



## TSM SERIES



### FEATURES

- Shielded construction
- Frequency range up to 1.0 MHz
- Lowest DCR/ $\mu$ H, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Compliant to RoHS Directive 2002/95/EC



**RoHS**  
COMPLIANT

### Part numbering system

#### TSM 0420 - 3R3 M

A      B      C      D

**A** : Series Name.

**B** : Dimension.

**C** : Inductance. ( for example 3R3=3.3  $\mu$ H )

**D** : Inductance Tolerance. ( for example M= $\pm$ 20% )

- ⊙ All test Data is referenced to 25°C ambient.
- ⊙ Operating temperature range: -35°C to 125°C.
- ⊙ Irms: Typical Heat Rating DC Current would cause an approximately  $\Delta$ T of 40°C.
- ⊙ Isat: Typical Saturation DC Current would cause Lo to drop approximately 30%.
- ⊙ The Part temperature (ambient +  $\Delta$ T) should not exceed 125°C under worst case operating conditions.
- ⊙ Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

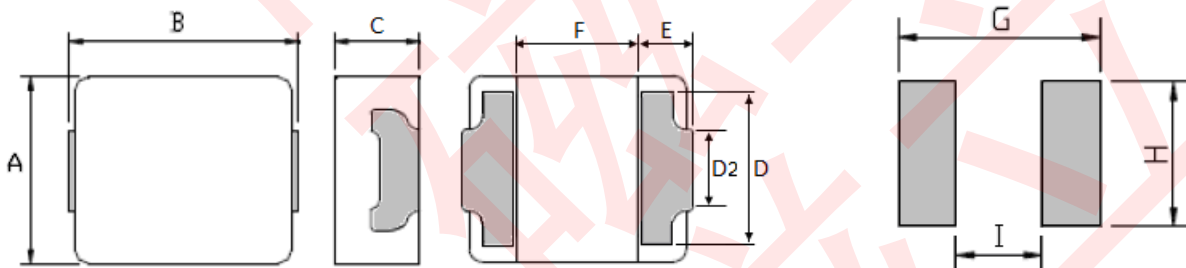


图 1

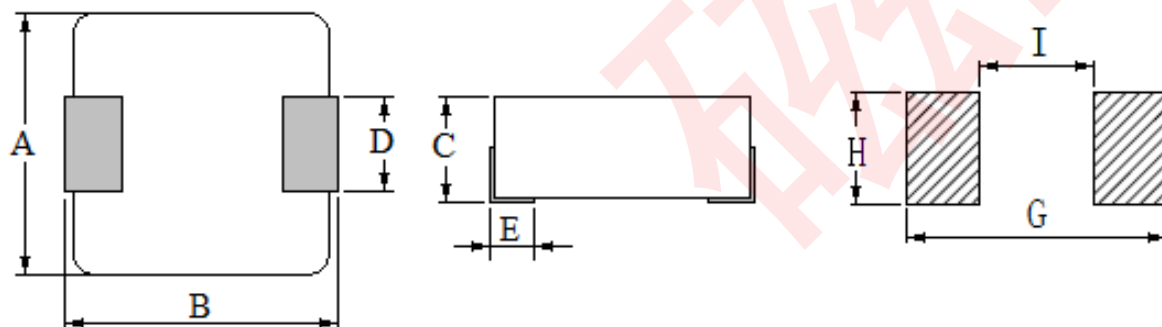
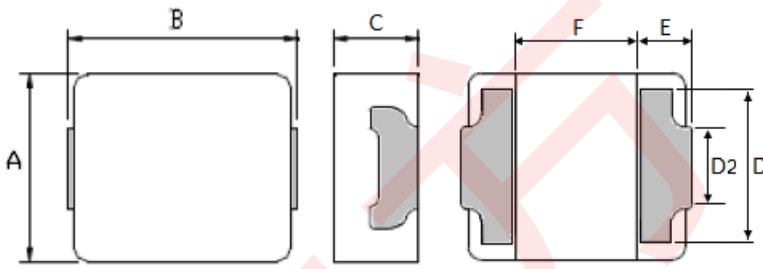


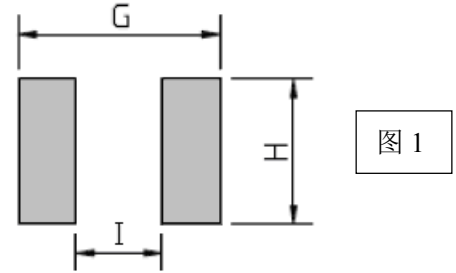
图 2

## TSM SERIES

### Dimension (Unit:mm)



### Land Pattern (Unit:mm)



| 系列        | 尺寸 | A       | B       | C       | D       | E       | G      | H      | I      | Packing (Pcs/Reel) |
|-----------|----|---------|---------|---------|---------|---------|--------|--------|--------|--------------------|
| TSM252012 |    | 2.0±0.2 | 2.5±0.2 | 1.2±0.1 | 1.8±0.2 | 0.6±0.1 | 2.8REF | 2.0REF | 1.2REF | <b>NEW</b>         |
| TSM0410   |    | 4.0±0.2 | 4.0±0.2 | 1.0Max  | 1.8±0.2 | 0.6±0.1 | 4.6REF | 2.0REF | 2.8REF | <b>NEW</b>         |

