

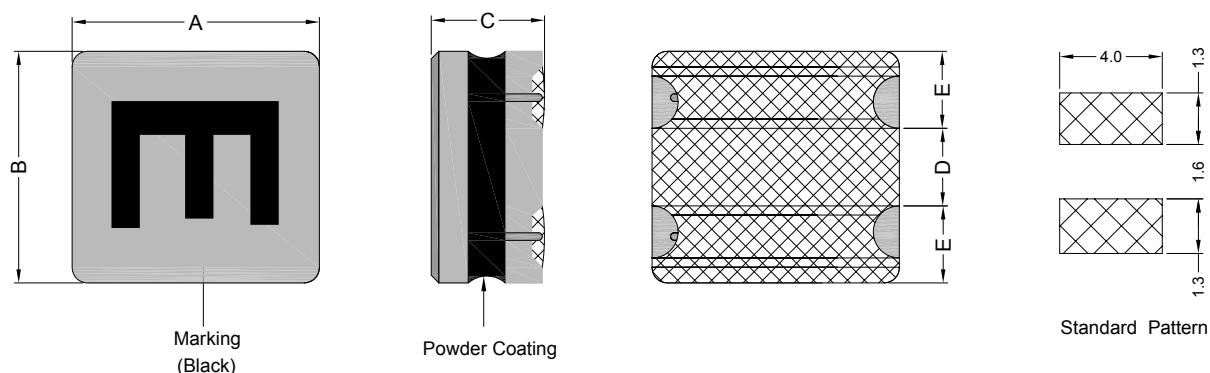
1. PART NO. EXPRESSION :

SPS4015FT2R2M-□□
(a) (b) (c)(d) (e) (f) (g)

- (a) Series code
- (b) Dimension code
- (c) Powder coating type
- (d) Taping package

- (e) Inductance code : 2R2= 2.2uH
- (f) Tolerance code : M=±20%, N=±30%
- (g) 11~99 : Internal controlled number

2. CONFIGURATION & DIMENSIONS :



Unit:m/m

A	B	C	D	E
4.0±0.2	4.0±0.2	1.5 Max.	1.6 Typ	1.2 Typ

3. MATERIALS :

- (a) Core : Ferrite
- (b) Wire : Polyurethane Enamelled Copper Wire
- (c) Solder : M35E
- (d) Coating : Powder Coating
- (e) Ink : 70000-00101

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4. GENERAL SPECIFICATION :

- a) IDC1 :Based on inductance change ($\Delta L/L_0$: $\pm 30\%$) @ ambient temp. 25°C
- b) IDC2 : Based on temperature rise (ΔT : 40°C TYP.)
- c) Rated DC Current: The less value which is IDC1 or IDC2.
- d) Storage temp. : -40°C to +105°C
- e) Operating temp. : -40°C to +105°C (include self temp. rise)
- f) Resistance to solder heat : 260°C 10secs

5. ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (μ H)	Test Frequency (Hz)	Resistance RDC (Ω) $\pm 20\%$	Rated DC Current		Marking
				IDC1 (A)	IDC2 (A)	
SPS4015FT1R0N	1.0 $\pm 30\%$	0.1V/1M	35m	3.3	2.40	A
SPS4015FT1R5N	1.5 $\pm 30\%$	0.1V/1M	43m	2.8	2.05	C
SPS4015FT2R2M	2.2 $\pm 20\%$	0.1V/1M	56m	2.3	1.75	E
SPS4015FT3R3M	3.3 $\pm 20\%$	0.1V/1M	76m	1.9	1.55	G
SPS4015FT4R7M	4.7 $\pm 20\%$	0.1V/1M	0.11	1.6	1.40	I
SPS4015FT6R8M	6.8 $\pm 20\%$	0.1V/1M	0.15	1.3	1.20	K
SPS4015FT100M	10 $\pm 20\%$	0.1V/1M	0.22	1.1	1.00	M
SPS4015FT150M	15 $\pm 20\%$	0.1V/1M	0.32	0.85	0.82	O
SPS4015FT220M	22 $\pm 20\%$	0.1V/1M	0.47	0.73	0.67	Q
SPS4015FT330M	33 $\pm 20\%$	0.1V/1M	0.65	0.61	0.58	S
SPS4015FT470M	47 $\pm 20\%$	0.1V/1M	1.08	0.52	0.43	U



