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# DEMINT

## Electronics Co., Ltd.

### (TRWL)

# Wire Wound Chip Ceramic Inductor

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## ► Product Introduction

### DeMint Wire wound Ceramic Inductor Simplifies Power Management Issues.

#### Features :

- Tighter Tolerance of  $\pm 2\%$ .
- Fully Automated Assembly.
- Smaller Size of 0402 (1005).
- Miniature ultra-compact size.
- High SRFs, exceptional Q values.
- Low profile, High Current are Available.

#### Applications :

- Remote Control, Security System, Wireless PDA.
- TCWLL, Wireless LAN / Mouse / Keyboard / Earphone.
- Cellular Phone (CDMA/GSM/PHS), Cordless Phone (DECT/CT1CT2).
- CATV Filter, VCO, RF Module & Other Wireless Products.
- Tuner, Set Top Box, Base Station, Repeater GPS Receiver.
- USB 2.0, IEEE 1394, Cable Modem / XDSL Tuner.

DeMint (TRWL) series is a wire wound and ceramic technology that offers the highest usable frequency range, highest current carrying capability, and the best Q factor of the three technologies. The combination of these three advantages ensures that design engineers will have the right product for many more high frequency applications than most competitors.

High frequency inductors are specifically used for their frequency dependent properties. Depending on the technology, size and inductance value, the inductor will pass a certain desired range of frequencies, but will block or attenuate frequencies above the desired range. This eliminates high frequency noise or interference from communications signals.

The Construction of DeMint (TRWL) open-type series chip wire wound ceramic inductors are designed to provide high SRFs. The full (TRWL) series conform to the RoHS directive and Lead-free. Customized designs and tighter tolerances are available on request.

Primarily, DeMint (TRWL) series as power inductors required by power supply circuits of multifunctional and small mobile phones must be small in size and low in height. These products must exhibit performance that is commensurate with the high power conversion efficiency of power supply circuits. Power supply circuits must also exhibit resistance to noise in the power supply state. All performance requirements of this component is expected based on the wire-wound inductors manufactured by DeMint.

Application of specific designs also available including different inductance values and Q specifications adjusted to frequency requirements. The (TRWL) series is supplied in tape and reel packaging ready for use with automated assembly processes. Contact us with your specific needs. For more information, please link to DeMint official website "[RF Inductors](http://www.direct-token.com)".



## ► Configurations & Dimensions

### Configurations & Dimensions (Unit: mm) (TRWL)

| Series                       | A<br>Max. | B<br>Max. | C<br>Max. | D<br>Ref. | E    | F    | G    | H    | I    | J    |
|------------------------------|-----------|-----------|-----------|-----------|------|------|------|------|------|------|
| <b>Standard</b>              |           |           |           |           |      |      |      |      |      |      |
| <b>TRWL02 (EIA 0402)</b>     | 1.27      | 0.76      | 0.61      | 0.15      | 0.51 | 0.23 | 0.56 | 0.66 | 0.50 | 0.46 |
| <b>TRWL03 (EIA 0603)</b>     | 1.80      | 1.12      | 1.02      | 0.38      | 0.76 | 0.33 | 0.86 | 1.02 | 0.64 | 0.64 |
| <b>TRWL05 (EIA 0805)</b>     | 2.29      | 1.73      | 1.52      | 0.51      | 1.27 | 0.44 | 1.02 | 1.78 | 1.02 | 0.76 |
| <b>TRWL06 (EIA 1206)</b>     | 3.56      | 2.16      | 1.52      | 0.50      | 1.20 | 0.50 | 2.20 | 1.93 | 1.02 | 1.78 |
| <b>TRWL08 (EIA 1008)</b>     | 2.92      | 2.79      | 2.03      | 0.65      | 2.03 | 0.51 | 1.52 | 2.54 | 1.02 | 1.27 |
| <b>Low Profile</b>           |           |           |           |           |      |      |      |      |      |      |
| <b>TRWL05 (EIA 0805)</b>     | 2.29      | 1.73      | 1.03      | 0.51      | 1.27 | 0.44 | 1.02 | 1.78 | 1.02 | 0.76 |
| <b>TRWL08 (EIA 1008)</b>     | 2.92      | 2.79      | 1.40      | 0.65      | 2.03 | 0.51 | 1.52 | 2.54 | 1.02 | 1.27 |
| <b>High Current / High Q</b> |           |           |           |           |      |      |      |      |      |      |
| <b>TRWL03 (EIA 0603)</b>     | 1.80      | 1.12      | 1.02      | 0.38      | 0.76 | 0.33 | 0.86 | 1.02 | 0.64 | 0.64 |
| <b>TRWL05 (EIA 0805)</b>     | 2.29      | 1.73      | 1.52      | 0.51      | 1.27 | 0.44 | 1.02 | 1.78 | 1.02 | 0.76 |
| <b>TRWL08 (EIA 1008)</b>     | 2.92      | 2.79      | 2.03      | 0.65      | 2.03 | 0.51 | 1.52 | 2.54 | 1.02 | 1.27 |

**Reel Dimensions**

TERMINAL WARPAROUND: Approx. 0.007" / 0.18mm Both Ends

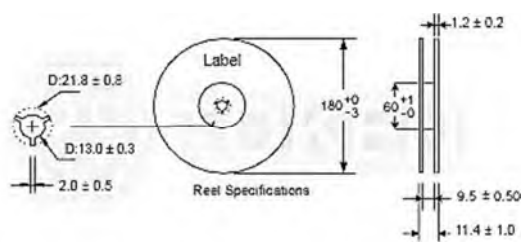
**Tape Packing Dimensions**

- **Note: Color Coding:**  
0603 / 0805 / 1206 / 1008 Series (0402 Series is No Color Coding)  
Because of small sizes, these parts are marked with a single color dot. The inductance value represented by the dot is shown on the data page for each series.



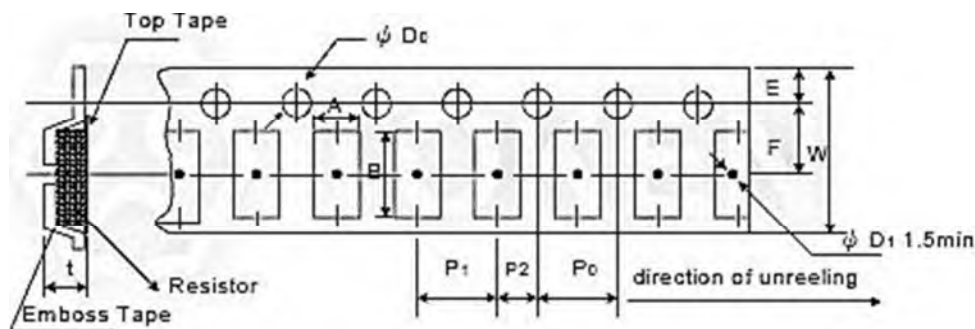
## Reel & Packaging

### Packaging Quantity & Reel Specifications (Unit: mm) (TRWL)

|  <p>Packaging Quantity &amp; Reel Specifications (TRWL)</p> | Type   | Emboss Plastic Tape (PCS) |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------|
|                                                                                                                                              | TRWL08 | 2000                      |
|                                                                                                                                              | TRWL06 | 2000                      |
|                                                                                                                                              | TRWL05 | 2000                      |
|                                                                                                                                              | TRWL03 | 4000                      |
|                                                                                                                                              | TRWL02 | 4000                      |