### Electrical Characteristics:

TEST CONDITION: AT 25°C: 1.0MHz/0.1V

| PART NO.       | L(0A)<br>(uH±20%) | I <sub>rms</sub><br>(Amperes) | I <sub>sat</sub><br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS, COATING<br>COLOR |
|----------------|-------------------|-------------------------------|-------------------------------|-----------------|----------------|---------------------------|
| TSM252012-R24M | 0.24              | 7.5                           | 8.1                           | 11.0            | 15.0           | <b>NEW</b>                |
| TSM252012-R33M | 0.33              | 6.0                           | 7.2                           | 15.0            | 20.0           | <b>NEW</b>                |
| TSM252012-R47M | 0.47              | 4.5                           | 5.6                           | 22.0            | 26.0           | <b>NEW</b>                |
| TSM252012-R68M | 0.68              | 4.3                           | 4.9                           | 29.0            | 35.0           | <b>NEW</b>                |
| TSM252012-1R0M | 1.0               | 3.4                           | 3.8                           | 45.0            | 58.0           | <b>NEW</b>                |
| TSM252012-1R5M | 1.5               | 2.8                           | 3.2                           | 60.0            | 72.0           | <b>NEW</b>                |
| TSM252012-2R2M | 2.2               | 2.6                           | 2.8                           | 85.0            | 102            | <b>NEW</b>                |
| TSM252012-3R3M | 3.3               | 2.1                           | 2.5                           | 130             | 156            | <b>NEW</b>                |
| TSM252012-4R7M | 4.7               | 1.6                           | 2.0                           | 185             | 222            | <b>NEW</b>                |
| TSM252012-6R8M | 6.8               | 1.5                           | 1.6                           | 260             | 312            | <b>NEW</b>                |
| TSM0410-R24M   | 0.24              | 7.0                           | 10.0                          | 10.0            | 12.0           | <b>NEW</b>                |
| TSM0410-R33M   | 0.33              | 6.4                           | 8.4                           | 14.0            | 17.0           | <b>NEW</b>                |
| TSM0410-R47M   | 0.47              | 5.8                           | 7.5                           | 17.0            | 20.0           | <b>NEW</b>                |
| TSM0410-R68M   | 0.68              | 4.7                           | 6.0                           | 27.0            | 32.0           | <b>NEW</b>                |
| TSM0410-1R0M   | 1.0               | 3.2                           | 4.4                           | 45.0            | 54.0           | <b>NEW</b>                |
| TSM0410-2R2M   | 2.2               | 2.4                           | 3.3                           | 80.0            | 96.0           | <b>NEW</b>                |
| TSM0410-4R7M   | 4.7               | 1.7                           | 2.4                           | 155.0           | 186.0          | <b>NEW</b>                |
| TSM0410-6R8M   | 6.8               | 1.5                           | 2.1                           | 210.0           | 255.0          | <b>NEW</b>                |
| TSM0410-100M   | 10.0              | 1.4                           | 2.0                           | 270.0           | 336.0          | <b>NEW</b>                |

以上为新品。

The above is a new product.

## TSM SERIES

### Mechanical dimension: (Unit: mm)

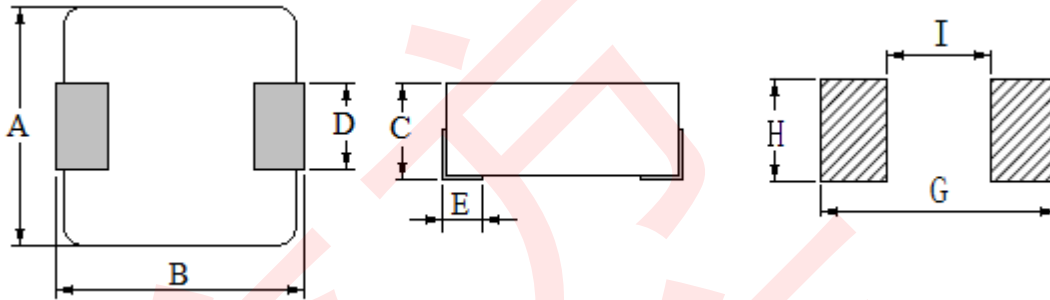


图 2

### Mechanical dimension and packing:

| 系列              | 尺寸 | A              | B              | C             | D              | E              | G             | H             | I             | Packing (Pcs/Reel) |
|-----------------|----|----------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------------|
| TSM0412         |    | 4.0±0.3        | 4.5±0.3        | 1.2Max        | 1.5±0.3        | 0.8±0.3        | 5.0REF        | 2.3REF        | 1.7REF        | 3000               |
| TSM0415         |    | 4.0±0.3        | 4.5±0.3        | 1.5Max        | 1.5±0.3        | 0.8±0.3        | 5.0REF        | 2.3REF        | 1.7REF        | 3000               |
| TSM0420         |    | 4.0±0.3        | 4.5±0.3        | 2.0Max        | 1.5±0.3        | 0.8±0.3        | 5.0REF        | 2.3REF        | 1.7REF        | 3000               |
| TSM0520         |    | 4.7±0.3        | 5.3±0.4        | 2.0Max        | 2.0±0.5        | 1.0±0.5        | 6.0REF        | 2.8REF        | 2.0REF        | 3000               |
| TSM0530         |    | 4.7±0.3        | 5.3±0.4        | 3.0Max        | 2.0±0.5        | 1.0±0.5        | 6.0REF        | 2.8REF        | 2.0REF        | 2000               |
| TSM0550         |    | 4.7±0.3        | 5.3±0.4        | 5.0Max        | 2.0±0.5        | 1.0±0.5        | 6.0REF        | 2.8REF        | 2.0REF        | 1500               |
| <b>TSM A612</b> |    | <b>6.0±0.3</b> | <b>6.0±0.3</b> | <b>1.2Max</b> | <b>3.8±0.5</b> | <b>1.8±0.5</b> | <b>7.2REF</b> | <b>4.5REF</b> | <b>2.4REF</b> | <b>NEW</b>         |
| TSM A630        |    | 6.0±0.3        | 6.5±0.5        | 3.0Max        | 2.5±0.5        | 1.3±0.5        | 7.2REF        | 3.2REF        | 3.0REF        | 1000               |
| TSM A640        |    | 6.0±0.3        | 6.5±0.5        | 4.0Max        | 2.5±0.5        | 1.3±0.5        | 7.2REF        | 3.2REF        | 3.0REF        | 1000               |
| TSM0618         |    | 6.6±0.3        | 7.2±0.5        | 1.8Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 2000               |
| TSM0620         |    | 6.6±0.3        | 7.2±0.5        | 2.0Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 2000               |
| TSM0624         |    | 6.6±0.3        | 7.2±0.5        | 2.4Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 2000               |
| TSM0630         |    | 6.6±0.3        | 7.2±0.5        | 3.0Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 1000               |
| TSM0630A        |    | 6.6±0.3        | 7.2±0.5        | 3.0Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 1000               |
| TSM0640         |    | 6.6±0.3        | 7.2±0.5        | 4.0Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 1000               |
| TSM0650         |    | 6.6±0.3        | 7.2±0.5        | 5.0Max        | 3.0±0.5        | 1.6±0.5        | 8.0REF        | 3.8REF        | 3.7REF        | 1000               |
| TSM1040         |    | 10±0.5         | 11.5±1.0       | 4.0Max        | 3.0±0.5        | 2.2±0.5        | 13.0REF       | 3.8REF        | 6.0REF        | 1000               |
| TSM1050         |    | 10±0.5         | 11.5±1.0       | 5.0Max        | 3.0±0.5        | 2.2±0.5        | 13.0REF       | 3.8REF        | 6.0REF        | 800                |
| TSM1235         |    | 12.8±0.5       | 13.5±1.0       | 4.0Max        | 3.8±0.5        | 2.5±0.5        | 14.5REF       | 5.0REF        | 7.8REF        | 500                |
| TSM1250         |    | 12.8±0.5       | 13.5±1.0       | 5.0Max        | 3.8±0.5        | 2.5±0.5        | 14.5REF       | 5.0REF        | 7.8REF        | 500                |
| TSM1265         |    | 12.8±0.5       | 13.5±1.0       | 6.5Max        | 3.8±0.5        | 2.5±0.5        | 14.5REF       | 5.0REF        | 7.8REF        | 400                |
| TSM1770         |    | 17.2Max        | 18.0±0.5       | 7.2Max        | 11.9±0.3       | 2.7±0.5        | 19.5REF       | 13REF         | 11REF         | 300                |