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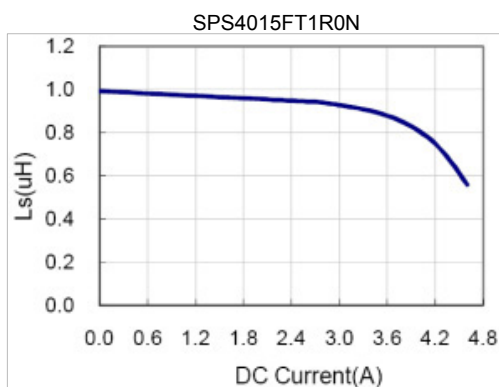
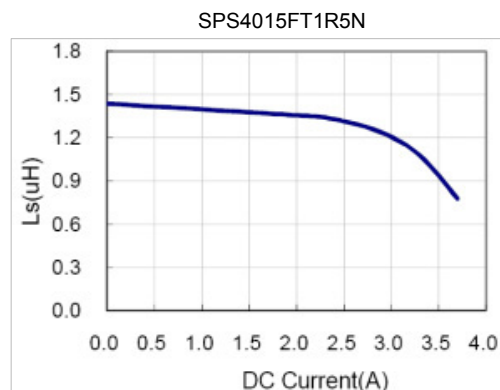
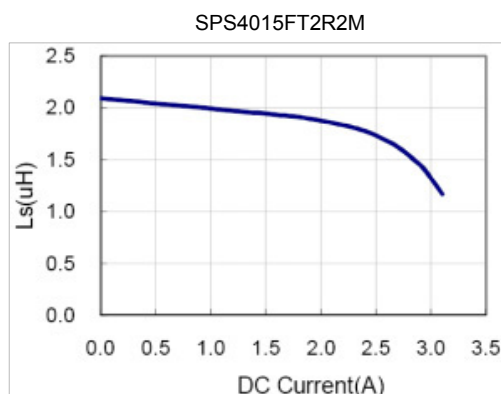
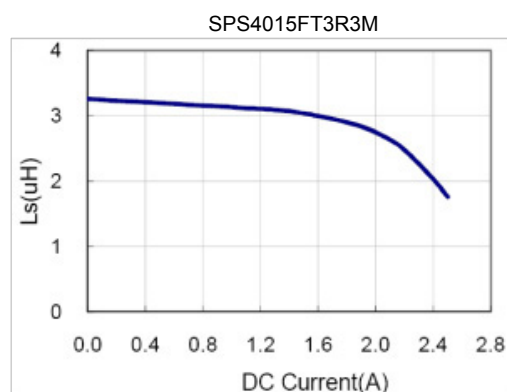
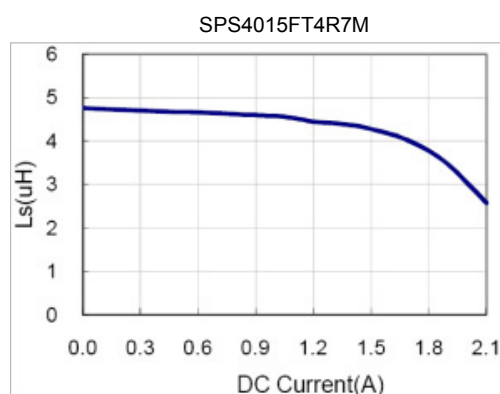
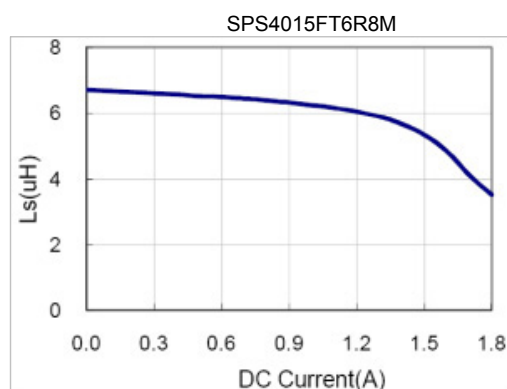
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6. IMPEDANCE VS. FREQUENCY CURVES ::