### Emboss Plastic Tape Specifications (Unit: mm) (TRWL)

| Codes  | A<br>±0.10 | B<br>±0.10 | W<br>±0.2 | E<br>±0.10 | F<br>±0.1 | P0<br>±0.10 | P1<br>±0.10 | P2<br>±0.05 | ΦD0<br>+0.10 | t<br>±0.05 |
|--------|------------|------------|-----------|------------|-----------|-------------|-------------|-------------|--------------|------------|
| TRWL08 | 2.70       | 2.80       | 8.0       | 1.75       | 3.5       | 4.00        | 4.00        | 2.00        | 1.50         | 2.00       |
| TRWL06 | 1.95       | 3.50       | 8.0       | 1.75       | 3.5       | 4.00        | 4.00        | 2.00        | 1.50         | 1.50       |
| TRWL05 | 1.85       | 2.30       | 8.0       | 1.75       | 3.5       | 4.00        | 4.00        | 2.00        | 1.50         | 1.45       |
| TRWL03 | 1.12       | 1.85       | 8.0       | 1.75       | 3.5       | 4.00        | 4.00        | 2.00        | 1.50         | 0.96       |
| TRWL02 | 0.71       | 1.16       | 8.0       | 1.75       | 3.5       | 4.00        | 2.00        | 2.00        | 1.50         | 0.65       |



Emboss Plastic Tape Specifications (TRWL)

## Mechanical Test

### Mechanical Performance Test (TRWL)

| Item                                  | Specification                                                                      | Test Method                                                                                                                                                                                                                                                                              |
|---------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vibration Test</b>                 | Appearance: No damage<br>L change: within $\pm 5\%$<br>Q change: within $\pm 10\%$ | Test device shall be soldered on the substrate<br>Oscillation Frequency: 10 to 55 to 10Hz for 1Min.<br>Amplitude: 1.5mm<br>Time: 2hrs for each axis (X, Y & Z), total 6hrs                                                                                                               |
| <b>Resistance to Soldering-Heat</b>   |                                                                                    | Solder Temperature: $260 \pm 5^\circ\text{C}$<br>Immersion Time: $10 \pm 2\text{sec}$                                                                                                                                                                                                    |
| <b>Component Adhesion (Push Test)</b> | 1 lbs. For 0402<br>2 lbs. For 0603<br>3 lbs. For the rest                          | The device should be soldered ( $260 \pm 5^\circ\text{C}$ for 10 seconds) to a tinned copper subs rate. A dynamiter force gauge should be applied to the side of the component. The device must with stand a minimum force of 2 or 4 pounds without a failure of adhesion on termination |
| <b>Drop Test</b>                      | No damage                                                                          | Dropping chip by each side and each corner.<br>Drop 10 times in total<br>Drop height: 100cm<br>Drop weight: 125g                                                                                                                                                                         |
| <b>Solderability Test</b>             | 90% covered with solder.                                                           | Inductor shall be dipped in a melted solder bath at $235 \pm 5^\circ\text{C}$ for 5 seconds.                                                                                                                                                                                             |
| <b>Resistance to Solvent Test</b>     | No damage on appearance and marking.                                               | MIL-STD202F, Method 215D                                                                                                                                                                                                                                                                 |

## Electrical Test

### Electrical Performance Test (TRWL)

| Item                              | Specification                                                        | Test Method                                                                                  |
|-----------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Inductance</b>                 | Refer to standard electrical characteristic spec.                    | HP4291B                                                                                      |
| <b>Q</b>                          |                                                                      | HP4291B                                                                                      |
| <b>SRF</b>                        |                                                                      | HP8753D                                                                                      |
| <b>DC Resistance RDC</b>          |                                                                      | Micro-Ohm meter (Gom-801G)                                                                   |
| <b>Rated Current IDC</b>          |                                                                      | Applied the current to coils, The inductance change should be less than 10% to initial value |
| <b>Over Load Test</b>             | Inductors shall have no evidence of electrical and mechanical damage | Applied 2 times of rated allowed DC current to inductor for a period of 5 minute             |
| <b>Withstanding Voltage Test</b>  | Inductors shall be no evidence of electrical and mechanical damage.  | AC voltage of 500 VAC applied between inductors terminal and case for 1 minute.              |
| <b>Insulation Resistance Test</b> | 1000M ohm Min.                                                       | 100 VDC applied between inductor terminal and case                                           |



## ► Climatic Test

### Climatic Test (TRWL)

| Item                            | Specification                                                                                 | Test Method                                                                                                                                                                                                                                                                               |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
|---------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|-------------|---|-------|----|---|------|----|---|------|----|---|------|----|
| Temperature Characteristic      | Appearance: No damage<br>L change: within ±10%<br>Q change: within ±20%                       | -40℃ ~+125℃                                                                                                                                                                                                                                                                               |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| Humidity Resistance             |                                                                                               | Temperature: 40±2℃<br>Relative Humidity: 90~95%<br>Time: 96hrs±2hrs<br>Measured after exposure in the room condition for 2hrs                                                                                                                                                             |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| Low Temperature Storage Test    |                                                                                               | Temperature: -40±2℃<br>Time: 48±2hrs<br>Inductors are tested after 1 hour at room temperature                                                                                                                                                                                             |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| Thermal Shock Test              |                                                                                               | One cycle: <table><tr><td>Step</td><td>Temperature (℃)</td><td>time (Min.)</td></tr><tr><td>1</td><td>-25±3</td><td>30</td></tr><tr><td>2</td><td>25±2</td><td>15</td></tr><tr><td>3</td><td>85±3</td><td>30</td></tr><tr><td>4</td><td>25±2</td><td>15</td></tr></table> Total: 5 cycles | Step        | Temperature (℃) | time (Min.) | 1 | -25±3 | 30 | 2 | 25±2 | 15 | 3 | 85±3 | 30 | 4 | 25±2 | 15 |
| Step                            |                                                                                               | Temperature (℃)                                                                                                                                                                                                                                                                           | time (Min.) |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| 1                               | -25±3                                                                                         | 30                                                                                                                                                                                                                                                                                        |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| 2                               | 25±2                                                                                          | 15                                                                                                                                                                                                                                                                                        |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| 3                               | 85±3                                                                                          | 30                                                                                                                                                                                                                                                                                        |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| 4                               | 25±2                                                                                          | 15                                                                                                                                                                                                                                                                                        |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| High Temperature Storage Test   | Temperature: 125±2℃<br>Time: 48±2hrs<br>Measured after exposure in the room condition for 1hr |                                                                                                                                                                                                                                                                                           |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| High Temperature Load Life Test | There should be no evidence of short of open circuit.                                         | Temperature: 85±2℃<br>Time: 1000±12hrs<br>Load: Allowed DC current                                                                                                                                                                                                                        |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |
| Humidity Load Life              |                                                                                               | Temperature: 40±2℃<br>Relative Humidity: 90~95%<br>Time: 1000±12hrs<br>Load: Allowed DC current                                                                                                                                                                                           |             |                 |             |   |       |    |   |      |    |   |      |    |   |      |    |

