



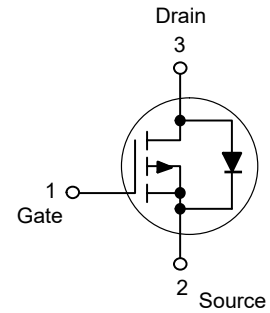
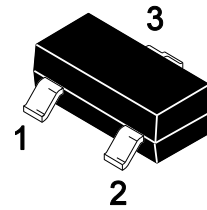
PJM10H01PSA

P- Enhancement Mode Field Effect Transistor

Features

- Fast switching
- Low gate charge and $R_{DS(ON)}$
- $V_{DS} = -100V$, $I_D = -1A$
 $R_{DS(ON)} = 0.6\Omega$ (Typ.) @ -10V

SOT-23



Absolute Maximum Ratings

Ratings at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Parameter	Symbol	Maximum	Units
Drain-Source Voltage	$-V_{DS}$	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$-I_D$	1	A
Pulsed Drain Current	$-I_{DM}$	1.5	A
Power Dissipation	P_D	0.5	W
Junction and Storage Temperature Range	T_J, T_{STG}	150, -55 to 150	$^\circ\text{C}$
Thermal Characteristics			
Parameter	Symbol	Typ.	Units
Maximum Junction-to-Ambient ^{Note1}	$R_{\theta JA}$	250	$^\circ\text{C/W}$



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Electrical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Type	Max	Units
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D=-250\mu A$	-100			V
Drain to Source Leakage Current	I_{DSS}	$V_{DS} =-16V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS}= \pm 8V, V_{DS}= 0V$			± 100	nA
Gate threshold voltage ^{Note2}	$V_{GS(th)}$	$V_{DS} =V_{GS}, I_D = -250\mu A$	-1		-2.5	V
Drain-source on-resistance ^{Note2}	$R_{DS(on)}$	$V_{GS} = -10V, I_D= -1A$			650	m Ω
		$V_{GS} = -4.5V, I_D= -0.5A$			700	
Switching Characteristics						
Turn-on delay time	$t_{d(on)}$	$V_{DD} =-50V, V_{GEN} =-10V, I_D =-1A,$ $R_L=33\Omega, R_g=6\Omega$		7	11	ns
Turn-on rise time	t_r			11	17	
Turn-off delay time	$t_{d(off)}$			9	15	
Turn-off fall time	t_f			10	15	
Total gate charge	Q_g	$V_{DD} =-50V, V_{GS} =-10V, I_D =-1A$		3.3	4	nC
Gate-source charge	Q_{gs}			0.47		
Gate-drain charge	Q_{gd}			1.45		
Source-Drain Diode characteristics						
Diode Forward voltage	- V_{DS}	$V_{GS} =0V, I_S=-0.5A$			1.3	V
Continuous source-drain diode current	- I_S				1	A

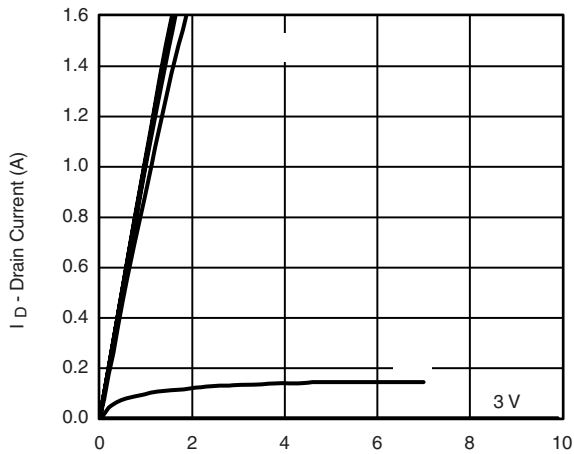
Note: 1. Surface mounted on FR4 board, $t \leq 10$ sec.2. Pulse Test ; Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.



