

# SMD POWER INDUCTORS

MODEL NO. : SMI-75 SERIES (CD75 COMPATIBLE)

## FEATURES:

- \* SUPERIOR QUALITY FROM AN AUTOMATED PRODUCTION LINE.
- \* PICK AND PLACE COMPATIBLE.
- \* TAPE AND REEL PACKING.

## APPLICATION :

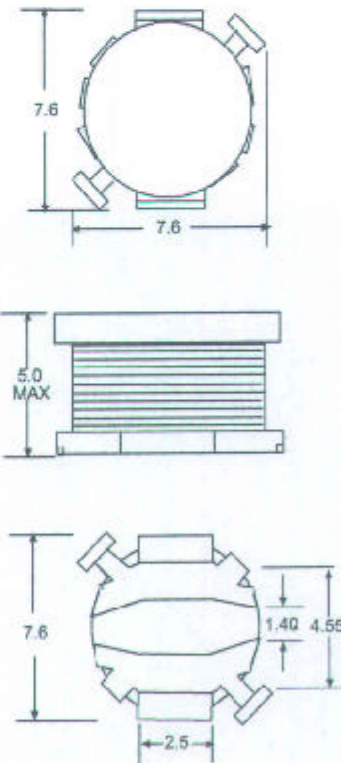
- \* NOTEBOOK COMPUTERS.
- \* DC-DC CONVERTORS.
- \* DC-AC INVERTERS.



## ELECTRICAL SPECIFICATION:

| PART NO.   | INDUCTANCE (uH) | D.C.R. MAX (Ω) | RATED CURRENT (A) |
|------------|-----------------|----------------|-------------------|
| SMI-75-100 | 10              | 0.07           | 2.30              |
| SMI-75-120 | 12              | 0.08           | 2.00              |
| SMI-75-150 | 15              | 0.09           | 1.80              |
| SMI-75-180 | 18              | 0.10           | 1.60              |
| SMI-75-220 | 22              | 0.11           | 1.50              |
| SMI-75-270 | 27              | 0.12           | 1.30              |
| SMI-75-330 | 33              | 0.13           | 1.20              |
| SMI-75-390 | 39              | 0.16           | 1.10              |
| SMI-75-470 | 47              | 0.18           | 1.00              |
| SMI-75-560 | 56              | 0.24           | 0.94              |
| SMI-75-680 | 68              | 0.28           | 0.85              |
| SMI-75-820 | 82              | 0.37           | 0.78              |
| SMI-75-101 | 100             | 0.43           | 0.72              |
| SMI-75-121 | 120             | 0.47           | 0.66              |
| SMI-75-151 | 150             | 0.64           | 0.58              |
| SMI-75-181 | 180             | 0.71           | 0.51              |
| SMI-75-221 | 220             | 0.96           | 0.49              |
| SMI-75-271 | 270             | 1.11           | 0.42              |
| SMI-75-331 | 330             | 1.26           | 0.40              |
| SMI-75-391 | 390             | 1.77           | 0.36              |
| SMI-75-471 | 470             | 1.96           | 0.34              |

## PHYSICAL DIMENSION : (UNIT:mm)



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

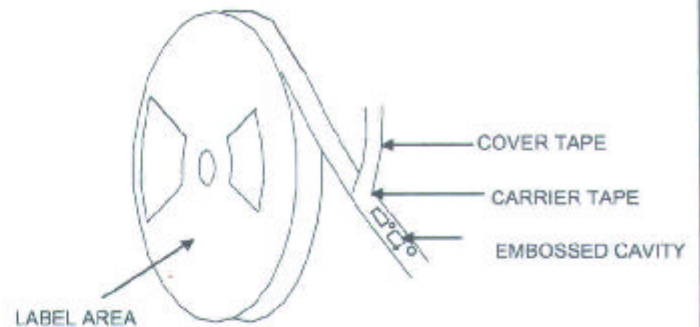
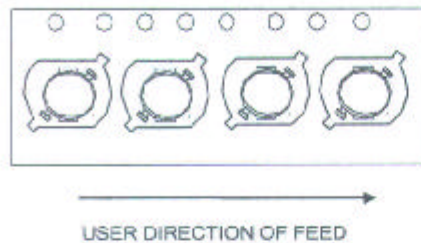
NOTE(2): 10~470uH  $\pm 10\%$ .

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.

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 |
|---------------|---------------|--------------------|----------------------|
| 16mm          | 22.4mm        | 12mm               | 1000                 |

#### 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) 30minutes 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.                                                                                                                    |