● Note: Storage Temperature: 25 $\pm$ 3°C; Humidity: <80%RH



## Standard Electrical Specifications

### Standard Electrical Specifications Standard (TRWL02) - EIA 0402

| Part Number | Inductance (nH) @ 250MHz | Tolerance (%) | Q (Min.) | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | 900MHz |    | 1.7GHz |     |
|-------------|--------------------------|---------------|----------|-----------------|---------------|----------|--------|----|--------|-----|
|             |                          |               |          |                 |               |          | L      | Q  | L      | Q   |
| TRWL02*T1N0 | 1.0                      | 10            | 16       | 12.70           | 0.04          | 1360     | 1.02   | 77 | 1.02   | 69  |
| TRWL02*T1N9 | 1.9                      | 10,5          | 16       | 11.30           | 0.07          | 1040     | 1.72   | 68 | 1.74   | 82  |
| TRWL02*T2N0 | 2.0                      | 10,5          | 16       | 11.10           | 0.07          | 1040     | 1.93   | 54 | 1.93   | 75  |
| TRWL02*T2N2 | 2.2                      | 10,5          | 19       | 10.80           | 0.07          | 960      | 2.19   | 59 | 2.23   | 100 |
| TRWL02*T2N4 | 2.4                      | 10,5          | 15       | 10.50           | 0.07          | 790      | 2.24   | 51 | 2.27   | 68  |
| TRWL02*T2N7 | 2.7                      | 10,5          | 16       | 10.40           | 0.12          | 640      | 2.23   | 42 | 2.25   | 61  |
| TRWL02*T3N3 | 3.3                      | 10,5,2        | 19       | 7.00            | 0.06          | 840      | 3.10   | 65 | 3.12   | 87  |
| TRWL02*T3N6 | 3.6                      | 10,5,2        | 19       | 6.80            | 0.06          | 840      | 3.56   | 45 | 3.62   | 71  |
| TRWL02*T3N9 | 3.9                      | 10,5,2        | 19       | 5.80            | 0.06          | 840      | 3.89   | 50 | 4.00   | 75  |
| TRWL02*T4N3 | 4.3                      | 10,5,2        | 18       | 6.00            | 0.09          | 700      | 4.19   | 47 | 4.30   | 71  |
| TRWL02*T4N7 | 4.7                      | 10,5,2        | 15       | 4.70            | 0.13          | 640      | 4.55   | 48 | 4.68   | 68  |
| TRWL02*T5N1 | 5.1                      | 10,5,2        | 20       | 4.80            | 0.08          | 800      | 5.15   | 56 | 5.25   | 82  |
| TRWL02*T5N6 | 5.6                      | 10,5,2        | 20       | 4.80            | 0.08          | 760      | 5.16   | 54 | 5.28   | 81  |
| TRWL02*T6N2 | 6.2                      | 10,5,2        | 20       | 4.80            | 0.08          | 760      | 6.16   | 52 | 6.37   | 76  |
| TRWL02*T6N8 | 6.8                      | 10,5,2        | 20       | 4.80            | 0.08          | 680      | 6.56   | 63 | 6.93   | 78  |
| TRWL02*T7N5 | 7.5                      | 10,5,2        | 22       | 4.80            | 0.10          | 680      | 7.91   | 60 | 8.22   | 88  |
| TRWL02*T8N2 | 8.2                      | 10,5,2        | 22       | 4.40            | 0.10          | 680      | 8.50   | 57 | 8.85   | 84  |
| TRWL02*T8N7 | 8.7                      | 10,5,2        | 18       | 4.10            | 0.20          | 480      | 8.78   | 54 | 9.21   | 73  |
| TRWL02*T9N0 | 9.0                      | 10,5,2        | 22       | 4.16            | 0.10          | 680      | 9.07   | 62 | 9.53   | 78  |
| TRWL02*T9N5 | 9.5                      | 10,5,2        | 18       | 4.00            | 0.20          | 480      | 9.42   | 54 | 9.98   | 69  |
| TRWL02*T10N | 10                       | 10,5,2        | 21       | 3.90            | 0.19          | 480      | 9.80   | 50 | 10.10  | 67  |
| TRWL02*T11N | 11                       | 10,5,2        | 24       | 3.68            | 0.12          | 640      | 10.70  | 52 | 11.20  | 78  |
| TRWL02*T12N | 12                       | 10,5,2        | 24       | 3.60            | 0.12          | 640      | 11.90  | 53 | 12.70  | 71  |
| TRWL02*T13N | 13                       | 10,5,2        | 24       | 3.45            | 0.21          | 440      | 13.40  | 51 | 14.60  | 57  |
| TRWL02*T15N | 15                       | 10,5,2        | 24       | 3.28            | 0.17          | 560      | 14.60  | 55 | 15.50  | 77  |
| TRWL02*T16N | 16                       | 10,5,2        | 24       | 3.10            | 0.22          | 560      | 16.60  | 46 | 18.80  | 47  |
| TRWL02*T18N | 18                       | 10,5,2        | 24       | 3.10            | 0.23          | 420      | 18.30  | 57 | 20.28  | 62  |
| TRWL02*T19N | 19                       | 10,5,2        | 24       | 3.04            | 0.20          | 480      | 19.10  | 50 | 21.10  | 67  |
| TRWL02*T20N | 20                       | 10,5,2        | 25       | 3.00            | 0.25          | 420      | 20.70  | 52 | 23.66  | 53  |
| TRWL02*T22N | 22                       | 10,5,2        | 25       | 2.80            | 0.30          | 400      | 23.20  | 53 | 26.75  | 53  |
| TRWL02*T23N | 23                       | 10,5,2        | 22       | 2.72            | 0.30          | 400      | 23.80  | 49 | 26.90  | 64  |
| TRWL02*T24N | 24                       | 10,5,2        | 25       | 2.70            | 0.30          | 400      | 25.10  | 51 | 29.50  | 50  |
| TRWL02*T27N | 27                       | 10,5,2        | 24       | 2.48            | 0.30          | 400      | 28.70  | 49 | 33.50  | 63  |
| TRWL02*T30N | 30                       | 10,5,2        | 25       | 2.35            | 0.35          | 400      | 31.10  | 46 | 38.50  | 39  |
| TRWL02*T33N | 33                       | 10,5,2        | 24       | 2.35            | 0.35          | 400      | 34.90  | 31 | 41.74  | 32  |
| TRWL02*T36N | 36                       | 10,5,2        | 24       | 2.32            | 0.44          | 320      | 39.50  | 44 | 48.40  | 53  |
| TRWL02*T39N | 39                       | 10,5,2        | 25       | 2.10            | 0.55          | 200      | 41.70  | 47 | 50.23  | 45  |
| TRWL02*T40N | 40                       | 10,5,2        | 24       | 2.24            | 0.44          | 320      | 39.00  | 44 | 47.40  | 33  |
| TRWL02*T43N | 43                       | 10,5,2        | 25       | 2.03            | 0.81          | 100      | 45.80  | 46 | 61.55  | 34  |
| TRWL02*T47N | 47                       | 10,5,2        | 20       | 2.10            | 0.83          | 150      | 50.00  | 38 | -      | -   |
| TRWL02*T51N | 51                       | 10,5,2        | 25       | 1.75            | 0.82          | 100      | -      | -  | -      | -   |
| TRWL02*T56N | 56                       | 10,5,2        | 22       | 1.76            | 0.97          | 100      | -      | -  | -      | -   |
| TRWL02*T68N | 68                       | 10,5,2        | 22       | 1.62            | 1.12          | 100      | -      | -  | -      | -   |