## TSM SERIES

**Electrical Characteristics:**      **TEST CONDITION:** AT 25oC: 100KHz/0.1V

| PART NO.     | L(0A)<br>(uH±20%) | I <sub>rms</sub><br>(Amperes) | I <sub>sat</sub><br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS,COATING<br>COLOR |
|--------------|-------------------|-------------------------------|-------------------------------|-----------------|----------------|--------------------------|
| TSM0412-R47M | 0.47              | 4.5                           | 6.0                           | 24.0            | 30.0           | Unconventional           |
| TSM0412-R68M | 0.68              | 3.5                           | 5.0                           | 36.0            | 41.0           | Unconventional           |
| TSM0412-1R0M | 1.0               | 2.5                           | 5.0                           | 60.0            | 79.0           | Unconventional           |
| TSM0412-1R5M | 1.5               | 2.0                           | 3.5                           | 74.0            | 80.0           | Unconventional           |
| TSM0412-2R2M | 2.2               | 2.0                           | 3.0                           | 96.0            | 110.0          | Unconventional           |
| TSM0415-R47M | 0.47              | 5.0                           | 9.0                           | 20.0            | 27.0           | Unconventional           |
| TSM0415-1R0M | 1.0               | 4.0                           | 6.0                           | 39.0            | 50.0           | Unconventional           |
| TSM0415-1R5M | 1.5               | 3.5                           | 5.5                           | 48.0            | 63.0           | Unconventional           |
| TSM0415-2R2M | 2.2               | 2.5                           | 4.0                           | 67.0            | 86.0           | Unconventional           |
| TSM0415-3R3M | 3.3               | 2.0                           | 3.5                           | 116.0           | 156.0          | Unconventional           |
| TSM0420-R10M | 0.10              | 12.0                          | 25.0                          | 5.5             | 8.0            |                          |
| TSM0420-R22M | 0.22              | 10.0                          | 14.0                          | 6.3             | 10.0           |                          |
| TSM0420-R36M | 0.36              | 8.0                           | 11.0                          | 8.6             | 12.0           |                          |
| TSM0420-R47M | 0.47              | 7.0                           | 9.5                           | 11.0            | 14.0           |                          |
| TSM0420-R56M | 0.56              | 6.5                           | 9.0                           | 13.0            | 20.0           |                          |
| TSM0420-1R0M | 1.0               | 4.5                           | 7.0                           | 21.0            | 28.0           |                          |
| TSM0420-1R2M | 1.2               | 4.0                           | 7.0                           | 23.0            | 32.0           |                          |
| TSM0420-1R5M | 1.5               | 4.0                           | 6.0                           | 28.0            | 38.0           |                          |
| TSM0420-2R2M | 2.2               | 3.0                           | 5.0                           | 42.0            | 52.0           |                          |
| TSM0420-3R3M | 3.3               | 2.5                           | 4.0                           | 60.0            | 80.0           |                          |
| TSM0420-4R7M | 4.7               | 2.0                           | 3.0                           | 118.0           | 150.0          |                          |
| TSM0420-5R6M | 5.6               | 1.8                           | 2.0                           | 126.0           | 150.0          |                          |
| TSM0420-6R8M | 6.8               | 1.8                           | 2.0                           | 130.0           | 170.0          |                          |
| TSM0420-100M | 10.0              | 1.5                           | 2.0                           | 225.0           | 280.0          |                          |
| TSM0520-R47M | 0.47              | 8.0                           | 12.5                          | 10.5            | 15.0           |                          |
| TSM0520-R68M | 0.68              | 7.0                           | 10.0                          | 14.0            | 20.0           |                          |
| TSM0520-1R0M | 1.0               | 6.0                           | 8.0                           | 15.0            | 21.0           |                          |
| TSM0520-1R2M | 1.2               | 5.0                           | 8.0                           | 17.0            | 27.0           |                          |
| TSM0520-1R5M | 1.5               | 4.0                           | 6.0                           | 20.0            | 26.0           |                          |
| TSM0520-2R2M | 2.2               | 3.5                           | 6.0                           | 32.0            | 42.0           |                          |
| TSM0520-3R3M | 3.3               | 3.5                           | 5.5                           | 44.0            | 58.0           |                          |
| TSM0520-4R7M | 4.7               | 3.2                           | 4.5                           | 68.0            | 90.0           |                          |
| TSM0520-5R6M | 5.6               | 3.0                           | 4.0                           | 75.0            | 97.0           |                          |
| TSM0520-6R8M | 6.8               | 2.0                           | 3.5                           | 96.0            | 130.0          |                          |
| TSM0520-100M | 10.0              | 2.0                           | 3.0                           | 170.0           | 221.0          |                          |



