

**SURFACE MOUNT MOLDED TYPE  
POWER INDUCTOR SERIES MTPI0503**

**FEATURES**

- Low profile
- High current handling capacity
- Low noise and low DCR
- High reliability and efficiency
- RoHS compliant plus Lead and Halogen free
- Magnetically shielded

**ELECTRICAL SPECIFICATIONS**

- Inductance range      0.47uH to 10.0uH
- Test frequency        100 KHz with test level 1.0 V
- Test equipment        Quadtech 1910 L analyzer
- Rated current range    3.5 to 16.0 Amps
- Tolerance                ± 20%
- Rated current            Refer to notes below

**SPECIFICATIONS**

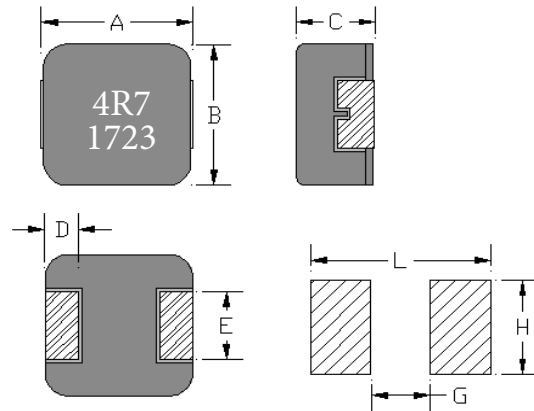
Part Number	L (μH)	Tol % ±	DCR max (mΩ)	Rated Current (A)	
				I <sub>rms</sub> <sup>(1)</sup>	I <sub>sat</sub> <sup>(2)</sup>
MTPI0503-R47M	0.47	20	7.4	12.0	16.0
MTPI0503-R68M	0.68	20	12.0	8.5	14.0
MTPI0503-1R0M	1.00	20	14.0	7.0	11.0
MTPI0503-2R2M	2.20	20	36.0	5.5	9.0
MTPI0503-3R3M	3.30	20	38.0	5.0	8.0
MTPI0503-4R7M	4.70	20	53.0	4.6	6.0
MTPI0503-5R6M	5.60	20	63.0	4.25	4.5
MTPI0503-6R8M	6.80	20	76.2	4.0	4.0
MTPI0503-100M	10.0	20	128.0	2.75	3.5

**PHYSICAL SPECIFICATIONS**

- Operating temp.        -40°C to +125°C
- Core                      Mixed material
- Terminal construction Solder plating
- Packaging                Box    4000 pieces per inner box  
                                  T & R 2000 pieces per reel
- Tape & reel spec.      Tape 12 mm embossed carrier  
                                  Reel 330 mm reel

**DIMENSIONS IN MILLIMETERS**

- Length A                5.7 ± 0.3
- Width B                 5.2 ± 0.2
- Height C                2.8 ± 0.2
- Terminal width D      1.1 ± 0.3
- Terminal length E     1.5 ± 0.3



**SUGGESTED LAND PATTERN**

- L = 6.5 mm ref.
- G = 2.5 mm ref.
- H = 1.8 mm ref.

Notes:

- (1) Based on ΔT 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 conditions.  
Circuit design, components, PCB trace size, airflow and other cooling provisions all effect the part temperature.