● Note: Working Temperature Range: -40℃ ~ 125℃



### Standard Electrical Specifications Standard (TRWL03) - EIA 0603

| Part Number         | Inductance<br>(nH) | Tolerance<br>(%) | Q<br>(Min.) | SRF<br>(GHz)(Min.) | DCR<br>(Ω)(Max.) | IDC<br>(mA) | 900MHz |    | 1.7GHz |    | Color<br>Code |
|---------------------|--------------------|------------------|-------------|--------------------|------------------|-------------|--------|----|--------|----|---------------|
|                     |                    |                  |             |                    |                  |             | L      | Q  | L      | Q  |               |
| Test Freq. @ 250MHz |                    |                  |             |                    |                  |             |        |    |        |    |               |
| TRWL03*T1N6         | 1.6                | 10,5             | 24          | 12.5               | 0.030            | 700         | 1.53   | 35 | 1.58   | 55 | Blue          |
| TRWL03*T1N8         | 1.8                | 10,5             | 16          | 12.5               | 0.045            | 700         | 1.63   | 35 | 1.66   | 50 | Black         |
| TRWL03*T2N2         | 2.2                | 10,5             | 20          | 6.00               | 0.100            | 700         | 2.18   | 41 | 2.20   | 64 | White         |
| TRWL03*T2N7         | 2.7                | 10,5             | 16          | >4.00              | 0.140            | 700         | 2.39   | 25 | 2.44   | 55 | Yellow        |
| TRWL03*T3N3         | 3.3                | 10,5,2           | 22          | >6.00              | 0.080            | 700         | 3.35   | 47 | 3.40   | 65 | Red           |
| TRWL03*T3N6         | 3.6                | 10,5,2           | 22          | 5.80               | 0.063            | 700         | 3.53   | 49 | 3.58   | 65 | Violet        |
| TRWL03*T3N9         | 3.9                | 10,5,2           | 22          | >6.00              | 0.080            | 700         | 3.95   | 49 | 3.96   | 67 | Brown         |
| TRWL03*T4N3         | 4.3                | 10,5,2           | 22          | 5.80               | 0.063            | 700         | 4.32   | 49 | 4.43   | 67 | Orange        |
| TRWL03*T4N5         | 4.5                | 10,5,2           | 20          | 5.80               | 0.120            | 700         | 4.74   | 55 | 4.87   | 92 | Gray          |
| TRWL03*T4N7         | 4.7                | 10,5,2           | 20          | 5.80               | 0.120            | 700         | 4.65   | 53 | 4.80   | 67 | Violet        |
| TRWL03*T5N1         | 5.1                | 10,5,2           | 20          | 5.80               | 0.160            | 700         | 5.13   | 47 | 5.36   | 56 | Green         |
| TRWL03*T5N6         | 5.6                | 10,5,2           | 20          | 5.80               | 0.170            | 700         | 5.53   | 56 | 5.86   | 77 | Yellow        |
| TRWL03*T6N2         | 6.2                | 10,5,2           | 25          | 5.80               | 0.110            | 700         | 6.28   | 60 | 6.40   | 85 | Black         |
| TRWL03*T6N3         | 6.3                | 10,5,2           | 25          | 5.80               | 0.110            | 700         | 6.67   | 41 | 6.86   | 61 | Black         |
| TRWL03*T6N8         | 6.8                | 10,5,2           | 27          | 5.80               | 0.110            | 700         | 6.75   | 60 | 7.10   | 81 | Red           |
| TRWL03*T7N5         | 7.5                | 10,5,2           | 28          | 4.80               | 0.106            | 700         | 7.70   | 60 | 7.82   | 65 | Brown         |
| TRWL03*T8N2         | 8.2                | 10,5,2           | 27          | 4.80               | 0.110            | 700         | 8.25   | 64 | 8.40   | 81 | Green         |
| TRWL03*T8N7         | 8.7                | 10,5,2           | 28          | 4.60               | 0.109            | 700         | 8.86   | 62 | 9.32   | 58 | Yellow        |
| TRWL03*T9N1         | 9.1                | 10,5,2           | 35          | 4.80               | 0.130            | 700         | 9.20   | 70 | 9.70   | 80 | Black         |
| TRWL03*T9N5         | 9.5                | 10,5,2           | 28          | 5.40               | 0.135            | 700         | 9.70   | 59 | 9.92   | 61 | Blue          |
| TRWL03*T10N         | 10.0               | 10,5,2           | 31          | 4.80               | 0.130            | 700         | 10.0   | 66 | 10.6   | 83 | Orange        |
| TRWL03*T11N         | 11.0               | 10,5,2           | 31          | 4.00               | 0.086            | 700         | 11.3   | 53 | 12.1   | 56 | Gray          |
| TRWL03*T12N         | 12.0               | 10,5,2           | 35          | 4.00               | 0.130            | 700         | 12.3   | 72 | 13.5   | 83 | Yellow        |
| TRWL03*T15N         | 15.0               | 10,5,2           | 35          | 4.00               | 0.170            | 700         | 15.4   | 64 | 16.8   | 89 | Green         |
| TRWL03*T16N         | 16.0               | 10,5,2           | 35          | 3.30               | 0.110            | 700         | 16.5   | 55 | 18.0   | 52 | White         |
| TRWL03*T17N         | 17.0               | 10,5,2           | 35          | 3.20               | 0.170            | 700         | 17.6   | 56 | 19.4   | 44 | Red           |
| TRWL03*T18N         | 18.0               | 10,5,2           | 35          | 3.10               | 0.170            | 700         | 18.7   | 70 | 21.4   | 69 | Blue          |
| TRWL03*T20N         | 20.0               | 10,5,2           | 40          | 3.00               | 0.190            | 700         | 20.7   | 80 | 23.5   | 30 | Green         |
| TRWL03*T22N         | 22.0               | 10,5,2           | 38          | 3.00               | 0.190            | 700         | 22.8   | 73 | 26.1   | 71 | Violet        |
| TRWL03*T23N         | 23.0               | 10,5,2           | 38          | 2.85               | 0.190            | 700         | 24.1   | 71 | 28.0   | 71 | Orange        |
| TRWL03*T24N         | 24.0               | 10,5,2           | 36          | 2.80               | 0.130            | 700         | 25.7   | 45 | 30.9   | 40 | Black         |
| TRWL03*T27N         | 27.0               | 10,5,2           | 40          | 2.80               | 0.220            | 600         | 29.2   | 74 | 34.6   | 65 | Gray          |
| TRWL03*T30N         | 30.0               | 10,5,2           | 37          | 2.80               | 0.150            | 600         | 31.4   | 47 | 39.8   | 28 | Brown         |
| TRWL03*T33N         | 33.0               | 10,5,2           | 40          | 2.30               | 0.220            | 600         | 36.0   | 67 | 49.5   | 42 | White         |
| TRWL03*T36N         | 36.0               | 10,5,2           | 37          | 2.30               | 0.250            | 600         | 39.1   | 47 | 48.9   | 24 | Red           |
| TRWL03*T39N         | 39.0               | 10,5,2           | 40          | 2.20               | 0.250            | 600         | 42.7   | 60 | 60.2   | 40 | Black         |
| Test Freq. @ 200MHz |                    |                  |             |                    |                  |             |        |    |        |    |               |
| TRWL03*T43N         | 43.0               | 10,5,2           | 38          | 2.00               | 0.280            | 600         | 46.9   | 44 | 60.3   | 21 | Orange        |
| TRWL03*T47N         | 47.0               | 10,5,2           | 38          | 2.00               | 0.280            | 600         | 52.2   | 62 | 77.2   | 35 | Brown         |
| TRWL03*T51N         | 51.0               | 10,5,2           | 35          | 1.90               | 0.280            | 600         | 55.5   | 69 | 82.2   | 34 | Blue          |
| TRWL03*T56N         | 56.0               | 10,5,2           | 38          | 1.90               | 0.310            | 600         | 62.5   | 56 | 97.0   | 26 | Red           |
| TRWL03*T62N         | 62.0               | 10,5,2           | 37          | 1.80               | 0.340            | 600         | 68.0   | 40 | 110    | 10 | Gray          |