6.1 INDUCTANCE vs. DC CURRENT



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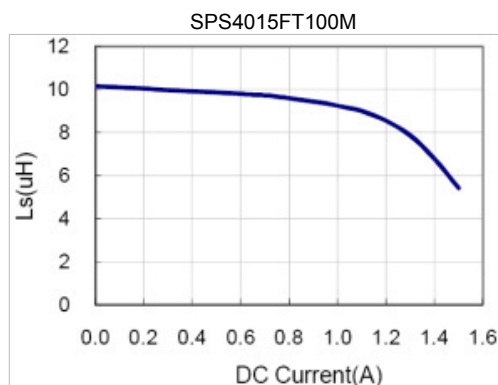
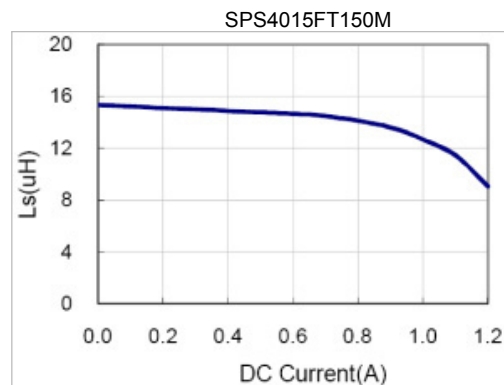
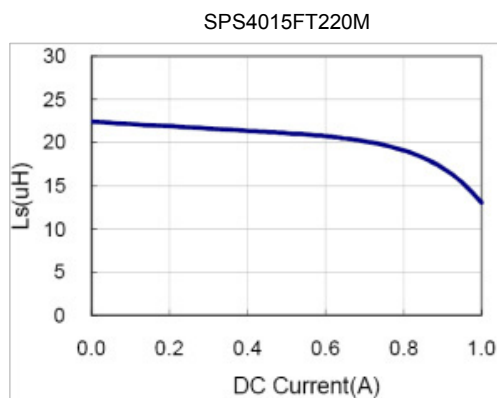
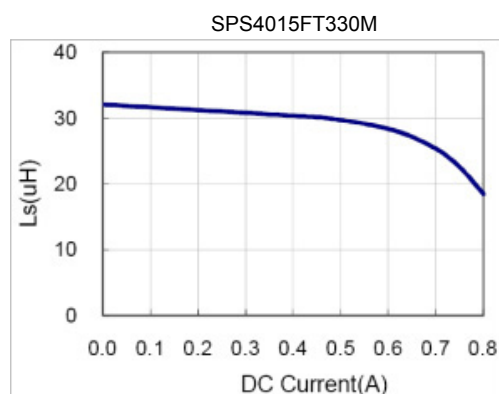
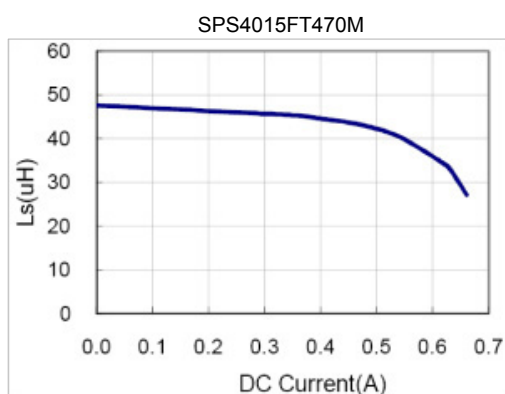
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6. GENERAL SPECIFICATION :