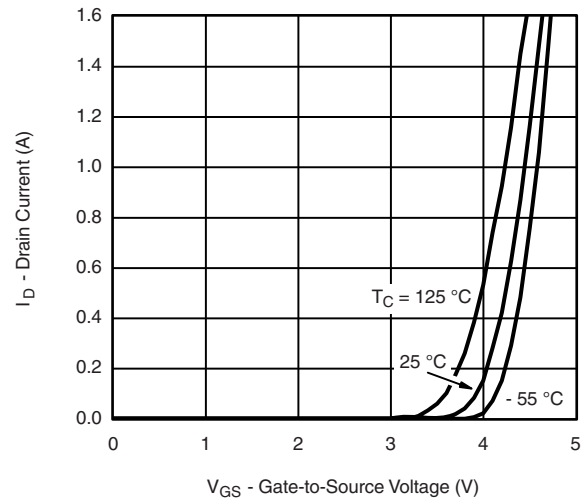
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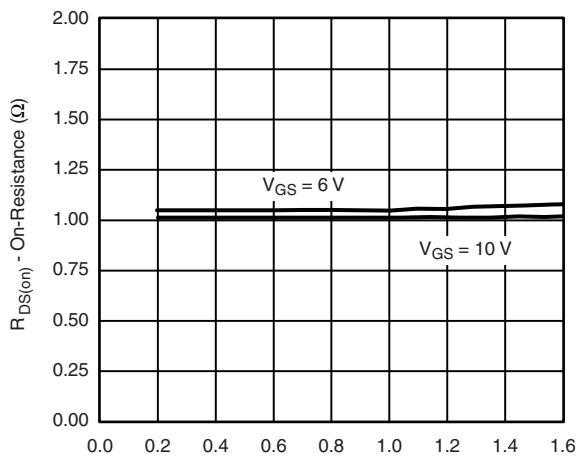
Typical Characteristic Curves



