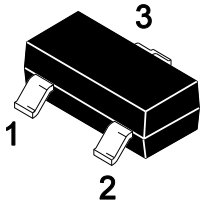
PJM2307PSA

P- Enhancement Mode Field Effect Transistor

SOT-23



1. Gate 2.Source 3.Drain

Marking: R7

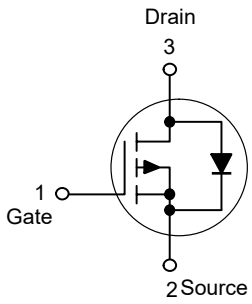
Features

- V_{DS} = -30V,I_D = -2.7A
  $R_{DS(ON)}$ = 110mΩ (Typ.) @ V_{GS}=-4.5V
  $R_{DS(ON)}$ = 73mΩ (Typ.) @ V_{GS}=-10V
- Low gate charge and $R_{DS(ON)}$
- Low reverse transfer capacitances

Application

- Load switch and in PWM applicatopns
- Power management

Schematic Diagram



Absolute Maximum Ratings

Ratings at T_C =25°C unless otherwise specified.

Parameter	Symbol	Value	Units
Drain-Source Voltage	$-V_{DS}$	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	$-I_D$	2.7	A
Power Dissipation	P_D	0.9	W
Junction and Storage Temperature Range	T_J, T_{STG}	150, -55 to 150	°C
Thermal Characteristics			
Parameter	**Symbol**	**Typ.**	**Units**
Maximum Junction-to-Ambient Note1	$R_{\theta JA}$	139	°C/W

Electrical Characteristics

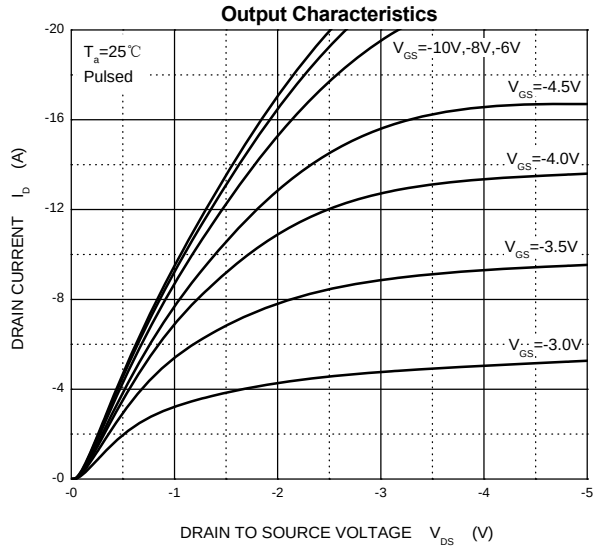
T_A=25℃ unless otherwise noted

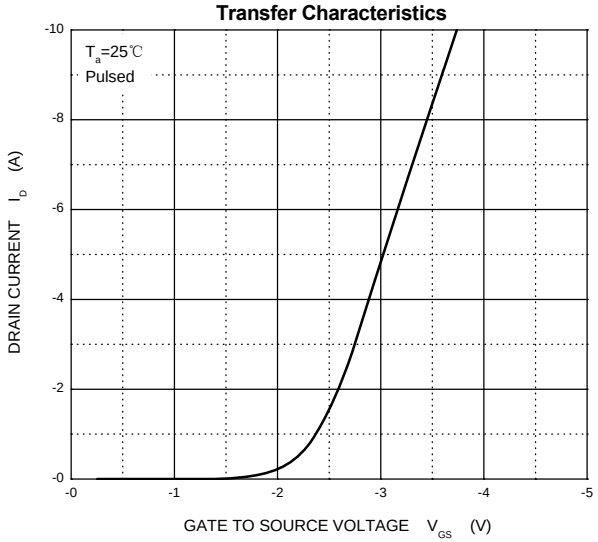
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$-V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	30			V
Gate-Source Leakage	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	$-I_{DSS}$	V_{DS} =-30V, V_{GS} =0V			1	μA
Gate threshold voltage Note2	$-V_{GS(th)}$	V_{DS} =V_{GS}, I_D = -250μA	1		3	V
Drain-Source On-State Resistance Note2	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-2.5A		110	138	mΩ
		V_{GS} =-10V, I_D =-3.5A		73	88	
Forward Transconductance Note2	g_{fs}	V_{DS} =-10V, I_D =-3.5A		7		S
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V,f =1MHz		340		pF
Output Capacitance	C_{oss}			67		
Reverse Transfer Capacitance	C_{rss}			51		
Switching Characteristics						
Total Gate Charge	Q_g	V_{DS} =-15V,V_{GS} =-4.5V, I_D =-2.5A		4.1	6.2	nC
Gate-Source Charge	Q_{gs}			1.3		
Gate-Drain Charge	Q_{gd}			1.8		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=-15V, R_L=15Ω, I_D =-1A, V_{GEN}=-4.5V,Rg=1Ω		40	60	ns
Rise Time	t_r			40	60	
Turn-Off Delay Time	$t_{d(off)}$			20	40	
Fall Time	t_f			17	30	
Source-Drain Diode characteristics						
Body Diode Voltage	$-V_{SD}$	I_S=-0.75A, ,V_{GS} =0		0.8	1.2	V

