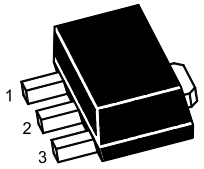
PJM03N60SQ

N- Enhancement Mode Field Effect Transistor

SOT-89



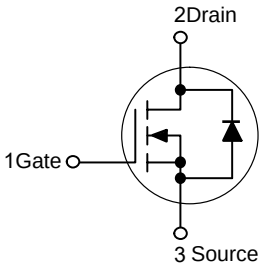
1. Gate 2.Drain 3.Source

Marking: W10

Features

- Trench FET Power MOSFET
- $R_{DS(ON)}$ < 105mΩ (V_{GS} = 10V)
  $R_{DS(ON)}$ < 125mΩ (V_{GS} = 4.5V)

Schematic diagram



Applications

- DC/DC Converter
- Battery Switch

Absolute Maximum Ratings

Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	3	A
Pulsed Drain Current Note 1	I_{DM}	10	A
Total Power Dissipation	P_D	1.5	W
Operating Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient Note2	$R_{\theta JA}$	83	℃/W

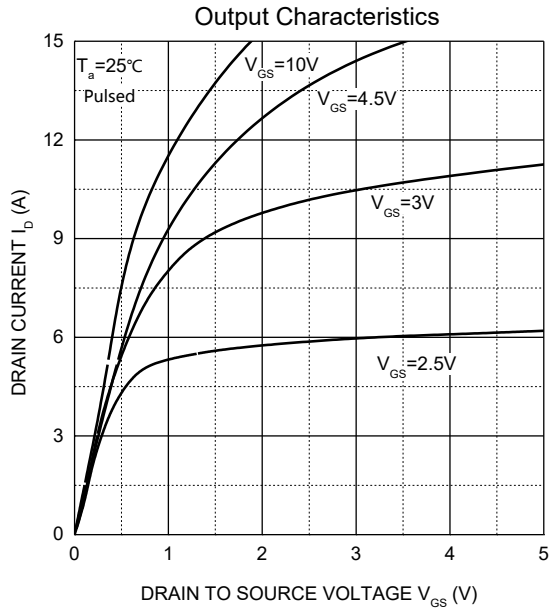
Electrical Characteristics (T_A=25°C unless otherwise noted)

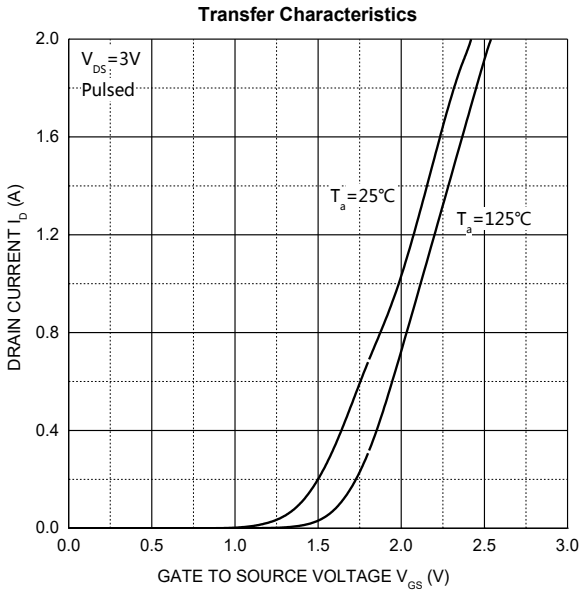
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =60V,V_{GS} = 0V			1	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	nA
Gate Threshold Voltage[Note3]	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1		2.5	V
Drain-Source On-Resistance[Note3]	$R_{DS(on)}$	V_{GS} =10V, I_D =3A		70	105	mΩ
		V_{GS} =4.5V, I_D =3A		82	125	
Forward Tranconductance[Note3]	g_{FS}	V_{DS} =15V, I_D =2A	1.4	2.5		S
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS} =30V,V_{GS} =0V,f =1MHz		250		pF
Output Capacitance	C_{oss}			26		
Reverse Transfer Capacitance	C_{rss}			20		
Switching CharacteristicsS						
Total Gate Charge	Q_g	V_{DS} =30V,V_{GS} =4.5V,I_D =3A		7		nC
Gate-Source Charge	Q_{gs}			1.2		
Gate-Drain Charge	Q_{gd}			1.5		
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V,V_{DD}=30V,I_D=1.5A,R_{GEN}=1Ω		6.5		ns
Turn-On Rise Time	t_r			15.2		
Turn-Off Delay Time	$t_{d(off)}$			15.2		
Turn-Off Fall Time	t_f			10.3		
Source-Drain Diode characteristics						
Body Diode Voltage	V_{SD}	I_S=3A,V_{GS}=0V		0.8	1.2	V