## TSM SERIES

**Electrical Characteristics:**      **TEST CONDITION:** AT 25oC: 100KHz/0.1V

| PART NO.      | L(0A)<br>(uH±20%) | I <sub>rms</sub><br>(Amperes) | I <sub>sat</sub><br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS, COATING<br>COLOR |
|---------------|-------------------|-------------------------------|-------------------------------|-----------------|----------------|---------------------------|
| TSM0530-R68M  | 0.68              | 8.5                           | 14.0                          | 11.0            | 12.5           |                           |
| TSM0530-1R0M  | 1.0               | 7.0                           | 11.0                          | 13.0            | 15.0           |                           |
| TSM0530-1R5M  | 1.5               | 6.0                           | 10.0                          | 20.0            | 25.0           |                           |
| TSM0530-2R2M  | 2.2               | 5.5                           | 9.0                           | 26.0            | 32.0           |                           |
| TSM0530-3R3M  | 3.3               | 5.0                           | 7.0                           | 30.0            | 40.0           |                           |
| TSM0530-4R7M  | 4.7               | 4.0                           | 6.0                           | 46.0            | 60.0           |                           |
| TSM0530-5R6M  | 5.6               | 4.0                           | 5.5                           | 62.0            | 79.0           |                           |
| TSM0530-6R8M  | 6.8               | 3.0                           | 5.0                           | 66.0            | 86.0           |                           |
| TSM0530-100M  | 10.0              | 2.0                           | 4.0                           | 115.0           | 150.0          |                           |
| TSM0550-100M  | 10.0              | 2.5                           | 4.5                           | 80.0            | 103.0          |                           |
| TSM0550-150M  | 15.0              | 2.0                           | 4.0                           | 140.0           | 180.0          |                           |
| TSM0550-220M  | 22.0              | 1.5                           | 2.5                           | 180.0           | 230.0          |                           |
| TSM0550-330M  | 33.0              | 1.5                           | 2.0                           | 345.0           | 445.0          |                           |
| TSM0550-470M  | 47.0              | 1.0                           | 2.0                           | 404.0           | 527.0          |                           |
| TSM0550-560M  | 56.0              | 0.8                           | 1.0                           | 456.0           | 600.0          |                           |
| T SMA612-R10M | 0.10              | 13.0                          | 25.0                          | 4.0             | 4.8            | NEW                       |
| T SMA612-R47M | 0.47              | 7.0                           | 13.0                          | 16.0            | 19.2           | NEW                       |
| T SMA612-3R3M | 3.3               | 3.2                           | 5.2                           | 90.0            | 108.0          | NEW                       |
| T SMA612-4R7M | 4.7               | 2.5                           | 4.5                           | 110.0           | 132.0          | NEW                       |
| T SMA612-6R8M | 6.8               | 2.1                           | 3.8                           | 160.0           | 192.0          | NEW                       |
| T SMA612-100M | 10.0              | 1.9                           | 2.8                           | 250.0           | 300.0          | NEW                       |
| T SMA630-R68M | 0.68              | 11.0                          | 16.0                          | 12.0            | 16.0           |                           |
| T SMA630-1R5M | 1.5               | 9.0                           | 12.0                          | 16.0            | 22.0           |                           |
| T SMA630-2R2M | 2.2               | 8.0                           | 11.0                          | 17.0            | 20.0           |                           |
| T SMA630-2R7M | 2.7               | 6.0                           | 8.0                           | 25.0            | 34.0           |                           |
| T SMA630-3R3M | 3.3               | 5.0                           | 7.0                           | 32.0            | 45.0           |                           |
| T SMA630-4R7M | 4.7               | 5.5                           | 7.0                           | 34.0            | 45.0           |                           |
| T SMA630-5R6M | 5.6               | 4.0                           | 6.0                           | 54.0            | 70.0           |                           |
| T SMA630-6R8M | 6.8               | 5.0                           | 7.0                           | 63.0            | 84.0           |                           |
| T SMA630-100M | 10.0              | 4.0                           | 6.0                           | 75.0            | 100.0          |                           |
| T SMA640-150M | 15.0              | 3.0                           | 4.0                           | 96.0            | 120.0          |                           |
| T SMA640-180M | 18.0              | 2.0                           | 3.0                           | 120.0           | 160.0          |                           |
| T SMA640-220M | 22.0              | 2.0                           | 3.0                           | 125.0           | 170.0          |                           |
| T SMA640-470M | 47.0              | 1.5                           | 2.0                           | 260.0           | 345.0          |                           |