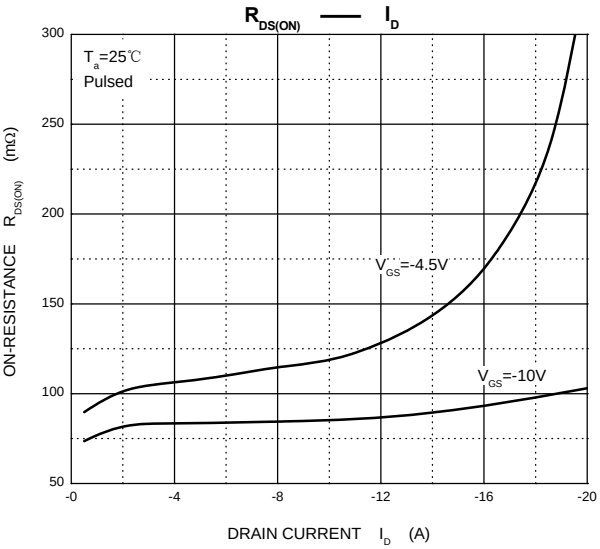
Notes:

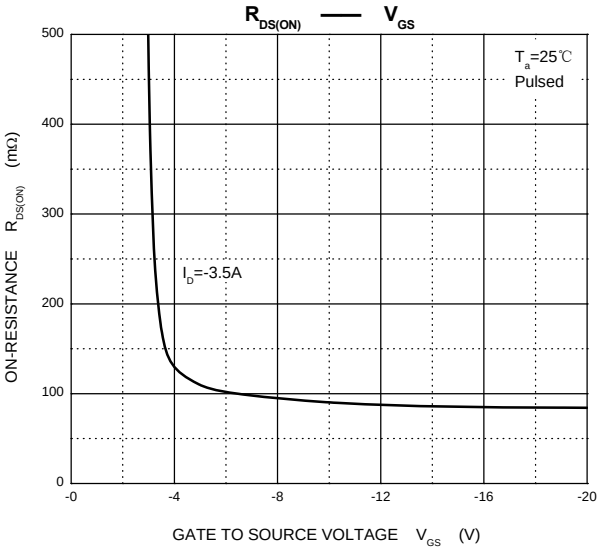
1. Surface mounted on FR4 board，t ≤ 10 sec.
2. Pulse Test :pulse width < 300μs, duty cycle ≤2%.