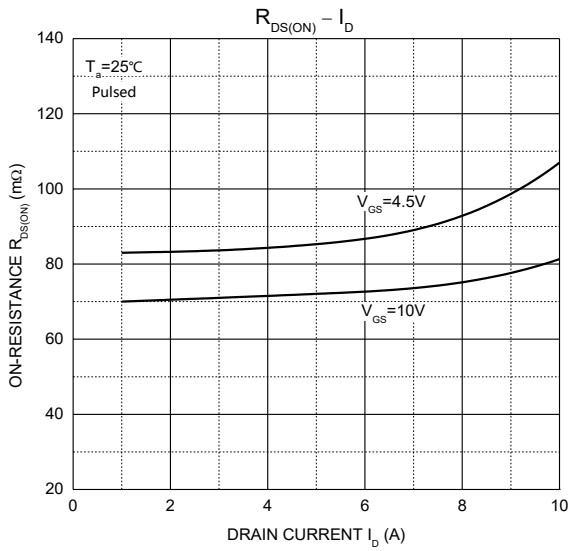
Notes :

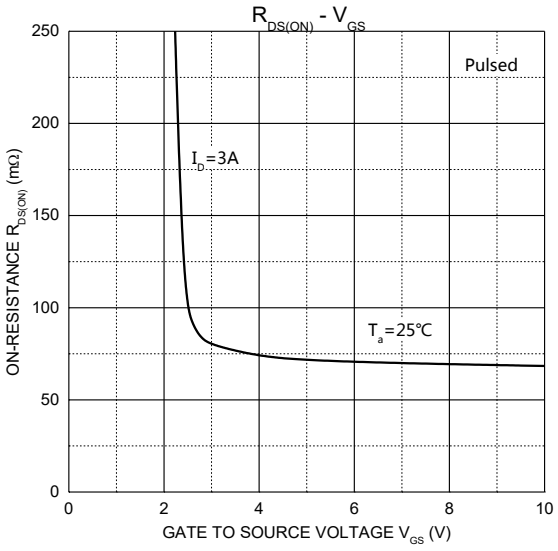
1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on FR4 board , t≤10s.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.