## TSM SERIES

**Electrical Characteristics:** TEST CONDITION: AT 25oC: 100KHz/0.1V

| PART NO.     | L(0A)<br>(uH±20%) | Irms<br>(Amperes) | Isat<br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS,COATING<br>COLOR |
|--------------|-------------------|-------------------|-------------------|-----------------|----------------|--------------------------|
| TSM0618-1R0M | 1.0               | 7.0               | 14.0              | 22.0            | 25.0           | Unconventional           |
| TSM0618-1R5M | 1.5               | 5.5               | 12.0              | 32.0            | 36.0           | Unconventional           |
| TSM0618-2R2M | 2.2               | 4.0               | 11.0              | 41.0            | 46.0           | Unconventional           |
| TSM0618-3R3M | 3.3               | 3.5               | 8.0               | 71.0            | 80.0           | Unconventional           |
| TSM0618-4R7M | 4.7               | 3.5               | 5.0               | 75.0            | 100.0          | Unconventional           |
| TSM0618-5R6M | 5.6               | 2.8               | 3.8               | 99.0            | 120.0          | Unconventional           |
| TSM0618-6R8M | 6.8               | 2.8               | 3.5               | 99.0            | 120.0          | Unconventional           |
| TSM0620-1R0M | 1.0               | 7.0               | 14.0              | 16.0            | 21.0           |                          |
| TSM0620-1R5M | 1.5               | 7.0               | 10.0              | 17.0            | 22.0           |                          |
| TSM0620-2R2M | 2.2               | 5.0               | 8.0               | 23.0            | 28.0           |                          |
| TSM0620-3R3M | 3.3               | 4.0               | 7.0               | 31.0            | 39.0           |                          |
| TSM0620-4R7M | 4.7               | 3.5               | 5.5               | 41.0            | 50.0           |                          |
| TSM0620-5R6M | 5.6               | 3.0               | 4.5               | 87.0            | 115.0          |                          |
| TSM0620-6R8M | 6.8               | 2.5               | 4.0               | 110.0           | 132.0          |                          |
| TSM0620-8R2M | 8.2               | 2.2               | 3.5               | 168.0           | 217.0          |                          |
| TSM0620-100M | 10.0              | 2.0               | 3.5               | 191.0           | 220.0          |                          |
| TSM0624-1R0M | 1.0               | 9.0               | 12.0              | 11.2            | 13.5           | Unconventional           |
| TSM0624-1R5M | 1.5               | 7.0               | 10.0              | 17.0            | 20.0           | Unconventional           |
| TSM0624-2R2M | 2.2               | 5.0               | 8.0               | 23.0            | 28.0           | Unconventional           |
| TSM0624-3R3M | 3.3               | 4.0               | 7.0               | 31.0            | 39.0           | Unconventional           |
| TSM0624-4R7M | 4.7               | 3.5               | 5.5               | 41.0            | 50.0           | Unconventional           |
| TSM0624-100M | 10.0              | 2.0               | 3.5               | 91.0            | 120.0          | Unconventional           |
| TSM0630-R10M | 0.10              | 32.5              | 60.0              | 1.5             | 1.7            |                          |
| TSM0630-R15M | 0.15              | 26.0              | 52.0              | 1.9             | 2.5            |                          |
| TSM0630-R20M | 0.20              | 24.0              | 41.0              | 2.4             | 3.0            |                          |
| TSM0630-R22M | 0.22              | 23.0              | 40.0              | 2.5             | 3.0            |                          |
| TSM0630-R33M | 0.33              | 20.0              | 30.0              | 3.5             | 4.0            |                          |
| TSM0630-R47M | 0.47              | 17.5              | 26.0              | 4.0             | 4.5            |                          |
| TSM0630-R68M | 0.68              | 15.5              | 25.0              | 5.0             | 5.5            |                          |
| TSM0630-R82M | 0.82              | 13.0              | 24.0              | 6.7             | 8.0            |                          |
| TSM0630-1R0M | 1.0               | 11.0              | 22.0              | 9.0             | 10.0           |                          |
| TSM0630-1R5M | 1.5               | 9.0               | 18.0              | 14.0            | 15.5           |                          |
| TSM0630-2R2M | 2.2               | 8.0               | 14.0              | 18.0            | 20.0           |                          |
| TSM0630-3R3M | 3.3               | 6.0               | 13.5              | 28.0            | 32.0           |                          |
| TSM0630-4R7M | 4.7               | 5.5               | 10.0              | 37.0            | 40.0           |                          |
| TSM0630-5R6M | 5.6               | 5.0               | 8.0               | 47.0            | 60.0           |                          |
| TSM0630-6R8M | 6.8               | 4.5               | 8.0               | 54.0            | 60.0           |                          |
| TSM0630-8R2M | 8.2               | 4.0               | 7.5               | 64.0            | 68.0           |                          |
| TSM0630-100M | 10.0              | 3.0               | 7.0               | 102.0           | 105.0          |                          |

