### SPS3015FT SERIES

#### 1. PART NO. EXPRESSION:

 $\frac{\text{S P S}}{\text{(a)}} \frac{\text{3 0 1 5}}{\text{(b)}} \frac{\text{F T}}{\text{(c)(d)}} \frac{\text{2 R 2}}{\text{(e)}} \frac{\text{M}}{\text{(f)}} - \frac{\square}{\text{(g)}}$ 

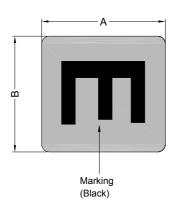
- (a) Series code
- (b) Dimension code
- (c) Powder coating type
- (d) Taping package

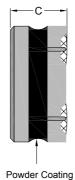
(e) Inductance code: 2R2= 2.2uH

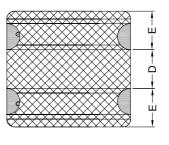
(f) Tolerance code: M=±20%, N=±30%

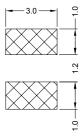
(g) 11~99: Internal controlled number

#### 2. CONFIGURATION & DIMENSIONS:









Standard Pattern

- 1	Init	٠	~ 1	~

Α	В	С	D	Е
3.0±0.2	3.0±0.2	1.5 Max.	1.2 Typ	0.9 Typ

#### 3. MATERIALS:

(a) Core: Ferrite

(b) Wire: Polyurethane Enamelled Copper Wire

(c) Solder: M35E

(d) Coating : Powder Coating



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#### 4. GENERAL SPECIFICATION:

a) IDC1 :Based on inductance change (ΔL/Lo: -30%) @ ambient temp. 25°C

b) IDC2 : Based on temperature rise ( T: 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:

Dord No.	Inductance	Test	Resistance	Rated DC Current		Mandrina
Part No.	( uH )	Frequency (Hz)	RDC (Ω) ±20%	IDC1(A)	IDC2(A)	Marking
SPS3015FT1R0N	1.0±30%	0.1V/1M	30m	2.10	2.10	Α
SPS3015FT1R5N	1.5±30%	0.1V/1M	40m	1.80	1.82	С
SPS3015FT2R2M	2.2±20%	0.1V/1M	60m	1.48	1.50	Е
SPS3015FT3R3M	3.3±20%	0.1V/1M	80m	1.21	1.23	G
SPS3015FT4R7M	4.7±20%	0.1V/1M	0.12	1.02	1.04	I
SPS3015FT6R8M	6.8±20%	0.1V/1M	0.16	0.87	0.88	K
SPS3015FT100M	10±20%	0.1V/1M	0.23	0.70	0.71	M
SPS3015FT150M	15±20%	0.1V/1M	0.36	0.56	0.56	0
SPS3015FT220M	22±20%	0.1V/1M	0.52	0.47	0.47	Q
SPS3015FT330M	33±20%	0.1V/1M	0.84	0.39	0.37	S
SPS3015FT470M	47±20%	0.1V/1M	1.34	0.32	0.30	U



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#### 6. RELIABILITY & TEST CONDITION:

ITEM	PERFORMANCE	TEST CONDITION	
Mechanical			
Substrate bending	ΔL/Lo ±10%  There shall be no mechanical damage or electrical damage.	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)	
Vibration	ΔL/Lo ±10%  There shall be no mechanical damage.	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)	
Solderability	New solder More than 90%	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.  More than 90% of the electrode sections shall be cowered with new solder smoothly when the sample is taken out of the solder bath.	
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	Soldering (Peak temperature 260±3°C 10sec)  30 sec Min. (230°C Max.)  Pre-heating (Stored at room temperature)  The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time.  The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.	

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**RoHS Compliant** 



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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	ΔL/L20°C ±10% 0~2000 ppm/°C	The test shall be performed after the sample has stabilized in an ambient temperature of -20 to +85 $^{\circ}$ C,and the value calculated based on the value applicable in a normal temperature and normal humidity shall be $\Delta$ L/L20 $^{\circ}$ C ±10%.			
High temperature storage	ΔL/Lo ±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	ΔL/Lo ±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	ΔL/Lo ±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.			
		Temperature Duration			
		-25±3°C 1 (Thermostat No.1) 30 min.			
		Standard 5 sec. or less 2 atmospheric No.1→No.2			
		3 (Thermostat No.2) 30 min.			
		4 Standard 5 sec. or less No.2→No.1			
Moisture storage	ΔL/Lo ±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.			



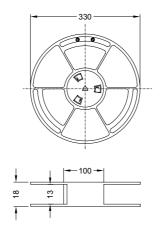
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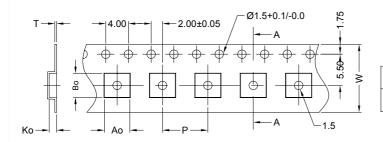
#### 7. PACKAGING INFORMATION:

#### 7-1. Reel Dimension (mm)



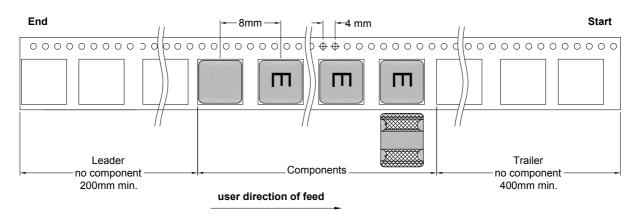


#### 7-2 CARRIER TAPE DIMENSIONS (mm)



Ao	Во	Ko	W	Р	Т
3.5mm	3.35mm	1.55mm	12mm	8.0mm	0.3mm

### 7-3 TAPING DIMENSIONS (mm)



#### 7-4 QUANTITY

3000pcs/Ree

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



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