

# POWER SMD INDUCTORS

MODEL NO. : SPC-0905 SERIES (CDR105B COMPATIBLE)

## FEATURES:

\* SUPERIOR QUALITY FROM AN  
AUTOMATED PRODUCTION LINE.

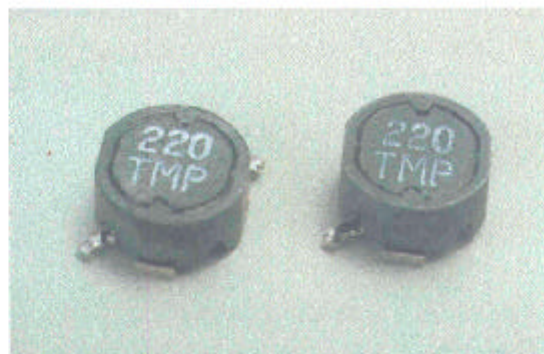
\* PICK AND PLACE COMPATIBLE.

\* TAPE AND REEL PACKING.

## APPLICATION :

\* NOTEBOOK COMPUTERS.

\* DC-DC CONVERTERS. \*DC-AC INVERTERS.



## ELECTRICAL SPECIFICATION:

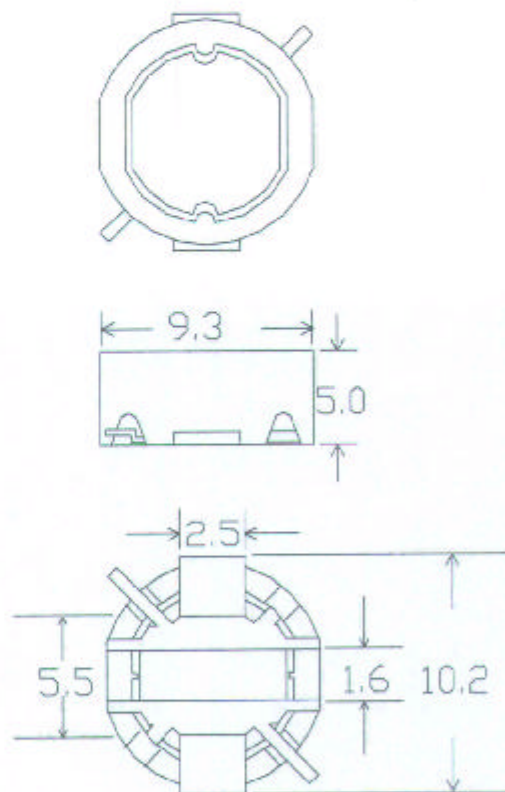
| PART NO.     | INDUCTANCE (uH) | D.C.R. MAX (Ω) | RATED CURRENT (A) |
|--------------|-----------------|----------------|-------------------|
| SPC-0905-100 | 10              | 0.06           | 2.06              |
| SPC-0905-120 | 12              | 0.07           | 1.94              |
| SPC-0905-150 | 15              | 0.07           | 1.72              |
| SPC-0905-180 | 18              | 0.08           | 1.58              |
| SPC-0905-220 | 22              | 0.08           | 1.42              |
| SPC-0905-270 | 27              | 0.10           | 1.32              |
| SPC-0905-330 | 33              | 0.11           | 1.16              |
| SPC-0905-390 | 39              | 0.12           | 1.10              |
| SPC-0905-470 | 47              | 0.14           | 1.00              |
| SPC-0905-560 | 56              | 0.19           | 0.93              |
| SPC-0905-680 | 68              | 0.21           | 0.85              |
| SPC-0905-820 | 82              | 0.28           | 0.79              |
| SPC-0905-101 | 100             | 0.34           | 0.72              |
| SPC-0905-121 | 120             | 0.37           | 0.63              |
| SPC-0905-151 | 150             | 0.51           | 0.55              |
| SPC-0905-181 | 180             | 0.57           | 0.50              |
| SPC-0905-221 | 220             | 0.78           | 0.47              |
| SPC-0905-271 | 270             | 0.87           | 0.41              |
| SPC-0905-331 | 330             | 1.20           | 0.37              |
| SPC-0905-391 | 390             | 1.34           | 0.35              |
| SPC-0905-471 | 470             | 1.50           | 0.33              |

NOTE(1): TEST FREQUENCY: 100KHz, 1VRMS.

