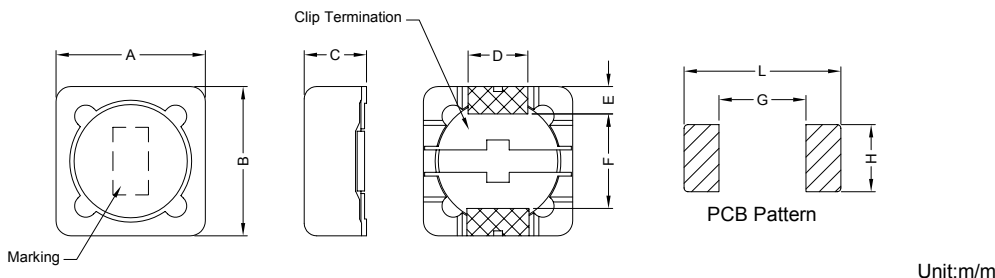


### 1. PART NO. EXPRESSION :

S D C 1 2 0 4 - 3 R 9 Y F  
 (a) (b) (c) (d)(e)

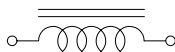
- (a) Series code
- (b) Dimension code
- (c) Inductance code : 3R9 = 3.9uH
- (d) Tolerance code : M = ±20%, Y = ±30%
- (e) F : RoHS Compliant

### 2. CONFIGURATION & DIMENSIONS :



A	B	C	D	E	F	G	H	L
12.8 Max.	12.8 Max.	5.0 Max.	5.0 Ref.	2.2 Ref.	7.6 Ref.	7.0 Ref.	5.4 Ref.	12.6 Ref.

### 3. SCHEMATIC :



### 4. GENERAL SPECIFICATION :

- a) Temp. rise : 40°C Typ.
- b) Rated current : Base on temp. rise &  $\Delta L/L0A \leq 35\%$
- c) Operating temp. : -40°C to +85°C
- d) Storage temp. : -40°C to +85°C



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## 5. ELECTRICAL CHARACTERISTICS :

Part No.	Inductance ( $\mu$ H)	Test Frequency (Hz)	DCR ( $\Omega$ ) Max.	IDC (A) Max.
SDC1204-3R9YF	3.9 $\pm$ 30%	1V / 100K	0.015	6.50
SDC1204-4R7YF	4.7 $\pm$ 30%	1V / 100K	0.018	5.70
SDC1204-6R8YF	6.8 $\pm$ 30%	1V / 100K	0.023	4.90
SDC1204-8R2YF	8.2 $\pm$ 30%	1V / 100K	0.026	4.60
SDC1204-100MF	10 $\pm$ 20%	1V / 100K	0.028	4.50
SDC1204-120MF	12 $\pm$ 20%	1V / 100K	0.038	4.00
SDC1204-150MF	15 $\pm$ 20%	1V / 100K	0.052	3.20
SDC1204-180MF	18 $\pm$ 20%	1V / 100K	0.060	3.10
SDC1204-220MF	22 $\pm$ 20%	1V / 100K	0.070	2.90
SDC1204-270MF	27 $\pm$ 20%	1V / 100K	0.080	2.80
SDC1204-330MF	33 $\pm$ 20%	1V / 100K	0.097	2.70
SDC1204-390MF	39 $\pm$ 20%	1V / 100K	0.132	2.10
SDC1204-470MF	47 $\pm$ 20%	1V / 100K	0.160	1.90
SDC1204-560MF	56 $\pm$ 20%	1V / 100K	0.190	1.80
SDC1204-680MF	68 $\pm$ 20%	1V / 100K	0.220	1.50
SDC1204-820MF	82 $\pm$ 20%	1V / 100K	0.260	1.30
SDC1204-101MF	100 $\pm$ 20%	1V / 100K	0.308	1.20
SDC1204-121MF	120 $\pm$ 20%	1V / 100K	0.380	1.10
SDC1204-151MF	150 $\pm$ 20%	1V / 100K	0.530	0.95
SDC1204-181MF	180 $\pm$ 20%	1V / 100K	0.620	0.85
SDC1204-221MF	220 $\pm$ 20%	1V / 100K	0.700	0.80
SDC1204-271MF	270 $\pm$ 20%	1V / 100K	0.870	0.60
SDC1204-331MF	330 $\pm$ 20%	1V / 100K	0.990	0.50