## TSM SERIES

**Electrical Characteristics: TEST CONDITION: AT 25oC: 100KHz/0.1V**

| PART NO.      | L(0A)<br>(uH±20%) | Irms<br>(Amperes) | Isat<br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS,COATING<br>COLOR |
|---------------|-------------------|-------------------|-------------------|-----------------|----------------|--------------------------|
| TSM0630A-1R0M | 1.0               | 12.5              | 9.5               | 7.6             | 8.5            | Unconventional           |
| TSM0630A-1R5M | 1.5               | 10.5              | 8.0               | 11.7            | 13.5           | Unconventional           |
| TSM0630A-2R2M | 2.2               | 9.0               | 7.0               | 15.7            | 17.0           | Unconventional           |
| TSM0630A-3R3M | 3.3               | 7.0               | 6.5               | 24.8            | 26.8           | Unconventional           |
| TSM0630A-4R7M | 4.7               | 6.0               | 4.0               | 31.8            | 34.0           | Unconventional           |
| TSM0630A-6R8M | 6.8               | 5.5               | 4.0               | 44.8            | 46.8           | Unconventional           |
| TSM0630A-8R2M | 8.2               | 5.0               | 4.0               | 52.3            | 57.0           | Unconventional           |
| TSM0630A-100M | 10.0              | 4.0               | 3.5               | 67.8            | 72.0           | Unconventional           |
| TSM0630A-220M | 22.0              | 2.9               | 2.5               | 128.9           | 135.0          | Unconventional           |
| TSM0640-R33M  | 0.33              | 20.0              | 30.0              | 2.0             | 2.5            |                          |
| TSM0640-R56M  | 0.56              | 17.0              | 25.0              | 3.6             | 4.5            |                          |
| TSM0640-R68M  | 0.68              | 13.0              | 15.0              | 3.8             | 4.5            |                          |
| TSM0640-1R5M  | 1.5               | 10.0              | 19.0              | 13.5            | 16.0           |                          |
| TSM0640-2R2M  | 2.2               | 8.5               | 16.0              | 15.0            | 18.0           |                          |
| TSM0640-3R3M  | 3.3               | 7.0               | 13.0              | 21.0            | 25.0           |                          |
| TSM0640-4R7M  | 4.7               | 6.0               | 10.0              | 23.0            | 30.0           |                          |
| TSM0650-R36M  | 0.36              | 21.0              | 25.0              | 3.2             | 3.5            |                          |
| TSM0650-R56M  | 0.56              | 20.0              | 18.0              | 3.4             | 3.6            |                          |
| TSM0650-R68M  | 0.68              | 18.0              | 17.0              | 3.9             | 4.2            |                          |
| TSM0650-R82M  | 0.82              | 16.5              | 16.0              | 4.6             | 4.9            |                          |
| TSM0650-1R0M  | 1.0               | 13.0              | 15.0              | 5.6             | 6.5            |                          |
| TSM0650-1R5M  | 1.5               | 8.0               | 14.0              | 8.5             | 12.0           |                          |
| TSM0650-2R2M  | 2.2               | 8.0               | 12.0              | 11.2            | 12.5           |                          |
| TSM0650-3R3M  | 3.3               | 7.0               | 8.0               | 19.9            | 20.9           |                          |
| TSM0650-4R7M  | 4.7               | 6.5               | 7.0               | 23.0            | 25.0           |                          |
| TSM0650-6R8M  | 6.8               | 5.0               | 9.0               | 33.0            | 45.0           |                          |
| TSM0650-100M  | 10.0              | 4.0               | 5.3               | 61.0            | 80.0           |                          |
| TSM0650-150M  | 15.0              | 2.5               | 4.0               | 90.0            | 120.0          |                          |
| TSM0650-220M  | 22.0              | 2.2               | 4.0               | 108.0           | 140.0          |                          |
| TSM0650-330M  | 33.0              | 2.0               | 4.0               | 160.0           | 210.0          |                          |
| TSM0650-470M  | 47.0              | 2.0               | 3.0               | 192.0           | 247.0          |                          |



## TSM SERIES

**Electrical Characteristics: TEST CONDITION: AT 25oC: 100KHz/0.1V**

| PART NO.     | L(0A)<br>(uH±20%) | Irms<br>(Amperes) | Isat<br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS,COATING<br>COLOR |
|--------------|-------------------|-------------------|-------------------|-----------------|----------------|--------------------------|
| TSM1040-R36M | 0.36              | 30.0              | 50.0              | 1.05            | 1.2            |                          |
| TSM1040-R47M | 0.47              | 28.0              | 40.0              | 1.5             | 1.8            |                          |
| TSM1040-R56M | 0.56              | 25.0              | 33.0              | 1.6             | 2.0            |                          |
| TSM1040-R68M | 0.68              | 23.0              | 30.0              | 2.1             | 2.5            |                          |
| TSM1040-R88M | 0.88              | 20.0              | 29.0              | 2.4             | 2.7            |                          |
| TSM1040-1R0M | 1.0               | 18.0              | 28.0              | 3.0             | 3.5            |                          |
| TSM1040-1R5M | 1.5               | 16.0              | 32.0              | 3.8             | 4.5            |                          |
| TSM1040-2R2M | 2.2               | 12.0              | 18.0              | 6.4             | 7.0            |                          |
| TSM1040-3R3M | 3.3               | 10.0              | 16.0              | 10.8            | 12.8           |                          |
| TSM1040-4R7M | 4.7               | 8.5               | 13.0              | 17.0            | 20.0           |                          |
| TSM1040-5R6M | 5.6               | 8.0               | 11.0              | 20.0            | 23.0           |                          |
| TSM1040-6R8M | 6.8               | 7.0               | 10.0              | 22.5            | 25.0           |                          |
| TSM1040-8R2M | 8.2               | 6.0               | 9.0               | 25.0            | 27.5           |                          |
| TSM1040-100M | 10.0              | 7.5               | 8.5               | 27.0            | 30.0           |                          |
| TSM1040-150M | 15.0              | 6.25              | 7.0               | 40.0            | 45.0           |                          |
| TSM1040-220M | 22.0              | 5.0               | 5.5               | 60.0            | 66.0           |                          |
| TSM1040-330M | 33.0              | 4.4               | 5.0               | 85.0            | 93.5           |                          |
| TSM1040-470M | 47.0              | 3.3               | 3.5               | 130.0           | 145.0          |                          |
| TSM1040-680M | 68.0              | 2.3               | 3.3               | 130.0           | 145.0          |                          |
| TSM1040-820M | 82.0              | 2.0               | 3.0               | 130.0           | 145.0          |                          |
| TSM1040-101M | 100.0             | 1.5               | 2.8               | 280.0           | 300.0          |                          |
| TSM1050-5R2M | 5.2               | 5.5               | 10.0              | 16.0            | 21.0           |                          |
| TSM1050-150M | 15.0              | 3.6               | 6.0               | 39.0            | 52.0           |                          |
| TSM1050-220M | 22.0              | 4.0               | 6.0               | 73.0            | 92.0           |                          |
| TSM1050-330M | 33.0              | 3.0               | 5.0               | 107.0           | 120.0          |                          |
| TSM1050-470M | 47.0              | 3.0               | 4.0               | 160.0           | 210.0          |                          |
| TSM1050-680M | 68.0              | 3.0               | 4.0               | 240.0           | 300.0          |                          |
| TSM1050-101M | 100.0             | 2.0               | 3.0               | 320.0           | 400.0          |                          |