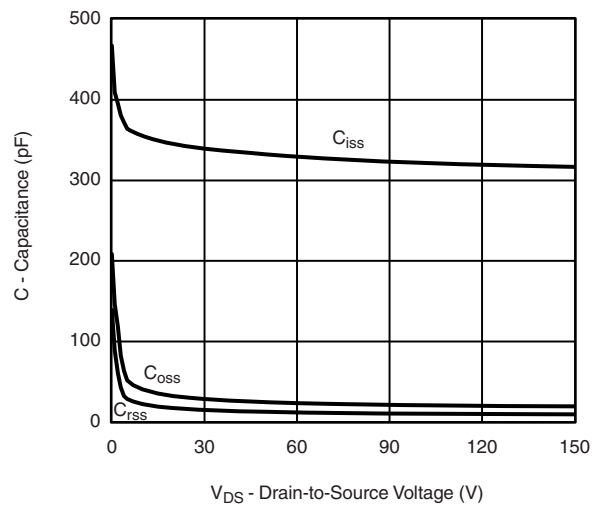
Output Characteristics



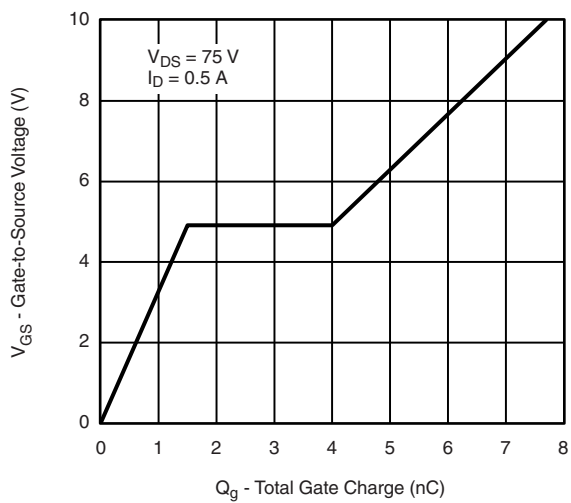
Transfer Characteristics



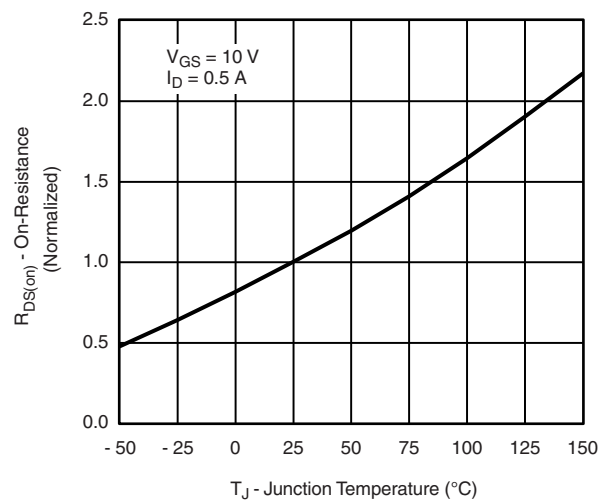
On-Resistance vs. Drain Current



Capacitance



Gate Charge

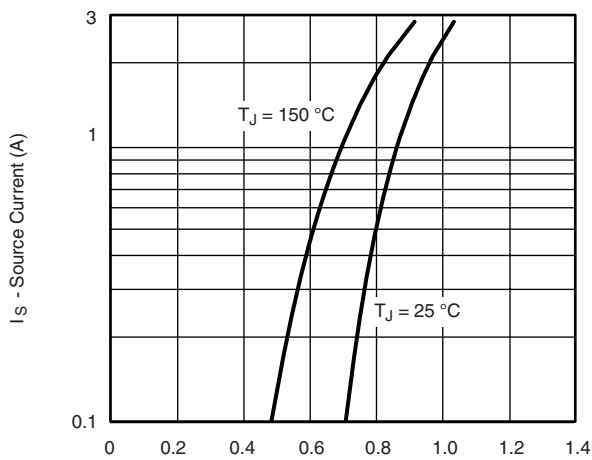


On-Resistance vs. Junction Temperature

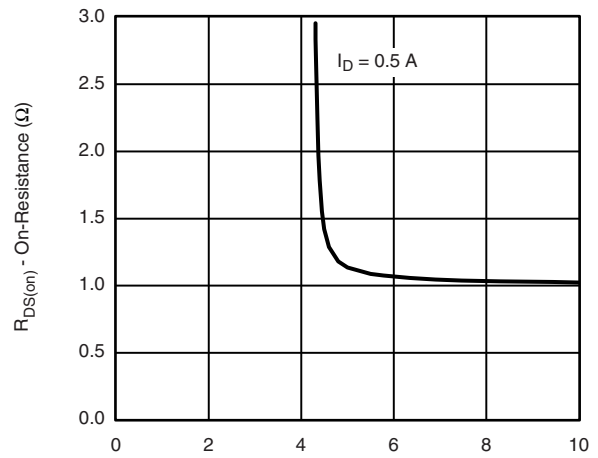


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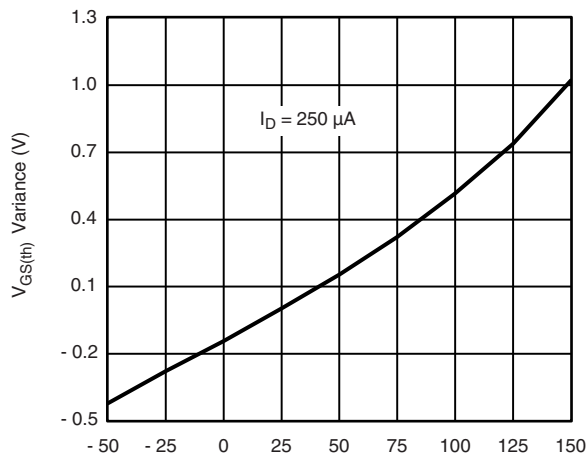
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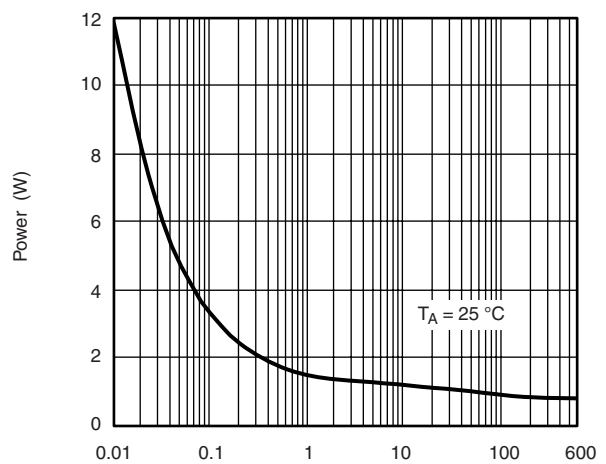
Source-Drain Diode Forward Voltage