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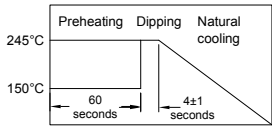
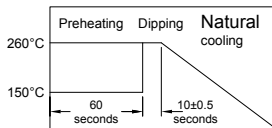
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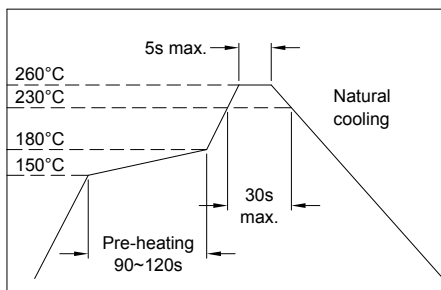


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## 6. RELIABILITY AND TEST CONDITIONS :

ITEM	PERFORMANCE	TEST CONDITION															
Mechanical Performance Test																	
Solderability Test	More than 90% of the terminal electrode should be covered with solder.  	Preheat : 150°C, 60sec. Solder : Sn-Ag3.0-Cu0.5 Solder Temperature : 245±5°C Flux for lead free : rosin Dip Time : 4±1sec.															
Solder Heat Resistance	1. Appearance : No significant abnormality 2. Inductance change : Within ±20%  	Preheat : 150°C, 60sec. Solder : Sn-Ag3.0-Cu0.5 Solder Temperature : 260±5°C Flux for lead free : rosin Dip Time : 10±0.5sec.															
Reliability Test																	
High Temperature Life Test		Temperature : 85±2°C Time : 500 hours Applied current : rated current															
Thermal Shock	1. Appearance : No damage 2. Inductance : Within ±20% of initial value.	Conditions of 1 cycle. <table border="1" data-bbox="938 953 1279 1079"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Times (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±2</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room Temperature</td> <td>15</td> </tr> <tr> <td>3</td> <td>+85±2</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room Temperature</td> <td>15</td> </tr> </tbody> </table> Total : 50 cycles	Step	Temperature (°C)	Times (min.)	1	-25±2	30±3	2	Room Temperature	15	3	+85±2	30±3	4	Room Temperature	15
Step	Temperature (°C)	Times (min.)															
1	-25±2	30±3															
2	Room Temperature	15															
3	+85±2	30±3															
4	Room Temperature	15															
Humidity Resistance	1. Appearance : No damage 2. Inductance : Within ±20% of initial value.	Temperature : 40±2°C Humidity : 90% to 95% Applied Current : Rated Current Time : 500 hours															
Random Vibration Test	Appearance : Cracking, chipping & any other defects harmful to the characteristics should not be allowed.	Frequency : 10-55-10Hz for 1 min. Amplitude : 1.52mm Directions & times : X, Y, Z directions for 2 hours. A period of 2 hours in each of 3 mutually perpendicular directions (Total 6 hours).															



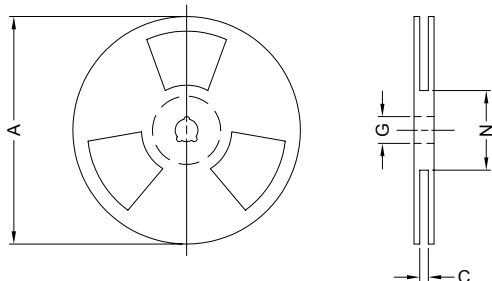
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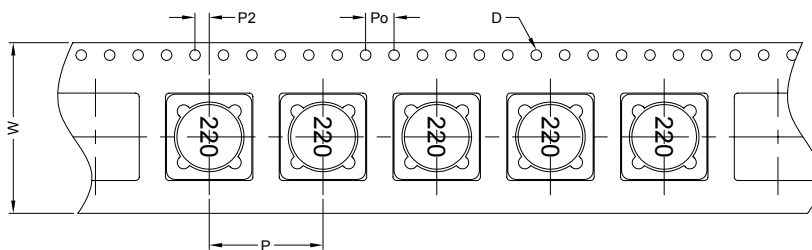
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## 7. PACKAGING INFORMATION :

### 7-1. Tape and Reel Dimension



Type	A(mm)	C(mm)	G(mm)	N(mm)
13" x 24mm	330	24.5±0.5	13.5±0.5	100±1



W(mm)	P(mm)	P2(mm)	D(mm)	Po(mm)	Quantity ( pcs )
24.0±0.3	16±0.1	2±0.1	1.5+0.25	4±0.1	600

## Application Notice

### 1. Storage Conditions :

To maintain the solderability of terminal electrodes :

- Temperature and humidity conditions : Less than 40°C and 70% RH.
- Recommended products should be used within 6 months from the time of delivery.
- The packaging material should be kept where no chlorine or sulfur exists in the air.

### 2. Transportation :

- Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- The use of tweezers or vacuum pick up is strongly recommended for individual components.
- Bulk handling should ensure that abrasion and mechanical shock are minimized.



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