## TSM SERIES

**Electrical Characteristics:** TEST CONDITION: AT 25oC: 100KHz/0.1V

| PART NO.     | L(0A)<br>(uH±20%) | Irms<br>(Amperes) | Isat<br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS,COATING<br>COLOR |
|--------------|-------------------|-------------------|-------------------|-----------------|----------------|--------------------------|
| TSM1235-R22M | 0.22              | 38.0              | 65.0              | 1.1             | 1.3            |                          |
| TSM1235-R33M | 0.33              | 36.5              | 62.0              | 1.3             | 1.5            |                          |
| TSM1235-R39M | 0.39              | 34.0              | 60.0              | 1.1             | 1.3            |                          |
| TSM1235-R47M | 0.47              | 32.0              | 55.0              | 1.7             | 2.0            |                          |
| TSM1235-R56M | 0.56              | 29.0              | 51.0              | 1.8             | 2.2            |                          |
| TSM1235-R62M | 0.62              | 29.0              | 51.0              | 1.8             | 2.2            |                          |
| TSM1235-R68M | 0.68              | 28.0              | 49.0              | 2.3             | 2.5            |                          |
| TSM1235-1R0M | 1.0               | 24.0              | 40.0              | 3.3             | 3.5            |                          |
| TSM1235-1R5M | 1.5               | 19.0              | 35.0              | 5.1             | 5.5            |                          |
| TSM1235-2R2M | 2.2               | 16.0              | 29.0              | 7.2             | 8.0            |                          |
| TSM1235-3R3M | 3.3               | 12.0              | 27.0              | 10.0            | 12.0           |                          |
| TSM1235-4R7M | 4.7               | 11.0              | 20.0              | 17.0            | 26.0           |                          |
| TSM1250-R22M | 0.22              | 51.0              | 110.0             | 0.64            | 0.8            |                          |
| TSM1250-R33M | 0.33              | 40.0              | 74.0              | 0.9             | 1.2            |                          |
| TSM1250-R36M | 0.36              | 40.0              | 70.0              | 0.9             | 1.2            |                          |
| TSM1250-R47M | 0.47              | 38.0              | 68.0              | 1.1             | 1.4            |                          |
| TSM1250-R56M | 0.56              | 37.0              | 65.0              | 1.3             | 1.6            |                          |
| TSM1250-R68M | 0.68              | 37.0              | 63.0              | 1.3             | 1.6            |                          |
| TSM1250-R82M | 0.82              | 31.0              | 53.0              | 1.8             | 2.1            |                          |
| TSM1250-1R0M | 1.0               | 29.0              | 49.0              | 2.1             | 2.5            |                          |
| TSM1250-1R2M | 1.2               | 25.0              | 47.0              | 2.6             | 3.0            |                          |
| TSM1250-1R5M | 1.5               | 24.0              | 44.0              | 3.1             | 3.6            |                          |
| TSM1250-2R2M | 2.2               | 21.5              | 33.0              | 4.1             | 4.8            |                          |
| TSM1250-3R3M | 3.3               | 18.5              | 27.0              | 5.4             | 6.3            |                          |
| TSM1250-4R7M | 4.7               | 14.0              | 23.0              | 9.2             | 10.5           |                          |
| TSM1250-6R8M | 6.8               | 11.0              | 19.0              | 14.1            | 17.0           |                          |
| TSM1250-100M | 10.0              | 9.5               | 16.5              | 19.0            | 22.0           |                          |
| TSM1250-150M | 15.0              | 7.0               | 13.5              | 32.0            | 38.0           |                          |
| TSM1250-220M | 22.0              | 6.0               | 9.5               | 44.8            | 52.0           |                          |
| TSM1250-330M | 33.0              | 8.0               | 8.0               | 63.9            | 74.0           |                          |
| TSM1250-470M | 47.0              | 4.0               | 7.0               | 95.0            | 110.0          |                          |
| TSM1250-560M | 56.0              | 3.3               | 6.5               | 144.0           | 165.0          |                          |
| TSM1250-680M | 68.0              | 3.2               | 6.0               | 144.2           | 165.0          |                          |



