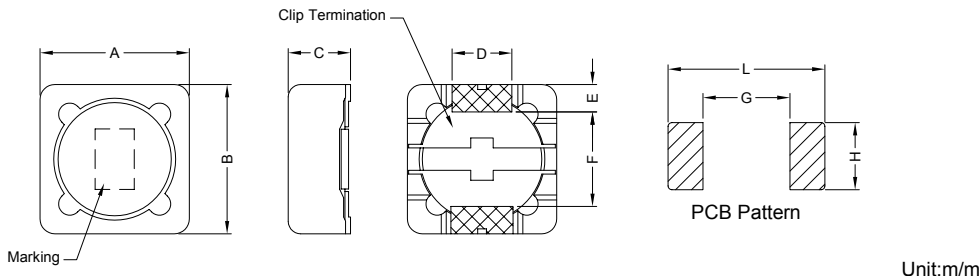


1. PART NO. EXPRESSION :

$\frac{S}{(a)} \frac{D}{(b)} \frac{C}{(c)} \frac{1}{(d)} \frac{2}{(e)} \frac{0}{(e)} \frac{5}{(e)} - \frac{1}{(e)} \frac{R}{(e)} \frac{3}{(e)} \frac{Y}{(e)} \frac{F}{(e)}$

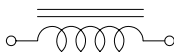
- (a) Series code
- (b) Dimension code
- (c) Inductance code : 1R3 = 1.3uH
- (d) Tolerance code : M = $\pm 20\%$, Y = $\pm 30\%$
- (e) F : RoHS Compliant

2. CONFIGURATION & DIMENSIONS :



A	B	C	D	E	F	G	H	L
12.8 Max.	12.8 Max.	6.0 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 & $\Delta L/L0A = 35\%$
- 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 (μ H)	Test Frequency (Hz)	DCR (Ω) Max.	IDC (A) Max.
SDC1205-1R3YF	1.3 \pm 30%	1V / 100K	0.012	8.00
SDC1205-2R1YF	2.1 \pm 30%	1V / 100K	0.014	7.00
SDC1205-3R1YF	3.1 \pm 30%	1V / 100K	0.017	6.00
SDC1205-4R4YF	4.4 \pm 30%	1V / 100K	0.020	5.00
SDC1205-5R8YF	5.8 \pm 30%	1V / 100K	0.021	4.40
SDC1205-7R5YF	7.5 \pm 30%	1V / 100K	0.024	4.20
SDC1205-100MF	10 \pm 20%	1V / 1K	0.025	4.00
SDC1205-120MF	12 \pm 20%	1V / 1K	0.027	3.50
SDC1205-150MF	15 \pm 20%	1V / 1K	0.030	3.30
SDC1205-180MF	18 \pm 20%	1V / 1K	0.034	3.00
SDC1205-220MF	22 \pm 20%	1V / 1K	0.036	2.80
SDC1205-270MF	27 \pm 20%	1V / 1K	0.051	2.30
SDC1205-330MF	33 \pm 20%	1V / 1K	0.057	2.10
SDC1205-390MF	39 \pm 20%	1V / 1K	0.068	2.00
SDC1205-470MF	47 \pm 20%	1V / 1K	0.075	1.80
SDC1205-560MF	56 \pm 20%	1V / 1K	0.110	1.70
SDC1205-680MF	68 \pm 20%	1V / 1K	0.120	1.50
SDC1205-820MF	82 \pm 20%	1V / 1K	0.140	1.40
SDC1205-101MF	100 \pm 20%	1V / 1K	0.160	1.30
SDC1205-121MF	120 \pm 20%	1V / 1K	0.170	1.10
SDC1205-151MF	150 \pm 20%	1V / 1K	0.230	1.00
SDC1205-181MF	180 \pm 20%	1V / 1K	0.290	0.90
SDC1205-221MF	220 \pm 20%	1V / 1K	0.400	0.80
SDC1205-271MF	270 \pm 20%	1V / 1K	0.460	0.75
SDC1205-331MF	330 \pm 20%	1V / 1K	0.510	0.68
SDC1205-391MF	390 \pm 20%	1V / 1K	0.690	0.65
SDC1205-471MF	470 \pm 20%	1V / 1K	0.770	0.58
SDC1205-561MF	560 \pm 20%	1V / 1K	0.860	0.54
SDC1205-681MF	680 \pm 20%	1V / 1K	1.200	0.48
SDC1205-821MF	820 \pm 20%	1V / 1K	1.340	0.43
SDC1205-102MF	1000 \pm 20%	1V / 1K	1.530	0.40