NOTE(2): 10~27uH  $\pm 20\%$ , 33~82uH  $\pm 15\%$ , 100~470uH  $\pm 10\%$ .

NOTE(3): THIS INDICATES THE VALUE OF CURRENT WHEN THE INDUCTANCE IS 10% LOWER THAN ITS INITIAL VALUE AT D.C. CURRENT WHEN  $\Delta T = 40^\circ\text{C}$  WHICHEVER IS LOWER.

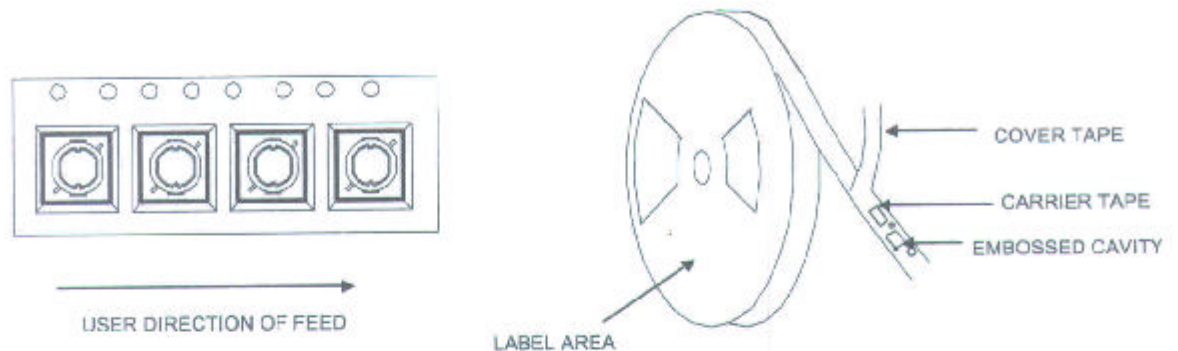
## PHYSICAL DIMENSION : (UNIT:mm)



TOLERANCE:  $\pm 0.3$

## PACKING

### Tape and Reel Orientation



NOTE : Top view shown with cover tape removed.

| TAPE<br>WIDTH | REEL<br>WIDTH | COMPONENT<br>PITCH | UNITS<br>PER<br>REEL |
|---------------|---------------|--------------------|----------------------|
| 24mm          | 32mm          | 16mm               | 800                  |

#### TAPE SPECIFICATIONS:

Carrier Tape Type : Conductive.

Cover Tape Type : Antistatic.

Cover Tape Adhesion to Carrier : 10 - 70 grams.

#### REEL SPECIFICATIONS:

Diameter (flange) : 13" (330.2mm)

STANDARDS : All embossed carrier tape packaging will be accomplished in compliance with latest revision of EIA-481 "Taping of surface Mount Components for Automatic Placement".

## ENVIRONMENTAL PERFORMANCE

| ITEM | TEST                  | CONDITION                                                                                                                                                                                                                                                                                                                    |
|------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Thermal Shock         | one cycle shall consist of :<br>(1) 30 minutes at temperature -30°C.<br>(2) 15 seconds maximum at room ambient.<br>(3) 30 minutes at temperature +85°C.<br>(4) 15 seconds maximum at room ambient.<br>Subject samples to 10 cycles. Test per applicable devices specification after a 4 hours stabilization at room ambient. |
| 2    | Vibration             | Inductance deviation within $\pm 3.0\%$ after vibration for 1 hour.<br>In each of three orientations at sweep vibration (10-50-10Hz) with 1.5mm P-P amplitude.                                                                                                                                                               |
| 3    | Solderability         | Solder pot at $230^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , with kester 1544 solder flux. Dip parts into solder pot containing 63/37 molten alloy for 5 second $\pm 1$ second. Wetting must occur on a minimum of 90% of the terminations.                                                                                   |
| 4    | Operating Temperature | -25°C ~ +80°C ( coil contain heat).                                                                                                                                                                                                                                                                                          |
| 5    | Humidity              | Inductance deviation within $\pm 5.0\%$ .<br>After 96 hour in 90-95% relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.                                                                                                                                                               |
| 6    | Mechanical Shock      | Inductance deviation within $\pm 5.0\%$ after drop down with $981\text{m/s}^2$ (100G) shock.<br>Attitude upon a rubber block method shock testing machine, for 1 time, in each of three orientations.                                                                                                                        |

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