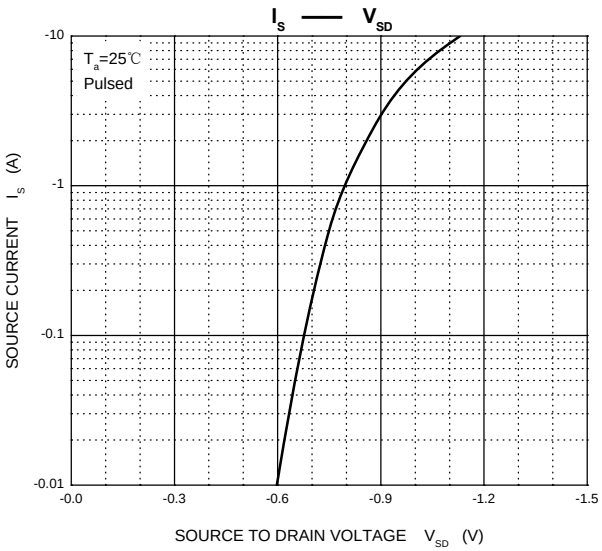
Typical Characteristics Curves





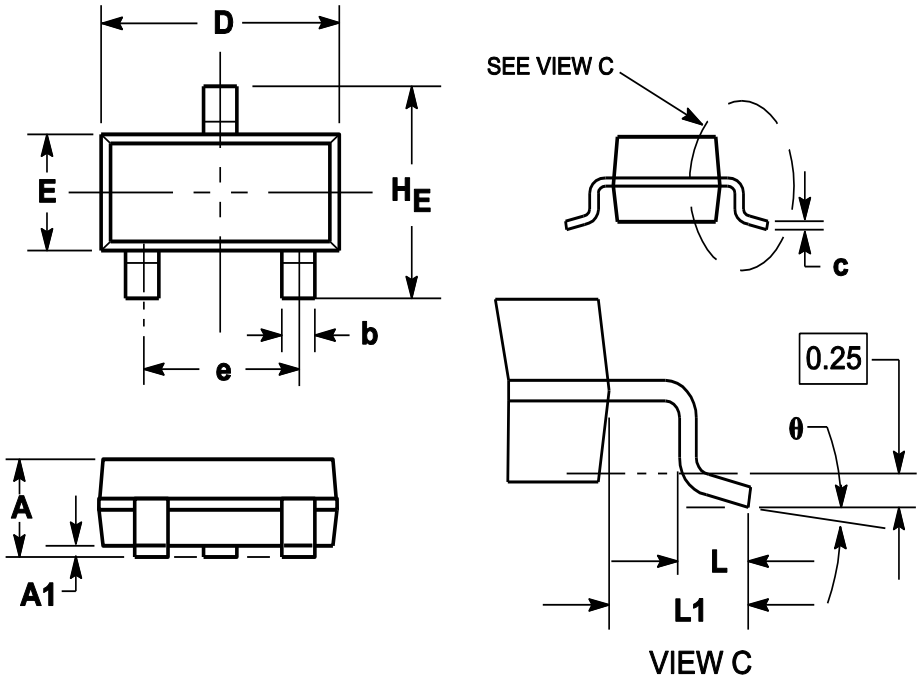




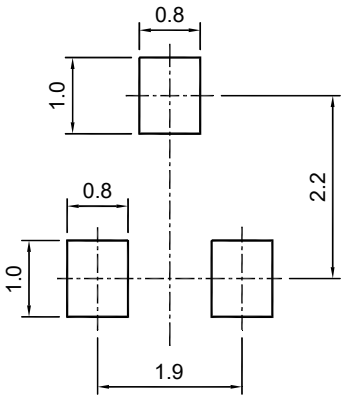


Package Outline

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
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^o		8^o



SOT-23 (TO-236)

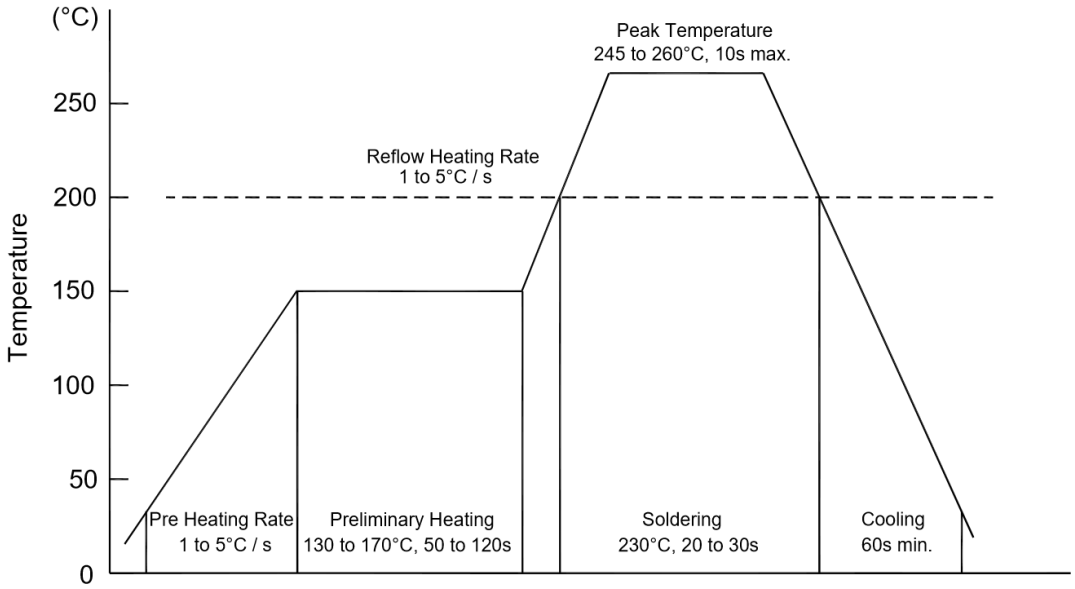
Recommended Soldering Pad

Ordering Information

Device	Package	Shipping
PJM2307PSA	SOT-23	3000/Reel&Tape(7inch)