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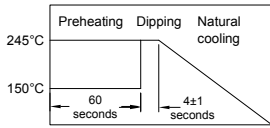
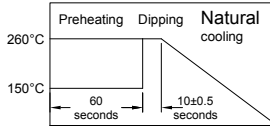
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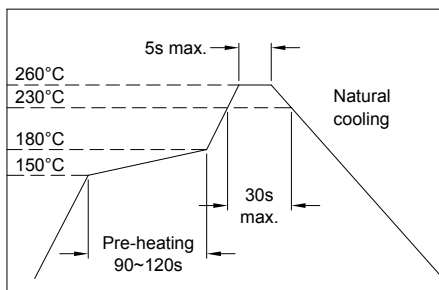


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6. RELIABILITY AND TEST CONDITIONS :

ITEM	PERFORMANCE	TEST CONDITION															
Mechanical Performance Test																	
Solderability Test	<p>More than 90% of the terminal electrode should be covered with solder.</p> 	<p>Preheat : 150°C, 60sec. Solder : Sn-Ag3.0-Cu0.5 Solder Temperature : 245±5°C Flux for lead free : rosin Dip Time : 4±1sec.</p>															
Solder Heat Resistance	<p>1. Appearance : No significant abnormality 2. Inductance change : Within ±20%</p> 	<p>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.</p>															
Reliability Test																	
High Temperature Life Test		<p>Temperature : 85±2°C Time : 500 hours Applied current : rated current</p>															
Thermal Shock	<p>1. Appearance : No damage 2. Inductance : Within ±20% of initial value.</p>	<p>Conditions of 1 cycle.</p> <table border="1"> <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> <p>Total : 50 cycles</p>	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	<p>1. Appearance : No damage 2. Inductance : Within ±20% of initial value.</p>	<p>Temperature : 40±2°C Humidity : 90% to 95% Applied Current : Rated Current Time : 500 hours</p>															
Random Vibration Test	<p>Appearance : Cracking, chipping & any other defects harmful to the characteristics should not be allowed.</p>	<p>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).</p>															



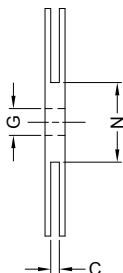
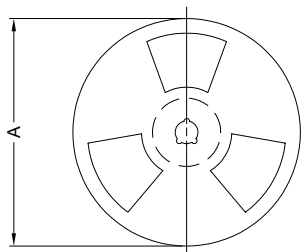
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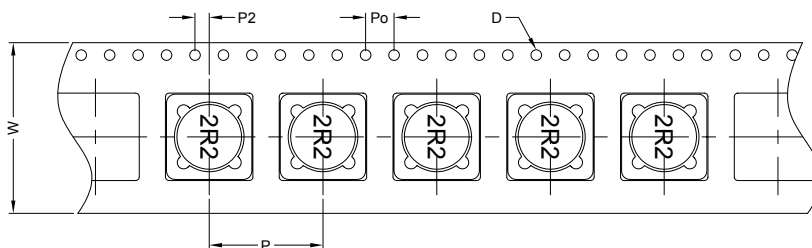
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7. PACKAGING INFORMATION :

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 :

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

2. Transportation :

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



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