| Part Number         | Inductance<br>(nH) | Tolerance<br>(%) | Q<br>(Min.) | SRF<br>(GHz)(Min.) | DCR<br>(Ω)(Max.) | IDC<br>(mA) | 900MHz |    | 1.7GHz |    | Color<br>Code |
|---------------------|--------------------|------------------|-------------|--------------------|------------------|-------------|--------|----|--------|----|---------------|
|                     |                    |                  |             |                    |                  |             | L      | Q  | L      | Q  |               |
| TRWL03*T68N         | 68.0               | 10,5,2           | 37          | 1.70               | 0.340            | 600         | 80.5   | 54 | 168    | 21 | Orange        |
| Test Freq. @ 150MHz |                    |                  |             |                    |                  |             |        |    |        |    |               |
| TRWL03*T72N         | 72.0               | 10,5,2           | 34          | 1.70               | 0.490            | 400         | 82.0   | 53 | 135    | 20 | Yellow        |
| TRWL03*T82N         | 82.0               | 10,5,2           | 34          | 1.70               | 0.540            | 400         | 96.2   | 54 | 177    | 21 | Green         |
| TRWL03*T91N         | 91.0               | 10,5,2           | 30          | 1.70               | 0.500            | 400         | 110    | 50 | -      | -  | Brown         |
| TRWL03*TR10         | 100                | 10,5,2           | 34          | 1.40               | 0.580            | 400         | 124    | 49 | -      | -  | Blue          |
| TRWL03*TR11         | 110                | 10,5,2           | 32          | 1.35               | 0.610            | 300         | 138    | 43 | -      | -  | Violet        |
| TRWL03*TR12         | 120                | 10,5,2           | 32          | 1.30               | 0.650            | 300         | 166    | 39 | -      | -  | Gray          |
| TRWL03*TR13         | 130                | 10,5,2           | 30          | 1.40               | 0.720            | 300         | 185    | 60 | -      | -  | White         |
| Test Freq. @ 100MHz |                    |                  |             |                    |                  |             |        |    |        |    |               |
| TRWL03*TR14         | 140                | 10,5,2           | 28          | 1.30               | 0.870            | 280         | 190    | 80 | -      | -  | Blue          |
| TRWL03*TR15         | 150                | 10,5,2           | 32          | 1.30               | 0.950            | 280         | 230    | 25 | -      | -  | White         |
| TRWL03*TR16         | 160                | 10,5,2           | 25          | 1.30               | 1.400            | 280         | 215    | -  | -      | -  | Yellow        |
| TRWL03*TR18         | 180                | 10,5,2           | 25          | 1.25               | 1.400            | 250         | 305    | 22 | -      | -  | Black         |
| TRWL03*TR22         | 220                | 10,5,2           | 25          | 1.20               | 1.600            | 250         | 377    | -  | -      | -  | Brown         |
| TRWL03*TR26         | 260                | 10,5,2           | 25          | 1.00               | 2.000            | 200         | 469    | -  | -      | -  | Violet        |
| TRWL03*TR27         | 270                | 10,5,2           | 25          | 0.90               | 2.100            | 200         | -      | -  | -      | -  | Red           |
| TRWL03*TR28         | 280                | 10,5,2           | 25          | 1.00               | 2.400            | 100         | -      | -  | -      | -  | Green         |
| TRWL03*TR30         | 300                | 10,5,2           | 25          | 0.75               | 2.500            | 150         | -      | -  | -      | -  | Orange        |
| TRWL03*TR33         | 330                | 10,5,2           | 25          | 0.90               | 3.800            | 100         | -      | -  | -      | -  | Blue          |
| TRWL03*TR39         | 390                | 10,5,2           | 25          | 0.90               | 4.350            | 100         | -      | -  | -      | -  | Yellow        |