## TSM SERIES

**Electrical Characteristics:**      **TEST CONDITION:** AT 25°C: 100KHz/0.1V

| PART NO.     | L(0A)<br>(uH±20%) | I <sub>rms</sub><br>(Amperes) | I <sub>sat</sub><br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS, COATING<br>COLOR |
|--------------|-------------------|-------------------------------|-------------------------------|-----------------|----------------|---------------------------|
| TSM1265-R22M | 0.22              | 48.0                          | 100.0                         | 0.70            | 0.8            |                           |
| TSM1265-R30M | 0.30              | 48.0                          | 72.0                          | 0.70            | 0.8            |                           |
| TSM1265-R33M | 0.33              | 45.0                          | 65.0                          | 0.83            | 0.95           |                           |
| TSM1265-R36M | 0.36              | 45.0                          | 64.5                          | 0.83            | 0.95           |                           |
| TSM1265-R40M | 0.40              | 41.0                          | 64.0                          | 1.0             | 1.2            |                           |
| TSM1265-R47M | 0.47              | 41.0                          | 63.0                          | 1.0             | 1.2            |                           |
| TSM1265-R56M | 0.56              | 38.0                          | 67.0                          | 1.1             | 1.4            |                           |
| TSM1265-R68M | 0.68              | 38.0                          | 65.0                          | 1.1             | 1.4            |                           |
| TSM1265-R80M | 0.80              | 34.0                          | 57.0                          | 1.6             | 2.0            |                           |
| TSM1265-R82M | 0.82              | 34.0                          | 56.0                          | 1.6             | 2.0            |                           |
| TSM1265-1R0M | 1.0               | 34.0                          | 54.0                          | 1.6             | 2.0            |                           |
| TSM1265-1R2M | 1.2               | 26.0                          | 48.0                          | 2.4             | 3.2            |                           |
| TSM1265-1R5M | 1.5               | 26.0                          | 45.0                          | 2.4             | 3.2            |                           |
| TSM1265-1R8M | 1.8               | 22.0                          | 40.0                          | 3.6             | 4.3            |                           |
| TSM1265-2R2M | 2.2               | 22.0                          | 38.0                          | 3.6             | 4.3            |                           |
| TSM1265-3R3M | 3.3               | 19.0                          | 27.0                          | 4.8             | 5.7            |                           |
| TSM1265-4R7M | 4.7               | 17.0                          | 24.0                          | 6.1             | 7.2            |                           |
| TSM1265-5R6M | 5.6               | 11.0                          | 22.0                          | 9.1             | 11.0           |                           |
| TSM1265-6R8M | 6.8               | 14.0                          | 20.5                          | 9.1             | 11.0           |                           |
| TSM1265-7R8M | 7.8               | 11.0                          | 19.0                          | 15.0            | 18.0           |                           |
| TSM1265-8R2M | 8.2               | 11.0                          | 18.0                          | 15.0            | 18.0           |                           |
| TSM1265-100M | 10.0              | 11.0                          | 17.0                          | 15.0            | 18.0           |                           |
| TSM1265-150M | 15.0              | 7.8                           | 14.5                          | 27.5            | 32.0           |                           |
| TSM1265-180M | 18.0              | 7.0                           | 12.0                          | 32.7            | 38.0           |                           |
| TSM1265-220M | 22.0              | 7.0                           | 10.5                          | 32.7            | 38.0           |                           |
| TSM1265-330M | 33.0              | 6.0                           | 8.5                           | 46.5            | 53.0           |                           |
| TSM1265-470M | 47.0              | 5.0                           | 7.5                           | 63.1            | 72.0           |                           |
| TSM1265-560M | 56.0              | 3.8                           | 7.0                           | 105.1           | 120.0          |                           |
| TSM1265-680M | 68.0              | 3.8                           | 6.0                           | 105.1           | 120.0          |                           |
| TSM1265-101M | 100.0             | 3.0                           | 5.0                           | 150.4           | 170.0          |                           |
| TSM1265-151M | 150.0             | 2.0                           | 3.5                           | 282.0           | 340.0          |                           |

## TSM SERIES

**Electrical Characteristics: TEST CONDITION: AT 25oC: 100KHz/0.1V**

| PART NO.     | L(0A)<br>(uH±20%) | Irms<br>(Amperes) | Isat<br>(Amperes) | DCR<br>(mΩ)TYPE | DCR<br>(mΩ)MAX | REMARKS,COATING<br>COLOR |
|--------------|-------------------|-------------------|-------------------|-----------------|----------------|--------------------------|
| TSM1770-R22M | 0.22              | 80.0              | 129.0             | 0.63            | 0.70           | Unconventional           |
| TSM1770-R33M | 0.33              | 75.5              | 55.0              | 0.61            | 0.67           |                          |
| TSM1770-R47M | 0.47              | 64.5              | 62.0              | 0.78            | 0.87           |                          |
| TSM1770-R56M | 0.56              | 61.0              | 66.0              | 0.83            | 0.91           |                          |
| TSM1770-R82M | 0.82              | 56.5              | 45.0              | 0.98            | 1.08           |                          |
| TSM1770-1R0M | 1.0               | 55.5              | 32.0              | 1.21            | 1.27           |                          |
| TSM1770-1R5M | 1.5               | 48.0              | 31.0              | 1.54            | 1.62           |                          |
| TSM1770-1R8M | 1.8               | 38.0              | 65.0              | 1.96            | 2.07           | Unconventional           |
| TSM1770-2R2M | 2.2               | 43.5              | 28.0              | 1.85            | 1.98           |                          |
| TSM1770-3R3M | 3.3               | 35.0              | 27.0              | 2.79            | 2.93           |                          |
| TSM1770-4R7M | 4.7               | 30.0              | 21.0              | 3.98            | 4.18           |                          |
| TSM1770-5R6M | 5.6               | 28.0              | 21.0              | 4.23            | 4.44           |                          |
| TSM1770-6R8M | 6.8               | 22.5              | 18.5              | 5.86            | 6.15           |                          |
| TSM1770-8R2M | 8.2               | 21.0              | 18.0              | 7.71            | 8.10           |                          |
| TSM1770-100M | 10.0              | 19.0              | 17.0              | 8.89            | 9.33           |                          |
| TSM1770-150M | 15.0              | 14.0              | 12.0              | 13.7            | 14.4           |                          |
| TSM1770-220M | 22.0              | 12.0              | 9.5               | 20.0            | 21.0           |                          |
| TSM1770-330M | 33.0              | 10.7              | 9.0               | 35.1            | 37.0           |                          |
| TSM1770-470M | 47.0              | 8.7               | 8.6               | 40.7            | 42.7           |                          |
| TSM1770-560M | 56.0              | 7.2               | 4.2               | 55.0            | 57.8           |                          |
| TSM1770-680M | 68.0              | 6.1               | 4.5               | 72.1            | 75.7           |                          |
| TSM1770-820M | 82.0              | 5.5               | 4.5               | 87.3            | 91.7           |                          |
| TSM1770-101M | 100.0             | 5.0               | 4.0               | 105.0           | 110.0          |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |
|              |                   |                   |                   |                 |                |                          |

备注：上表中未列出的型号规格，请电话联系我们咨询。  
Note: unlisted model specifications in the above table, please contact us by telephone.