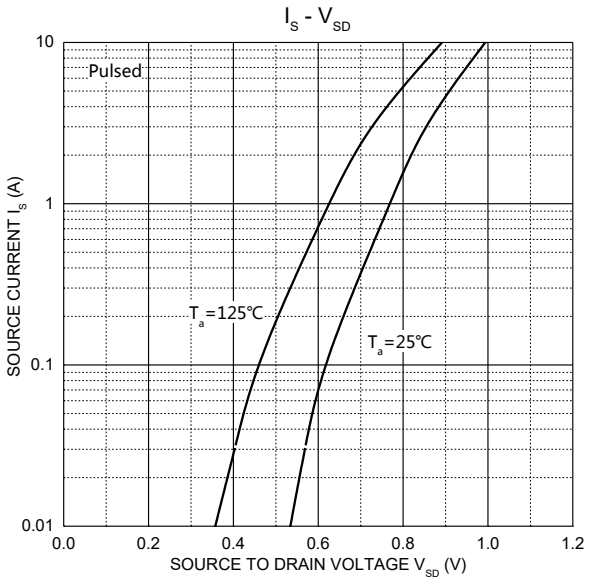
Typical Characteristics Curves

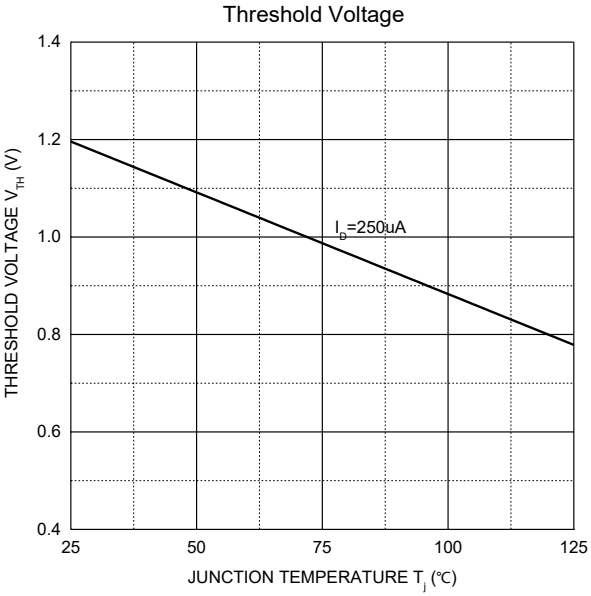






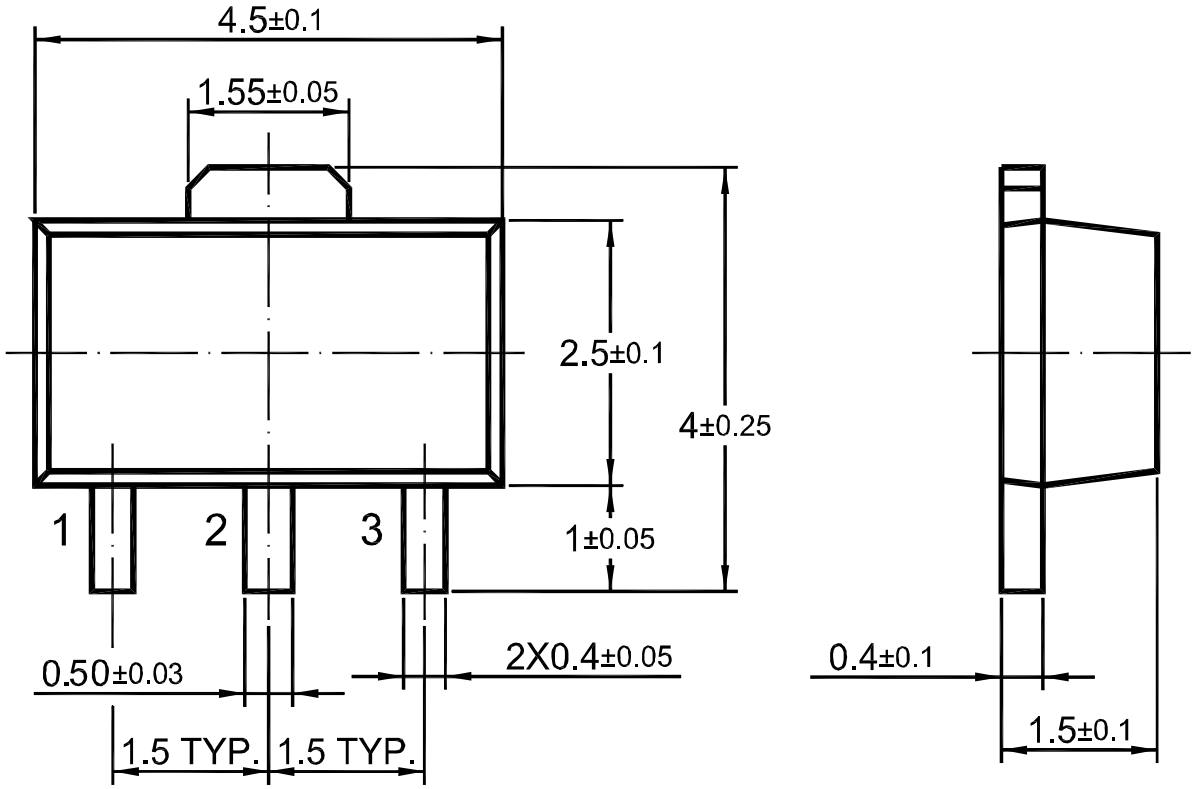






Package Outline

SOT-89

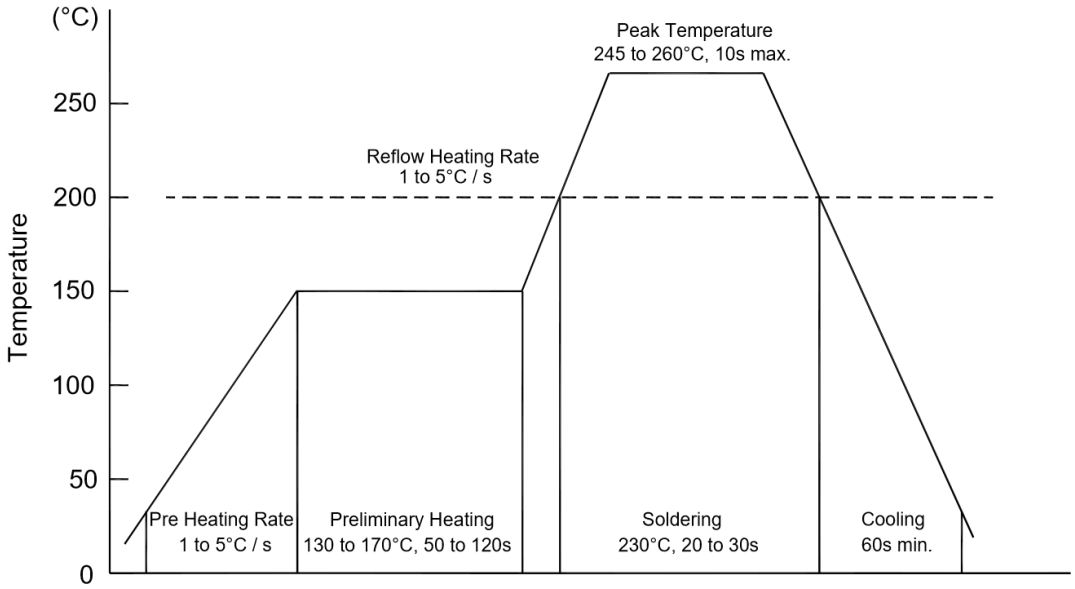


Ordering Information

Device	Package	Shipping