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

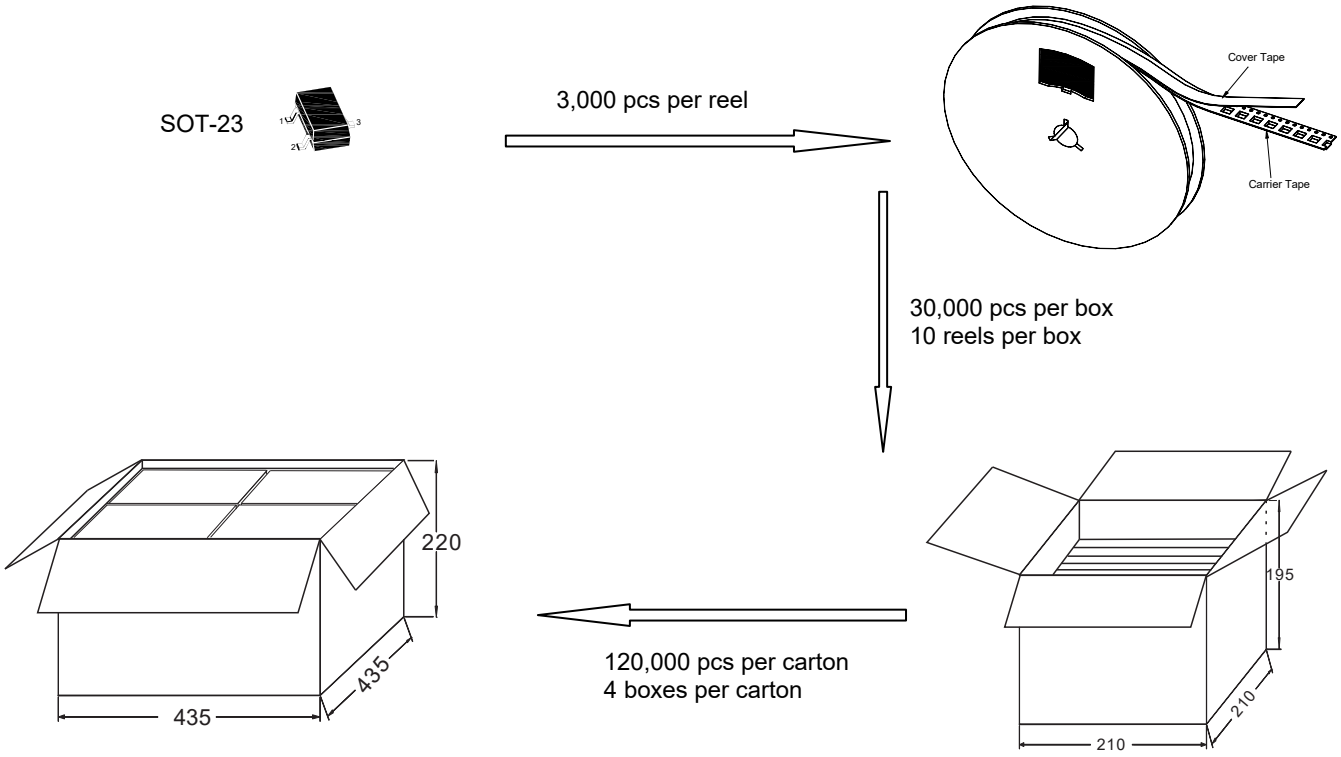
- Temperature: 370 ˚C
- Time: 3s max.
- Times: one time

◆ Storage conditions

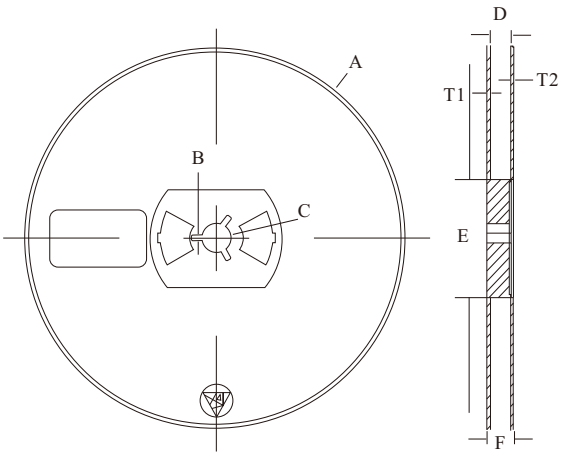
- **Temperature**
  5 to 40 ˚C
- **Humidity**
  30 to 80% RH
- **Recommended period**
  One year after manufacturing

Package Specifications

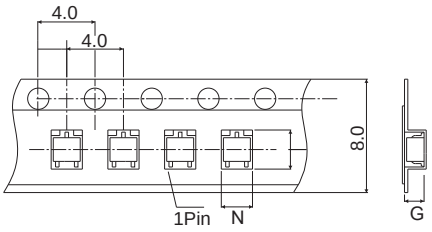
◆ The method of packaging



◆ 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