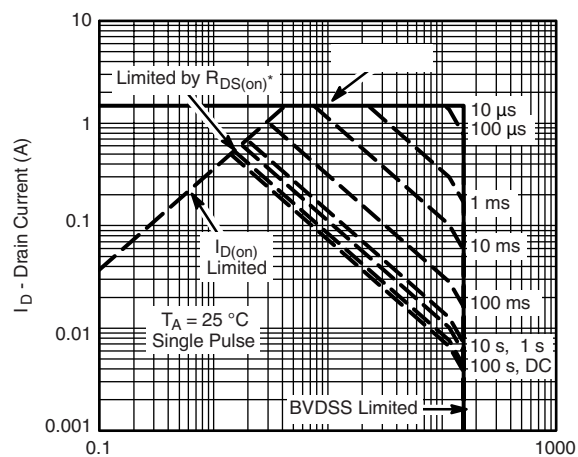
On-Resistance vs. Gate-to-Source Voltage



Threshold Voltage



Single Pulse Power



Safe Operating Area

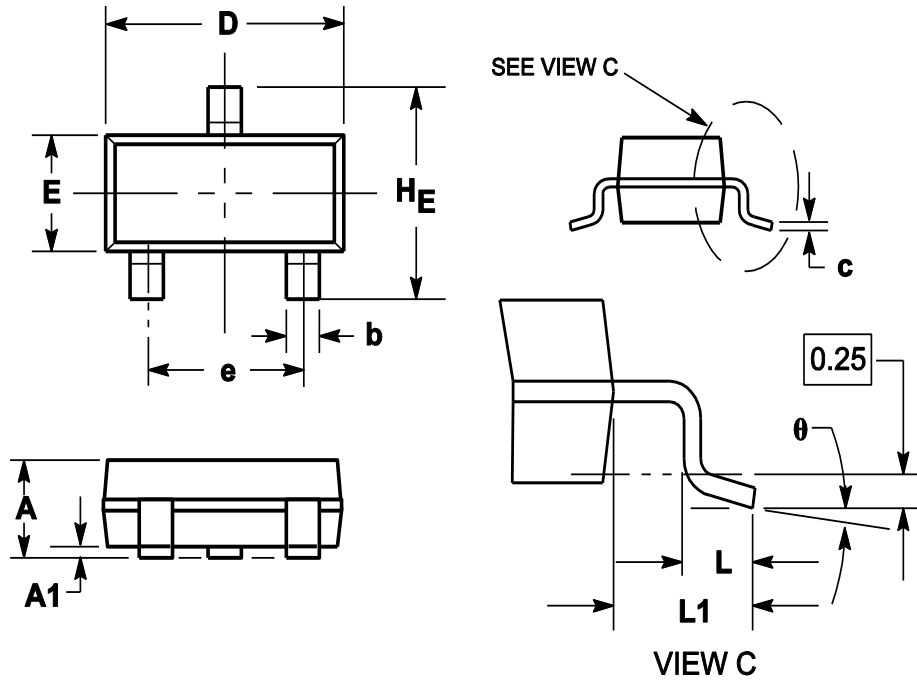


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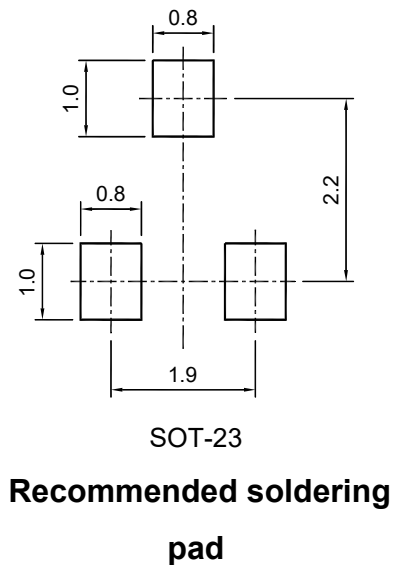
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Package Outline

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
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°