● Note: Working Temperature Range: -40°C ~ 125°C



### Standard Electrical Specifications Standard (TRWL05) - EIA 0805

| Part Number | Inductance (nH) | Tolerance (%) | Q (Min.)     | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|-------------|-----------------|---------------|--------------|-----------------|---------------|----------|------------|
| TRWL05*T2N7 | 2.7 @ 250MHz    | 10,5          | 80 @ 1500MHz | 7.900           | 0.06          | 800      | Brown      |
| TRWL05*T2N8 | 2.8 @ 250MHz    | 10,5          | 80 @ 1500MHz | 7.900           | 0.06          | 800      | Gray       |
| TRWL05*T3N0 | 3.0 @ 250MHz    | 10,5          | 65 @ 1500MHz | 7.900           | 0.06          | 800      | White      |
| TRWL05*T3N3 | 3.3 @ 250MHz    | 10,5          | 50 @ 1500MHz | 6.000           | 0.08          | 600      | Black      |
| TRWL05*T5N6 | 5.6 @ 250MHz    | 10,5          | 65 @ 1000MHz | 5.500           | 0.08          | 600      | Orange     |
| TRWL05*T6N2 | 6.2 @ 250MHz    | 10,5          | 50 @ 1000MHz | 5.500           | 0.11          | 600      | Green      |
| TRWL05*T6N8 | 6.8 @ 250MHz    | 10,5          | 50 @ 1000MHz | 5.500           | 0.11          | 600      | Brown      |
| TRWL05*T7N5 | 7.5 @ 250MHz    | 10,5          | 50 @ 1000MHz | 4.500           | 0.14          | 600      | Green      |
| TRWL05*T8N2 | 8.2 @ 250MHz    | 10,5          | 50 @ 1000MHz | 4.700           | 0.12          | 600      | Red        |
| TRWL05*T8N7 | 8.7 @ 250MHz    | 10,5          | 50 @ 1000MHz | 3.900           | 0.21          | 400      | White      |
| TRWL05*T10N | 10.0 @ 250MHz   | 10,5,2        | 60 @ 500MHz  | 4.200           | 0.10          | 600      | Blue       |
| TRWL05*T12N | 12.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 4.000           | 0.15          | 600      | Orange     |
| TRWL05*T15N | 15.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 3.400           | 0.17          | 600      | Yellow     |
| TRWL05*T18N | 18.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 3.300           | 0.20          | 600      | Green      |
| TRWL05*T22N | 22.0 @ 250MHz   | 10,5,2        | 55 @ 500MHz  | 2.600           | 0.22          | 500      | Blue       |
| TRWL05*T24N | 24.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 2.000           | 0.22          | 500      | Gray       |
| TRWL05*T27N | 27.0 @ 250MHz   | 10,5,2        | 55 @ 500MHz  | 2.500           | 0.25          | 500      | Violet     |
| TRWL05*T33N | 33.0 @ 250MHz   | 10,5,2        | 60 @ 500MHz  | 2.050           | 0.27          | 500      | Gray       |
| TRWL05*T36N | 36.0 @ 250MHz   | 10,5,2        | 55 @ 500MHz  | 1.700           | 0.27          | 500      | Orange     |
| TRWL05*T39N | 39.0 @ 250MHz   | 10,5,2        | 60 @ 500MHz  | 2.000           | 0.29          | 500      | White      |
| TRWL05*T43N | 43.0 @ 200MHz   | 10,5,2        | 60 @ 500MHz  | 1.650           | 0.34          | 500      | Yellow     |
| TRWL05*T47N | 47.0 @ 200MHz   | 10,5,2        | 60 @ 500MHz  | 1.650           | 0.31          | 500      | Black      |
| TRWL05*T56N | 56.0 @ 200MHz   | 10,5,2        | 60 @ 500MHz  | 1.550           | 0.34          | 500      | Brown      |
| TRWL05*T68N | 68.0 @ 200MHz   | 10,5,2        | 60 @ 500MHz  | 1.450           | 0.38          | 500      | Red        |
| TRWL05*T72N | 72.0 @ 150MHz   | 10,5,2        | 65 @ 500MHz  | 1.400           | 0.40          | 500      | Green      |
| TRWL05*T82N | 82.0 @ 150MHz   | 10,5,2        | 65 @ 500MHz  | 1.300           | 0.42          | 400      | Orange     |
| TRWL05*T91N | 91.0 @ 150MHz   | 10,5,2        | 65 @ 500MHz  | 1.200           | 0.48          | 400      | Black      |
| TRWL05*TR10 | 100 @ 150MHz    | 10,5,2        | 65 @ 500MHz  | 1.200           | 0.46          | 400      | Yellow     |
| TRWL05*TR11 | 110 @ 150MHz    | 10,5,2        | 50 @ 250MHz  | 1.000           | 0.48          | 400      | Brown      |
| TRWL05*TR12 | 120 @ 150MHz    | 10,5,2        | 50 @ 250MHz  | 1.100           | 0.51          | 400      | Green      |
| TRWL05*TR15 | 150 @ 100MHz    | 10,5,2        | 50 @ 250MHz  | 0.920           | 0.56          | 400      | Blue       |
| TRWL05*TR18 | 180 @ 100MHz    | 10,5,2        | 50 @ 250MHz  | 0.870           | 0.64          | 400      | Violet     |
| TRWL05*TR20 | 200 @ 100MHz    | 10,5,2        | 50 @ 250MHz  | 0.860           | 0.66          | 400      | Orange     |
| TRWL05*TR22 | 220 @ 100MHz    | 10,5,2        | 50 @ 250MHz  | 0.850           | 0.70          | 400      | Gray       |
| TRWL05*TR24 | 240 @ 100MHz    | 10,5,2        | 44 @ 250MHz  | 0.690           | 1.00          | 350      | Red        |
| TRWL05*TR25 | 250 @ 100MHz    | 10,5,2        | 45 @ 250MHz  | 0.680           | 1.00          | 350      | Green      |
| TRWL05*TR27 | 270 @ 100MHz    | 10,5,2        | 48 @ 250MHz  | 0.650           | 1.00          | 350      | White      |
| TRWL05*TR30 | 300 @ 100MHz    | 10,5,2        | 48 @ 250MHz  | 0.620           | 1.20          | 330      | Yellow     |
| TRWL05*TR33 | 330 @ 100MHz    | 10,5,2        | 48 @ 250MHz  | 0.600           | 1.40          | 310      | Black      |
| TRWL05*TR36 | 360 @ 100MHz    | 10,5,2        | 48 @ 250MHz  | 0.580           | 1.45          | 300      | Green      |
| TRWL05*TR39 | 390 @ 100MHz    | 10,5,2        | 48 @ 250MHz  | 0.560           | 1.50          | 290      | Brown      |
| TRWL05*TR43 | 430 @ 50MHz     | 10,5,2        | 33 @ 100MHz  | 0.430           | 1.70          | 230      | Blue       |
| TRWL05*TR47 | 470 @ 50MHz     | 10,5,2        | 33 @ 100MHz  | 0.375           | 1.70          | 220      | Red        |



| Part Number | Inductance (nH) | Tolerance (%) | Q (Min.)    | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|-------------|-----------------|---------------|-------------|-----------------|---------------|----------|------------|
| TRWL05*TR56 | 560 @ 25MHz     | 10,5,2        | 23 @ 50MHz  | 0.340           | 1.90          | 210      | Orange     |
| TRWL05*TR60 | 600 @ 25MHz     | 10,5,2        | 23 @ 50MHz  | 0.260           | 1.60          | 450      | White      |
| TRWL05*TR62 | 620 @ 25MHz     | 10,5,2        | 23 @ 50MHz  | 0.220           | 2.20          | 210      | Yellow     |
| TRWL05*TR68 | 680 @ 25MHz     | 10,5,2        | 23 @ 50MHz  | 0.200           | 2.20          | 190      | Green      |
| TRWL05*TR75 | 750 @ 25MHz     | 10,5,2        | 23 @ 50MHz  | 0.200           | 2.30          | 180      | Blue       |
| TRWL05*TR82 | 820 @ 25MHz     | 10,5,2        | 23 @ 50MHz  | 0.200           | 2.35          | 180      | Violet     |
| TRWL05*T1R0 | 1000 @ 25MHz    | 10,5,2        | 20 @ 50MHz  | 0.100           | 2.50          | 170      | Gray       |
| TRWL05*T1R2 | 1200 @ 7.9MHz   | 10,5,2        | 18 @ 25MHz  | 0.100           | 2.50          | 170      | White      |
| TRWL05*T1R5 | 1500 @ 7.9MHz   | 10,5,2        | 16 @ 25MHz  | 0.100           | 2.50          | 170      | Black      |
| TRWL05*T1R8 | 1800 @ 7.9MHz   | 10,5,2        | 16 @ 7.9MHz | 0.080           | 2.50          | 170      | Brown      |
| TRWL05*T2R2 | 2200 @ 7.9MHz   | 10,5,2        | 16 @ 7.9MHz | 0.060           | 2.70          | 160      | Red        |
| TRWL05*T2R7 | 2700 @ 7.9MHz   | 10,5,2        | 16 @ 7.9MHz | 0.050           | 2.95          | 150      | Orange     |