6.1 INDUCTANCE vs. DC CURRENT



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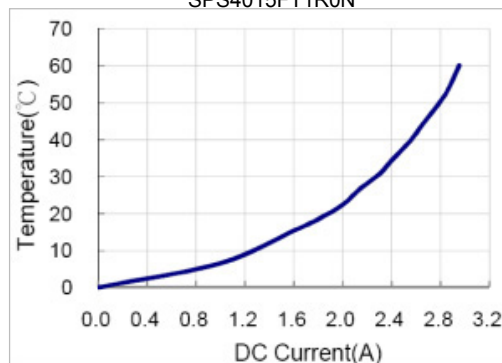


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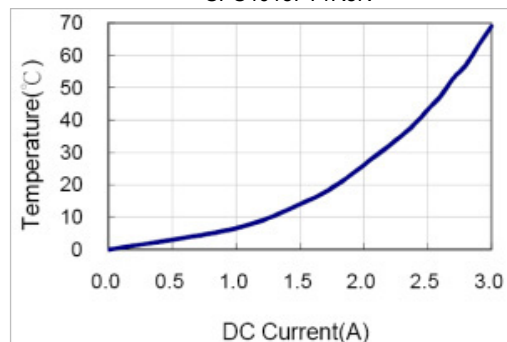
6. GENERAL SPECIFICATION :

6.2 TEMPERATURE vs. DC CURRENT

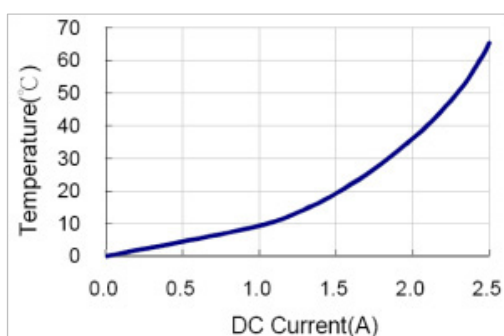
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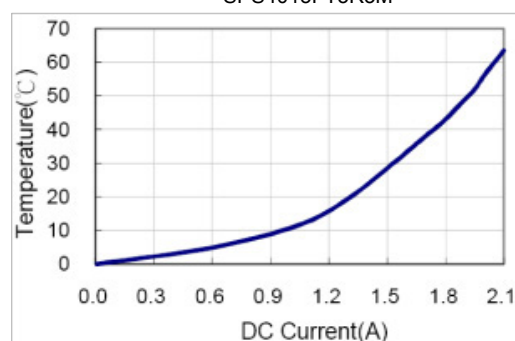
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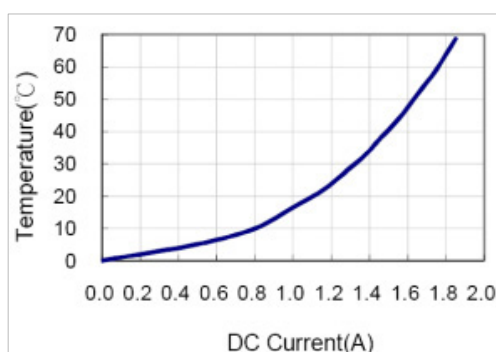
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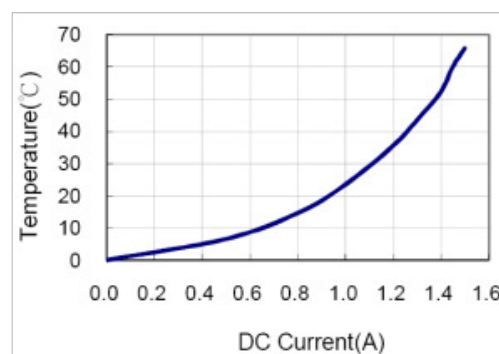
SPS4015FT3R3M