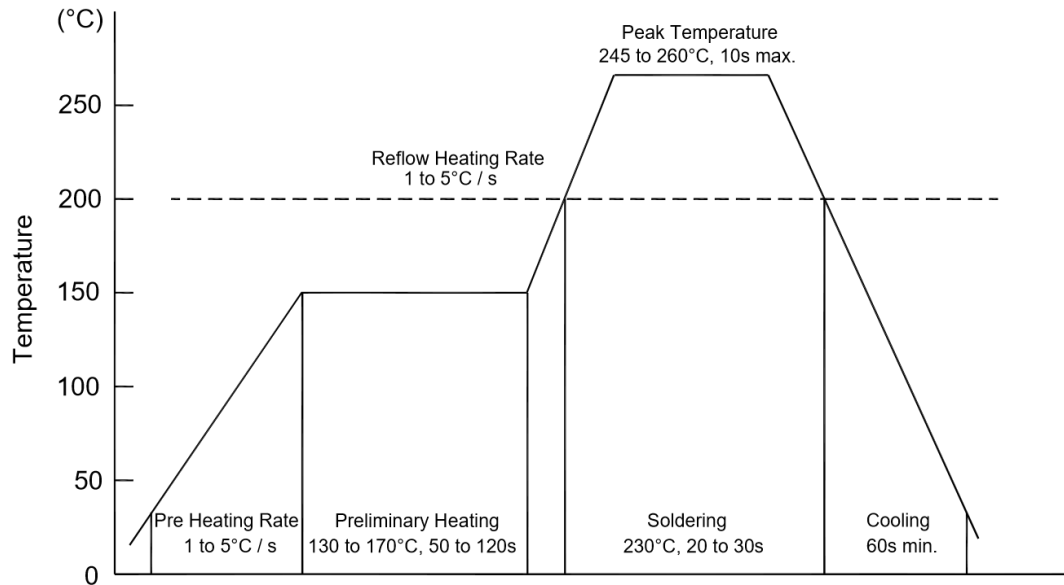
Ordering Information

Device	Package	Shipping
PJM10H01PSA	SOT-23	3000PCS/Reel&Tape



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

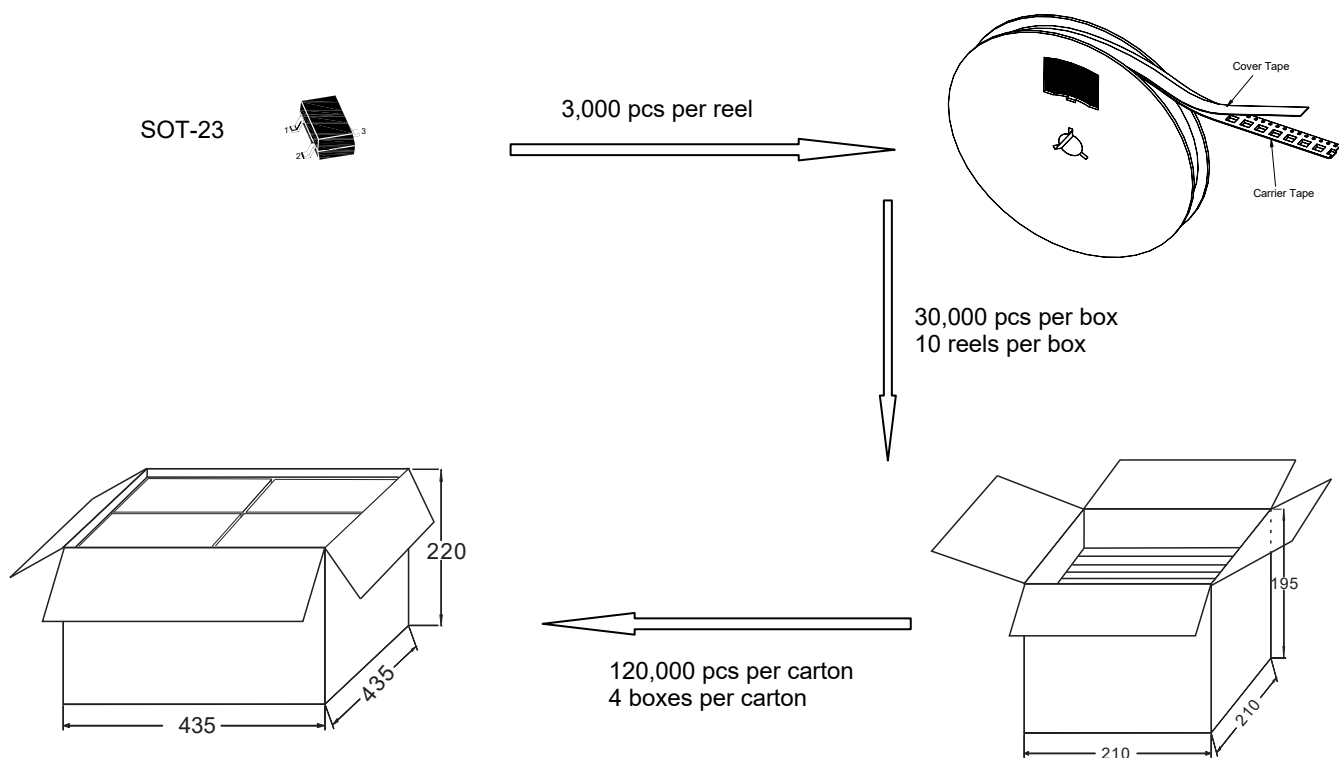


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