● Note: Working Temperature Range: -40℃ ~ 125℃

### Standard Electrical Specifications Standard (TRWL06) - EIA 1206

| Part Number | Inductance (nH) | Tolerance (%) | Q (Min.)    | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|-------------|-----------------|---------------|-------------|-----------------|---------------|----------|------------|
| TRWL06*T6N8 | 6.8 @ 100MHz    | 10,5          | 30 @ 300MHz | 5.50            | 0.07          | 1000     | Brown      |
| TRWL06*T10N | 10.0 @ 100MHz   | 10,5          | 40 @ 300MHz | 4.00            | 0.08          | 1000     | Red        |
| TRWL06*T12N | 12.0 @ 100MHz   | 10,5          | 40 @ 300MHz | 3.20            | 0.08          | 1000     | Orange     |
| TRWL06*T15N | 15.0 @ 100MHz   | 10,5          | 40 @ 300MHz | 3.20            | 0.10          | 1000     | Yellow     |
| TRWL06*T18N | 18.0 @ 100MHz   | 10,5          | 50 @ 300MHz | 2.80            | 0.10          | 1000     | Green      |
| TRWL06*T22N | 22.0 @ 100MHz   | 10,5          | 50 @ 300MHz | 2.20            | 0.10          | 1000     | Blue       |
| TRWL06*T24N | 24.0 @ 100MHz   | 10,5          | 50 @ 300MHz | 2.00            | 0.10          | 1000     | Red        |
| TRWL06*T27N | 27.0 @ 100MHz   | 10,5,2        | 50 @ 300MHz | 1.80            | 0.11          | 1000     | Violet     |
| TRWL06*T33N | 33.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.80            | 0.11          | 1000     | Gray       |
| TRWL06*T39N | 39.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.80            | 0.12          | 1000     | White      |
| TRWL06*T47N | 47.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.50            | 0.13          | 1000     | Black      |
| TRWL06*T56N | 56.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.45            | 0.14          | 1000     | Brown      |
| TRWL06*T62N | 62.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.20            | 0.20          | 1000     | Violet     |
| TRWL06*T68N | 68.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.20            | 0.26          | 950      | Red        |
| TRWL06*T82N | 82.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.20            | 0.21          | 920      | Orange     |
| TRWL06*T91N | 91.0 @ 100MHz   | 10,5,2        | 55 @ 300MHz | 1.10            | 0.24          | 900      | White      |
| TRWL06*TR10 | 100 @ 100MHz    | 10,5,2        | 55 @ 300MHz | 1.10            | 0.26          | 850      | Yellow     |
| TRWL06*TR12 | 120 @ 100MHz    | 10,5,2        | 55 @ 300MHz | 0.75            | 0.26          | 800      | Green      |
| TRWL06*TR15 | 150 @ 100MHz    | 10,5,2        | 60 @ 300MHz | 0.95            | 0.31          | 750      | Blue       |
| TRWL06*TR18 | 180 @ 50MHz     | 10,5,2        | 55 @ 300MHz | 0.90            | 0.43          | 700      | Violet     |
| TRWL06*TR22 | 220 @ 50MHz     | 10,5,2        | 55 @ 300MHz | 0.76            | 0.50          | 670      | Gray       |
| TRWL06*TR27 | 270 @ 50MHz     | 10,5,2        | 55 @ 300MHz | 0.74            | 0.56          | 630      | White      |
| TRWL06*TR30 | 300 @ 50MHz     | 10,5,2        | 50 @ 150MHz | 0.68            | 0.60          | 600      | Green      |
| TRWL06*TR33 | 330 @ 50MHz     | 10,5,2        | 45 @ 150MHz | 0.65            | 0.62          | 590      | Black      |
| TRWL06*TR36 | 360 @ 50MHz     | 10,5,2        | 45 @ 150MHz | 0.60            | 0.65          | 550      | Blue       |
| TRWL06*TR39 | 390 @ 50MHz     | 10,5,2        | 45 @ 150MHz | 0.60            | 0.75          | 530      | Brown      |
| TRWL06*TR47 | 470 @ 50MHz     | 10,5,2        | 45 @ 150MHz | 0.55            | 1.30          | 490      | Red        |
| TRWL06*TR56 | 560 @ 35MHz     | 10,5,2        | 45 @ 150MHz | 0.47            | 1.34          | 460      | Orange     |
| TRWL06*TR62 | 620 @ 35MHz     | 10,5,2        | 45 @ 150MHz | 0.47            | 1.58          | 460      | Gray       |
| TRWL06*TR68 | 680 @ 35MHz     | 10,5,2        | 45 @ 150MHz | 0.45            | 1.58          | 430      | Yellow     |
| TRWL06*TR75 | 750 @ 35MHz     | 10,5,2        | 45 @ 150MHz | 0.44            | 2.25          | 320      | White      |
| TRWL06*TR82 | 820 @ 35MHz     | 10,5,2        | 45 @ 150MHz | 0.42            | 1.82          | 400      | Green      |
| TRWL06*TR91 | 910 @ 35MHz     | 10,5,2        | 45 @ 150MHz | 0.41            | 2.95          | 310      | Green      |
| TRWL06*T1R0 | 1000 @ 35MHz    | 10,5,2        | 45 @ 150MHz | 0.40            | 2.80          | 320      | Blue       |
| TRWL06*T1R2 | 1200 @ 35MHz    | 10,5,2        | 45 @ 150MHz | 0.38            | 3.20          | 300      | Violet     |

