

### FEATURES

- Low profile and thin thickness.
- Monolithic structure for high reliability.
- Closed magnetic circuit design reduces leakage flux and EMI.
- Operating temperature: -40°C ~ +85°C.



### APPLICATIONS

- DC-DC converter circuits for mobile phones, wearable devices, DVCs, HDDs, etc.

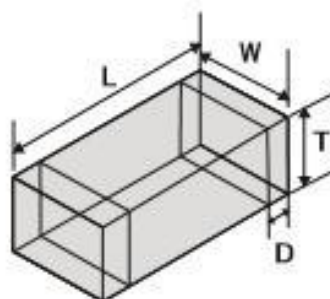
### PRODUCT IDENTIFICATION

MCPI 201610 H 1R0 M T

(1) (2) (3) (4) (5) (6)

- (1) 系列名称 Series name
- (2) 产品尺寸 Product dimensions
- (3) 特性类别 Feature Type (S: Standard Type, H: High Current Type)
- (4) 电感量 Inductance Value (1R0:1.0uH, 100:10uH, 101:100uH)
- (5) 电感公差 Inductance Tolerance(K:10%, M:20%, N:30%)
- (6) 包装 Package(T:Tape&Reel 卷盘编带)

### SHAPE AND DIMENSIONS



| Series     | L       | W       | T       | D       |
|------------|---------|---------|---------|---------|
| MCPI160808 | 1.6±0.2 | 0.8±0.2 | 0.8±0.2 | 0.3±0.2 |
| MCPI201210 | 2.0±0.2 | 1.2±0.2 | 0.9±0.2 | 0.5±0.3 |
| MCPI201610 | 3.2±0.2 | 1.6±0.2 | 0.9±0.2 | 0.5±0.3 |
| MCPI252010 | 2.5±0.2 | 2.0±0.2 | 1.0±0.2 | 0.5±0.3 |

Unit:mm

## SPECIFICATIONS

### MCPI160808 Series

| Part Number      | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Condition | DCR<br>( $\Omega$ ) | SRF Min.<br>(MHz) | Irms<br>(mA) |
|------------------|--------------------------|------------------|----------------|---------------------|-------------------|--------------|
| MCPI160808HR47MT | 0.47                     | 20               | 1MHz/1V        | 0.10 $\pm$ 30%      | 100               | 1050         |
| MCPI160808HR56MT | 0.56                     | 20               | 1MHz/1V        | 0.12 $\pm$ 30%      | 100               | 1050         |
| MCPI160808H1R0MT | 1.0                      | 20               | 1MHz/1V        | 0.20 $\pm$ 30%      | 98                | 900          |
| MCPI160808H1R8MT | 1.8                      | 20               | 1MHz/1V        | 0.24 $\pm$ 30%      | 95                | 750          |
| MCPI160808H2R2MT | 2.2                      | 20               | 1MHz/1V        | 0.24 $\pm$ 30%      | 95                | 750          |
| MCPI160808H4R7MT | 4.7                      | 20               | 1MHz/1V        | 0.50 $\pm$ 30%      | 65                | 700          |

### MCPI201210 Series

| Part Number      | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Condition | DCR<br>( $\Omega$ ) | SRF Min.<br>(MHz) | Irms<br>(mA) |
|------------------|--------------------------|------------------|----------------|---------------------|-------------------|--------------|
| MCPI201210S1R0MT | 1.0                      | 20               | 1MHz/1V        | 0.14 $\pm$ 25%      | 75                | 300          |
| MCPI201210S2R2MT | 2.2                      | 20               | 1MHz/1V        | 0.224 $\pm$ 25%     | 50                | 220          |
| MCPI201210S3R3MT | 3.3                      | 20               | 1MHz/1V        | 0.24 $\pm$ 25%      | 35                | 200          |
| MCPI201210S4R7MT | 4.7                      | 20               | 1MHz/1V        | 0.30 $\pm$ 25%      | 25                | 180          |
| MCPI201210H1R0MT | 1.0                      | 20               | 1MHz/1V        | 0.11 $\pm$ 25%      | 75                | 1150         |
| MCPI201210H2R2MT | 2.2                      | 20               | 1MHz/1V        | 0.20 $\pm$ 25%      | 50                | 950          |
| MCPI201210H3R3MT | 3.3                      | 20               | 1MHz/1V        | 0.22 $\pm$ 25%      | 35                | 800          |
| MCPI201210H4R7MT | 4.7                      | 20               | 1MHz/1V        | 0.30 $\pm$ 25%      | 25                | 750          |
| MCPI201210H6R8MT | 6.8                      | 20               | 1MHz/1V        | 0.30 $\pm$ 25%      | 25                | 600          |

### MCPI201610 Series

| Part Number      | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Condition | DCR<br>( $\Omega$ ) | SRF Min.<br>(MHz) | Irms<br>(mA) |
|------------------|--------------------------|------------------|----------------|---------------------|-------------------|--------------|
| MCPI201610H1R0MT | 1.0                      | 20               | 1MHz/1V        | 0.10 $\pm$ 25%      | 70                | 1400         |
| MCPI201610H2R2MT | 2.2                      | 20               | 1MHz/1V        | 0.16 $\pm$ 25%      | 50                | 1200         |
| MCPI201610H3R3MT | 3.3                      | 20               | 1MHz/1V        | 0.20 $\pm$ 25%      | 40                | 1200         |
| MCPI201610H4R7MT | 4.7                      | 20               | 1MHz/1V        | 0.26 $\pm$ 25%      | 30                | 1100         |

### MCPI252010 Series

| Part Number      | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Condition | DCR<br>( $\Omega$ ) | SRF Min.<br>(MHz) | Irms<br>(mA) |
|------------------|--------------------------|------------------|----------------|---------------------|-------------------|--------------|
| MCPI252010H1R0MT | 1.0                      | 20               | 1MHz/1V        | 0.06 $\pm$ 25%      | 70                | 1600         |
| MCPI252010H2R2MT | 2.2                      | 20               | 1MHz/1V        | 0.10 $\pm$ 25%      | 55                | 1300         |
| MCPI252010H3R3MT | 3.3                      | 20               | 1MHz/1V        | 0.14 $\pm$ 25%      | 30                | 1200         |
| MCPI252010H4R7MT | 4.7                      | 20               | 1MHz/1V        | 0.18 $\pm$ 25%      | 25                | 1100         |

### Note:

Irms: DC current that causes the temperature rise( $\Delta T=40^{\circ}\text{C}$ ) from  $25^{\circ}\text{C}$  ambient.