PJM03N60SQ	SOT-89	1000/Reel&Tape(7inch)

Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 ^{O}C. If peak temperature is below 245 ^{O}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

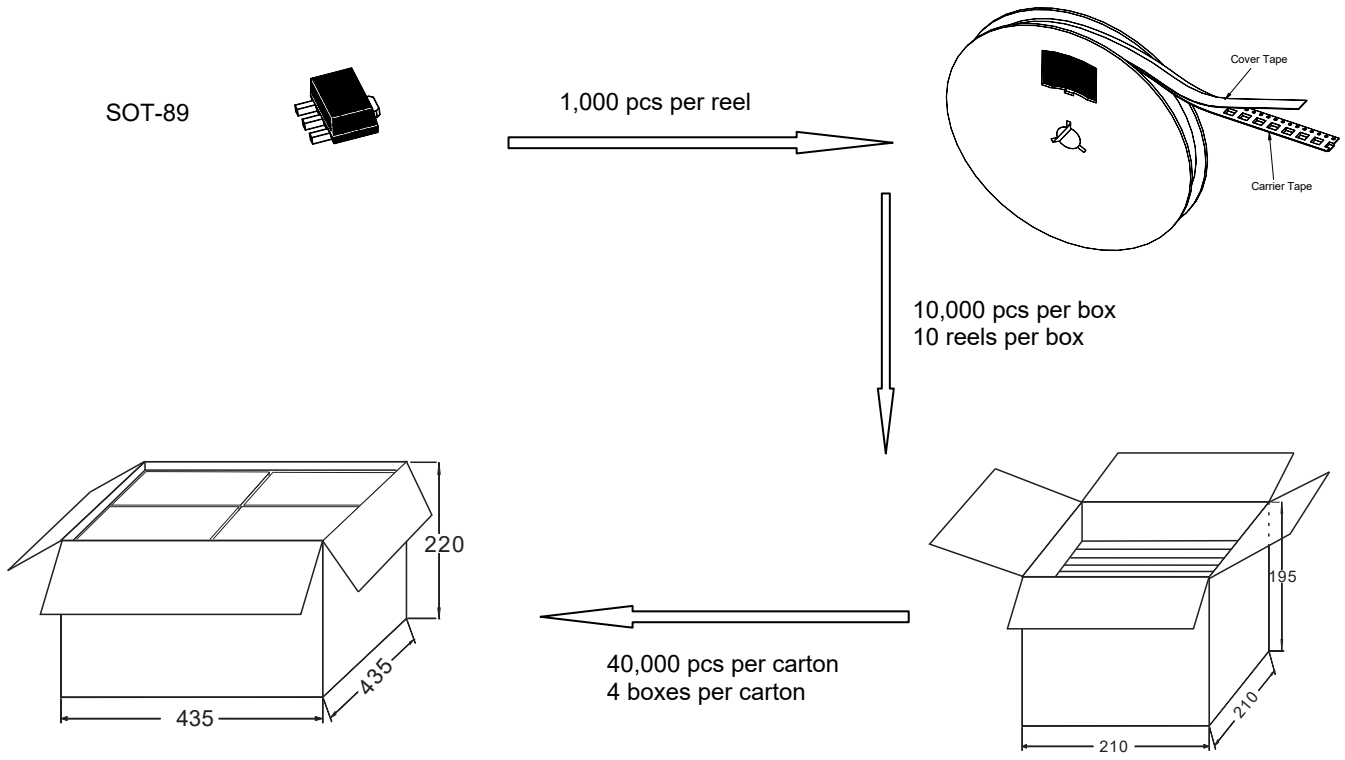
- Temperature: 370 ^{O}C
- Time: 3s max.
- Times: one time

