#### SURFACE MOUNT MOLDING TYPE **POWER INDUCTOR SERIES MTPI1265**

#### **FEATURES**

### - Low profile

- High current handling capacity
- Low noise and low DCR
- High reliability and efficiency
- RoHS compliant and Halogen free

#### **ELECTRICAL SPECIFICATIONS**

| - Inductance range    | 1.0uH to 10.0uH               |
|-----------------------|-------------------------------|
| - Test frequency      | 100 KHz with test level 1.0 V |
| - Test equipment      | Quadtech 1910 L analyzer      |
| - Rated current range | 15.5 to 48.0 Amps             |
| - Tolerance           | ± 20%                         |
| - Rated current       | Refer to notes below          |

#### PHYSICAL SPECIFICATIONS

| - Operating temp.       | -40°C to +125°C |                           |  |  |  |
|-------------------------|-----------------|---------------------------|--|--|--|
| - Core                  | Mixed           | /lixed material           |  |  |  |
| - Terminal construction | Solder          | plating                   |  |  |  |
| - Packaging             | Box             | 1000 pieces per inner box |  |  |  |
|                         | T & R           | 500 pieces per reel       |  |  |  |
| - Tape & reel spec.     | Tape            | 24 mm embossed carrier    |  |  |  |
|                         | Reel            | 330 mm reel               |  |  |  |

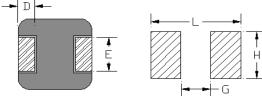
#### DIMENSIONS IN MILLIMETERS

| - Length A          | $13.5 \pm 0.5$ |
|---------------------|----------------|
| - Width B           | $12.5 \pm 0.3$ |
| - Height C          | $6.2 \pm 0.3$  |
| - Terminal width D  | $2.3 \pm 0.3$  |
| - Terminal length E | $4.7 \pm 0.3$  |

#### SUGGESTED LAND PATTERN

- -L = 14.2 mm ref.
- -G = 8.0 mm ref.
- H = 5.0 mm ref.

## C. Α 5R6 В



Notes:

(1) Based on  $\Delta T$  approximately 40°C

(2) L drops 20% typical

All test data based on 25°C ambient

Part temperature (ambient + temperature rise) must not exceed 125°C under worst case operating contions. Circuit design, components, PCB trace size, airflow and other cooling provisions all effect the part temperature.

# **SPECIFICATIONS**

| Part<br>Number | L<br>(µH) | Tol<br>%<br>± | DCR<br>max<br>(mΩ) | Ra<br>Curre<br>I <sub>rms</sub> <sup>(1)</sup> | ted<br>nt (A)<br>I <sub>sat</sub> <sup>(2)</sup> |
|----------------|-----------|---------------|--------------------|--|--|
| MTPI1265-1R0M  | 1.00      | 20            | 2.3                | 30.0   | 48.0   |
| MTPI1265-2R2M  | 2.20      | 20            | 4.2                | 22.0   | 37.0   |
| MTPI1265-3R3M  | 3.30      | 20            | 6.8                | 18.0   | 30.0   |
| MTPI1265-4R7M  | 4.70      | 20            | 8.4                | 13.5   | 28.0   |
| MTPI1265-5R6M  | 5.60      | 20            | 10.0               | 12.5   | 23.0   |
| MTPI1265-6R8M  | 6.80      | 20            | 11.5               | 11.5   | 18.0   |
| MTPI1265-8R2M  | 8.20      | 20            | 15.5               | 10.5   | 16.0   |
| MTPI1265-100M  | 10.0      | 20            | 16.5               | 10.0   | 15.5   |