SPS4015FT4R7M



SPS4015FT6R8M



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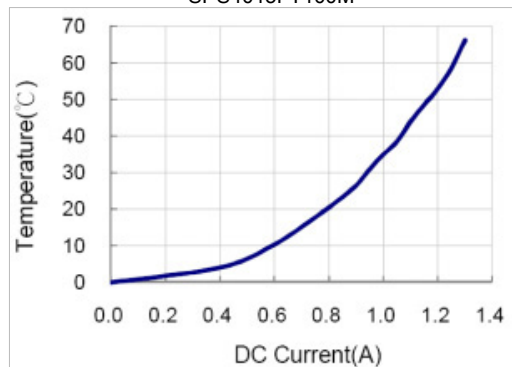


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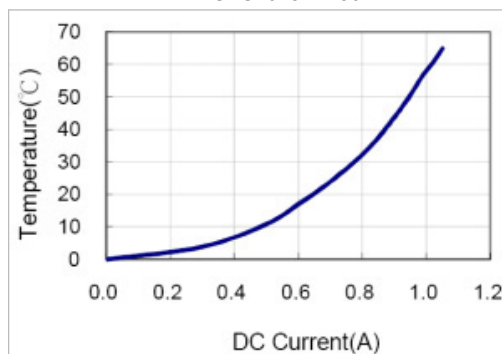
6. GENERAL SPECIFICATION :

6.2 TEMPERATURE vs. DC CURRENT

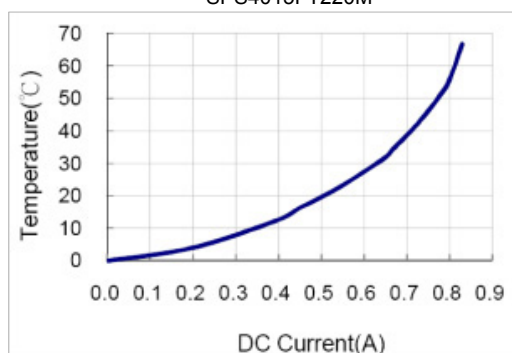
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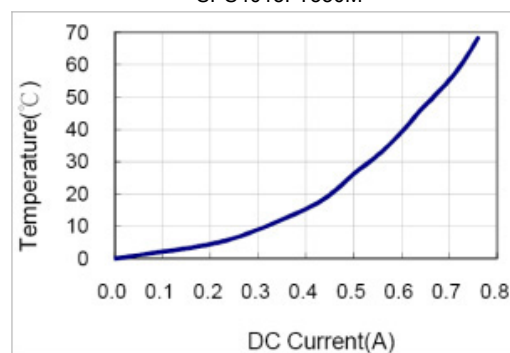
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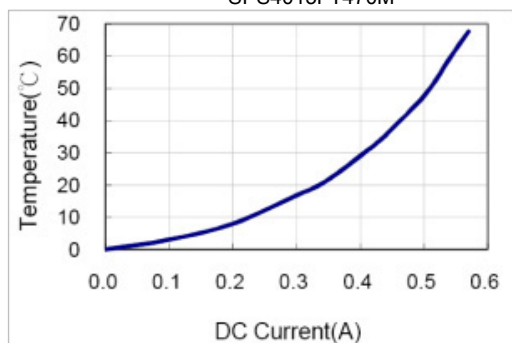
SPS4015FT220M



SPS4015FT330M



SPS4015FT470M



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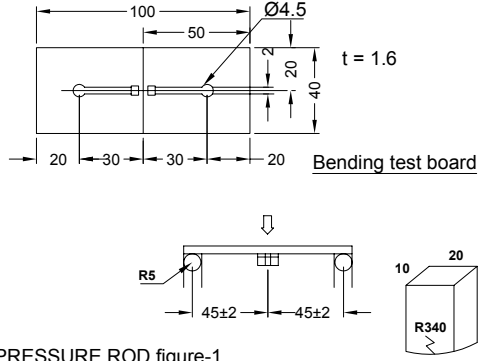
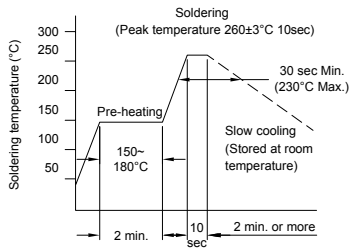
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6. RELIABILITY & TEST CONDITION :