◆ Storage conditions

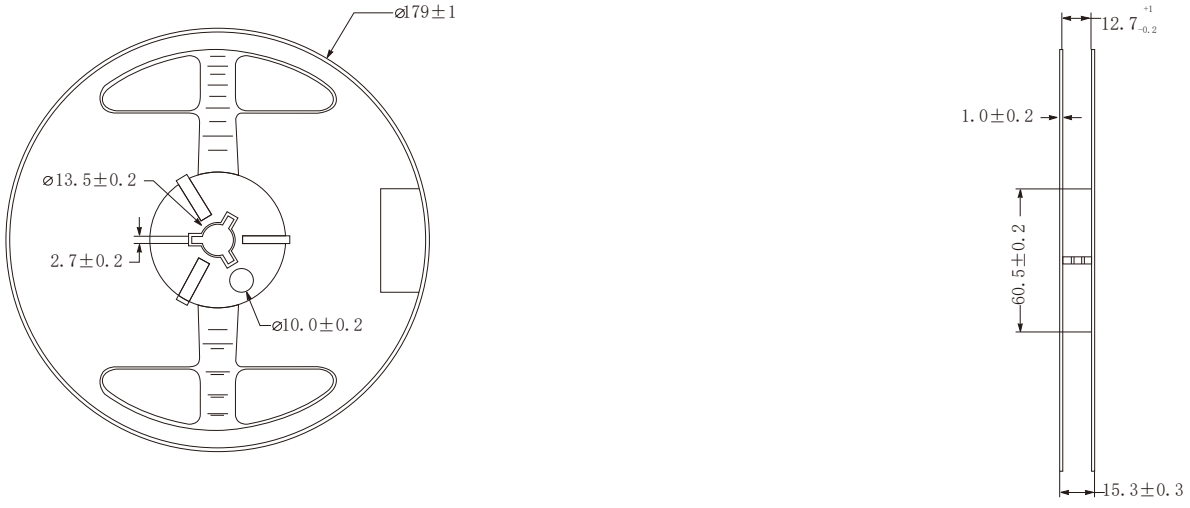
- **Temperature**
  5 to 40 ^{O}C
- **Humidity**
  30 to 80% RH
- **Recommended period**
  One year after manufacturing

Package Specifications unit: mm

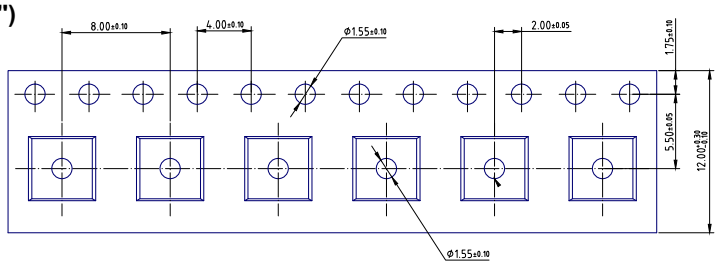
◆ The method of packaging



◆ Embossed tape and reel data



Reel (7")



Tape (12mm)