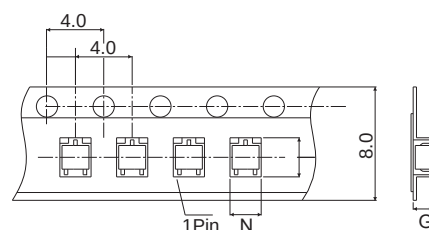
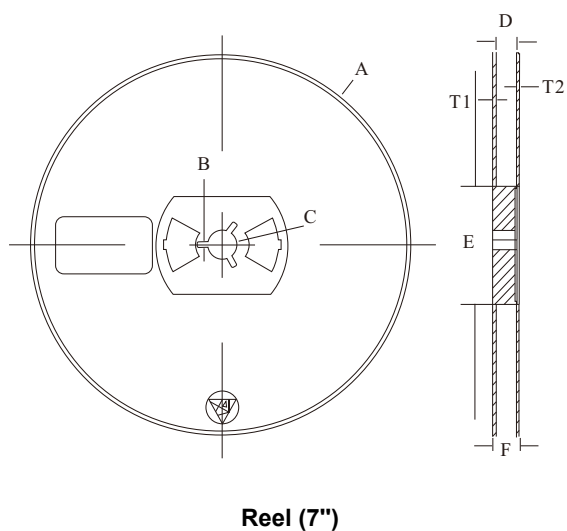
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Package Specifications

- The method of packaging



◆ Embossed tape and reel data



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