ITEM	PERFORMANCE	TEST CONDITION
Mechanical		
Substrate bending	$\Delta L/L_0 \pm 10\%$ There shall be no mechanical damage or electrical damage.	<p>The sample shall be soldered onto the printed circuit board in figure 1 and a load applied until the figure in the arrow direction is made approximately 3mm.(keep time 30 secs)</p>  <p>PRESSURE ROD figure-1</p>
Vibration	$\Delta L/L_0 \pm 10\%$ There shall be no mechanical damage.	<p>The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.52mm and a frequency of from 10 to 55Hz/1 minute repeated should be applied to the 3 directions (X,Y,Z) for 2 hours each. (A total of 6 hours)</p>
Solderability	New solder More than 90%	<p>Flux (rosin, isopropyl alcohol{JIS-K-1522}) shall be coated over the whole of the sample before hard, the sample shall then be preheated for about 2 minutes in a temperature of 130~150°C and after it has been immersed to a depth 0.5mm below for 3±0.2 seconds fully in molten solder M705 with a temperature of 245±5°C.</p> <p>More than 90% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath.</p>
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	 <p>The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time.</p> <p>The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.</p>



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6. RELIABILITY & TEST CONDITION :

ITEM	PERFORMANCE	TEST CONDITION															
Electrical Characteristics Test																	
Dielectric withstand voltage	There shall be no damage or problems.	AC 100V voltage shall be applied for 1 minute across the top surface and the terminal of this sample															
Temperature characteristics	$\Delta L/L_{20^\circ\text{C}} \pm 10\%$ 0~2000 ppm/°C	The test shall be performed after the sample has stabilized in an ambient temperature of -20 to +85°C, and the value calculated based on the value applicable in a normal temperature and normal humidity shall be $\Delta L/L_{20^\circ\text{C}} \pm 10\%$.															
High temperature storage	$\Delta L/L_0 \pm 10\%$ There shall be no mechanical damage.	The sample shall be left for 96±4 hours in an atmosphere with a temperature of 85±2°C and a normal humidity. Upon completion of the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.															
Low temperature storage	$\Delta L/L_0 \pm 10\%$ There shall be no mechanical damage.	The sample shall be left for 96±4 hours in an atmosphere with a temperature of -25±3°C. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity for 1 hour.															
Change of temperature	$\Delta L/L_0 \pm 10\%$ There shall be no other damage of problems	The sample shall be subject to 5 continuous cycles, such as shown in the table 2 below and then it shall be subjected to standard atmospheric conditions for 1 hour, after which measurement shall be made. <table border="1"> <thead> <tr> <th></th><th>Temperature</th><th>Duration</th></tr> </thead> <tbody> <tr> <td>1</td><td>-25±3°C (Thermostat No.1)</td><td>30 min.</td></tr> <tr> <td>2</td><td>Standard atmospheric</td><td>5 sec. or less No.1→No.2</td></tr> <tr> <td>3</td><td>85±2°C (Thermostat No.2)</td><td>30 min.</td></tr> <tr> <td>4</td><td>Standard atmospheric</td><td>5 sec. or less No.2→No.1</td></tr> </tbody> </table>		Temperature	Duration	1	-25±3°C (Thermostat No.1)	30 min.	2	Standard atmospheric	5 sec. or less No.1→No.2	3	85±2°C (Thermostat No.2)	30 min.	4	Standard atmospheric	5 sec. or less No.2→No.1
	Temperature	Duration															
1	-25±3°C (Thermostat No.1)	30 min.															
2	Standard atmospheric	5 sec. or less No.1→No.2															
3	85±2°C (Thermostat No.2)	30 min.															
4	Standard atmospheric	5 sec. or less No.2→No.1															
Moisture storage	$\Delta L/L_0 \pm 10\%$ There shall be no mechanical damage.	The sample shall be left for 96±4 hours in a temperature of 40±2°C and a humidity(RH) of 90~95%. Upon completion of the test, the measurement shall be made after the sample has been left in a normal temperature and normal humidity more than 1 hour.															



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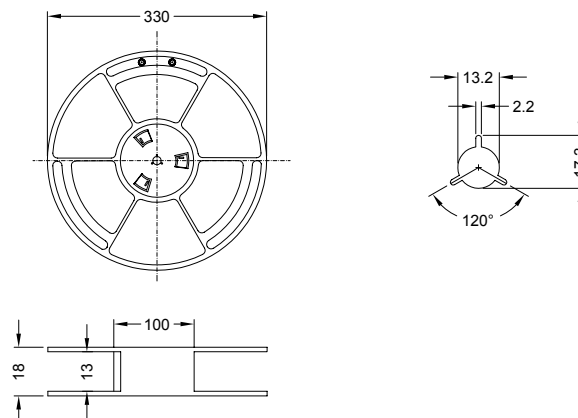
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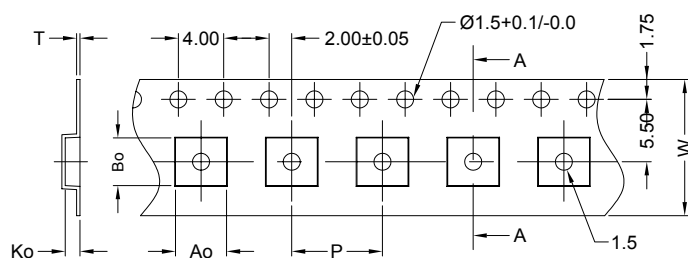
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7. PACKAGING INFORMATION :

7-1. Reel Dimension (mm)

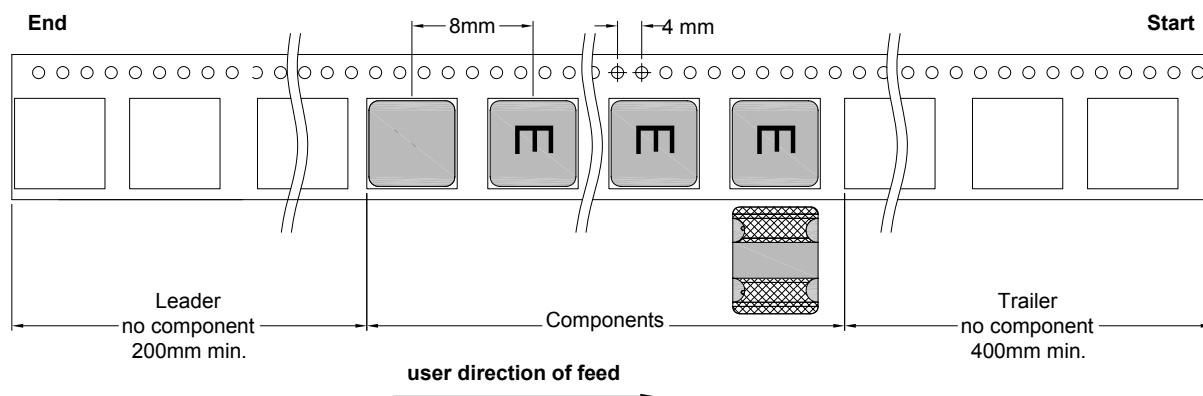


7-2 CARRIER TAPE DIMENSIONS (mm)



Ao	Bo	Ko	W	P	T
3.5mm	3.35mm	1.55mm	12mm	8.0mm	0.3mm

7-3 TAPING DIMENSIONS (mm)



7-4 QUANTITY

3000pcs/Reel

The products are packaged so that no damage will be sustained.



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