● Note: Working Temperature Range: -40°C ~ 125°C





### Standard Electrical Specifications Standard (TRWL08) - EIA 1008

| Part Number | Inductance (nH) | Tolerance (%) | Q (Min.)     | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|-------------|-----------------|---------------|--------------|-----------------|---------------|----------|------------|
| TRWL08*T5N6 | 5.6 @ 50MHz     | 10,5          | 50 @ 1500MHz | 4.000           | 0.15          | 1000     | Black      |
| TRWL08*T10N | 10 @ 50MHz      | 10,5,2        | 50 @ 500MHz  | 4.100           | 0.08          | 1000     | Brown      |
| TRWL08*T12N | 12 @ 50MHz      | 10,5,2        | 50 @ 500MHz  | 3.300           | 0.09          | 1000     | Red        |
| TRWL08*T15N | 15 @ 50MHz      | 10,5,2        | 50 @ 500MHz  | 2.500           | 0.11          | 1000     | Orange     |
| TRWL08*T18N | 18 @ 50MHz      | 10,5,2        | 50 @ 350MHz  | 2.400           | 0.12          | 1000     | Yellow     |
| TRWL08*T22N | 22 @ 50MHz      | 10,5,2        | 55 @ 350MHz  | 2.400           | 0.12          | 1000     | Green      |
| TRWL08*T24N | 24 @ 50MHz      | 10,5,2        | 55 @ 350MHz  | 1.900           | 0.12          | 1000     | Blue       |
| TRWL08*T27N | 27 @ 50MHz      | 10,5,2        | 55 @ 350MHz  | 1.600           | 0.13          | 1000     | Violet     |
| TRWL08*T33N | 33 @ 50MHz      | 10,5,2        | 60 @ 350MHz  | 1.600           | 0.14          | 1000     | Gray       |
| TRWL08*T36N | 36 @ 50MHz      | 10,5,2        | 60 @ 350MHz  | 1.600           | 0.15          | 1000     | Orange     |
| TRWL08*T39N | 39 @ 50MHz      | 10,5,2        | 60 @ 350MHz  | 1.500           | 0.15          | 1000     | White      |
| TRWL08*T47N | 47 @ 50MHz      | 10,5,2        | 65 @ 350MHz  | 1.500           | 0.16          | 1000     | Black      |
| TRWL08*T56N | 56 @ 50MHz      | 10,5,2        | 65 @ 350MHz  | 1.300           | 0.18          | 1000     | Brown      |
| TRWL08*T62N | 59 @ 50MHz      | 10,5,2        | 65 @ 350MHz  | 1.250           | 0.20          | 1000     | Blue       |
| TRWL08*T68N | 68 @ 50MHz      | 10,5,2        | 65 @ 350MHz  | 1.300           | 0.20          | 1000     | Red        |
| TRWL08*T75N | 75 @ 50MHz      | 10,5,2        | 60 @ 350MHz  | 1.100           | 0.21          | 1000     | White      |
| TRWL08*T82N | 82 @ 50MHz      | 10,5,2        | 60 @ 350MHz  | 1.000           | 0.22          | 1000     | Orange     |
| TRWL08*TR10 | 100 @ 25MHz     | 10,5,2        | 60 @ 350MHz  | 1.000           | 0.56          | 650      | Yellow     |
| TRWL08*TR12 | 120 @ 25MHz     | 10,5,2        | 60 @ 350MHz  | 0.950           | 0.63          | 650      | Green      |
| TRWL08*TR15 | 150 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.850           | 0.70          | 580      | Blue       |
| TRWL08*TR18 | 180 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.750           | 0.77          | 620      | Violet     |
| TRWL08*TR22 | 220 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.700           | 0.84          | 500      | Gray       |
| TRWL08*TR24 | 240 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.650           | 0.88          | 500      | White      |
| TRWL08*TR27 | 270 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.600           | 0.91          | 500      | Black      |
| TRWL08*TR30 | 300 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.585           | 1.00          | 450      | Brown      |
| TRWL08*TR33 | 330 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.570           | 1.05          | 450      | Red        |
| TRWL08*TR36 | 360 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.530           | 1.10          | 470      | Orange     |
| TRWL08*TR39 | 390 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.500           | 1.12          | 470      | Yellow     |
| TRWL08*TR43 | 430 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.480           | 1.15          | 470      | Green      |
| TRWL08*TR47 | 470 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.450           | 1.19          | 470      | Blue       |
| TRWL08*TR56 | 560 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.415           | 1.33          | 400      | Violet     |
| TRWL08*TR62 | 620 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.375           | 1.40          | 300      | Gray       |
| TRWL08*TR68 | 680 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.375           | 1.47          | 400      | White      |
| TRWL08*TR75 | 750 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.360           | 1.54          | 360      | Black      |
| TRWL08*TR82 | 820 @ 25MHz     | 10,5,2        | 45 @ 100MHz  | 0.350           | 1.61          | 400      | Brown      |
| TRWL08*TR91 | 910 @ 25MHz     | 10,5,2        | 35 @ 50MHz   | 0.320           | 1.68          | 380      | Red        |
| TRWL08*T1R0 | 1000 @ 25MHz    | 10,5,2        | 35 @ 50MHz   | 0.290           | 1.75          | 370      | Orange     |
| TRWL08*T1R2 | 1200 @ 7.9MHz   | 10,5,2        | 35 @ 50MHz   | 0.250           | 2.00          | 310      | Yellow     |
| TRWL08*T1R5 | 1500 @ 7.9MHz   | 10,5,2        | 28 @ 50MHz   | 0.200           | 2.30          | 330      | Green      |
| TRWL08*T1R8 | 1800 @ 7.9MHz   | 10,5,2        | 28 @ 50MHz   | 0.160           | 2.60          | 300      | Blue       |
| TRWL08*T2R2 | 2200 @ 7.9MHz   | 10,5,2        | 28 @ 50MHz   | 0.160           | 2.80          | 280      | Violet     |
| TRWL08*T2R7 | 2700 @ 7.9MHz   | 10,5,2        | 22 @ 25MHz   | 0.140           | 3.20          | 290      | Gray       |
| TRWL08*T3R3 | 3300 @ 7.9MHz   | 10,5,2        | 22 @ 25MHz   | 0.110           | 3.40          | 290      | White      |
| TRWL08*T3R9 | 3900 @ 7.9MHz   | 10,5,2        | 20 @ 25MHz   | 0.100           | 3.60          | 260      | Black      |
| TRWL08*T4R7 | 4700 @ 7.9MHz   | 10,5,2        | 18 @ 25MHz   | 0.090           | 4.00          | 260      | Brown      |
| TRWL08*T5R6 | 5600 @ 7.9MHz   | 10,5,2        | 16 @ 7.96MHz | 0.020           | 4.00          | 240      | Red        |
| TRWL08*T6R8 | 6800 @ 7.9MHz   | 10,5,2        | 15 @ 7.96MHz | 0.040           | 4.90          | 200      | Orange     |
| TRWL08*T8R2 | 8200 @ 7.9MHz   | 10,5,2        | 15 @ 7.96MHz | 0.025           | 6.00          | 170      | Yellow     |
| TRWL08*T100 | 10000 @ 2.52MHz | 10,5,2        | 15 @ 7.96MHz | 0.020           | 9.00          | 150      | Green      |
| TRWL08*T120 | 12000 @ 2.52MHz | 10,5,2        | 15 @ 7.96MHz | 0.018           | 10.5          | 130      | Blue       |
| TRWL08*T150 | 15000 @ 2.52MHz | 10,5,2        | 15 @ 7.96MHz | 0.015           | 11.5          | 120      | Violet     |

● Note: Working Temperature Range: -40°C ~ 125°C  
Test Methods/Instrument: Network Spectrum Analyzer.

**Standard Electrical Specifications Low Profile (TRWL05) - EIA 0805**

| Part Number  | Inductance (nH) | Tolerance (%) | Q (Min.)     | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|--------------|-----------------|---------------|--------------|-----------------|---------------|----------|------------|
| TRWL05*TL1N8 | 1.8 @ 250MHz    | 10            | 55 @ 1500MHz | 9.40            | 0.03          | 800      | Black      |
| TRWL05*TL3N9 | 3.9 @ 250MHz    | 10,5          | 50 @ 1000MHz | 6.10            | 0.06          | 800      | Brown      |
| TRWL05*TL4N7 | 4.7 @ 250MHz    | 10,5          | 50 @ 1000MHz | 5.50            | 0.06          | 800      | Red        |
| TRWL05*TL6N8 | 6.8 @ 250MHz    | 10,5          | 50 @ 1000MHz | 5.50            | 0.08          | 800      | Orange     |
| TRWL05*TL8N2 | 8.2 @ 250MHz    | 10,5          | 50 @ 1000MHz | 4.80            | 0.08          | 800      | Yellow     |
| TRWL05*TL10N | 10.0 @ 250MHz   | 10,5,2        | 55 @ 750MHz  | 3.30            | 0.08          | 800      | Green      |
| TRWL05*TL12N | 12.0 @ 250MHz   | 10,5,2        | 55 @ 750MHz  | 3.80            | 0.10          | 800      | Blue       |
| TRWL05*TL15N | 15.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 2.95            | 0.10          | 800      | Violet     |
| TRWL05*TL18N | 18.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 3.10            | 0.13          | 800      | Gray       |
| TRWL05*TL22N | 22.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 2.90            | 0.15          | 800      | Whit       |
| TRWL05*TL27N | 27.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 2.45            | 0.23          | 600      | Black      |
| TRWL05*TL33N | 33.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 2.35            | 0.28          | 600      | Brown      |
| TRWL05*TL39N | 39.0 @ 250MHz   | 10,5,2        | 50 @ 500MHz  | 2.20            | 0.33          | 600      | Red        |
| TRWL05*TL47N | 47.0 @ 200MHz   | 10,5,2        | 50 @ 500MHz  | 2.00            | 0.39          | 600      | Orange     |
| TRWL05*TL56N | 56.0 @ 200MHz   | 10,5,2        | 50 @ 500MHz  | 1.85            | 0.39          | 500      | Yellow     |
| TRWL05*TL68N | 68.0 @ 200MHz   | 10,5,2        | 50 @ 500MHz  | 1.50            | 0.40          | 500      | Green      |
| TRWL05*TL82N | 82.0 @ 150MHz   | 10,5,2        | 50 @ 500MHz  | 1.50            | 0.44          | 500      | Blue       |
| TRWL05*TLR10 | 100.0 @ 150MHz  | 10,5,2        | 50 @ 500MHz  | 1.20            | 0.64          | 400      | Violet     |
| TRWL05*TLR12 | 120.0 @ 150MHz  | 10,5,2        | 40 @ 250MHz  | 1.15            | 0.68          | 300      | Gray       |
| TRWL05*TLR15 | 150.0 @ 150MHz  | 10,5,2        | 40 @ 250MHz  | 1.05            | 0.80          | 300      | Whit       |
| TRWL05*TL1R0 | 1000.0 @ 25MHz  | 10,5,2        | 16 @ 50MHz   | 0.08            | 2.00          | 220      | Black      |

● **Note: Working Temperature Range: -40℃ ~ 125℃**



### Standard Electrical Specifications Low Profile (TRWL08) - EIA 1008

| Part Number  | Inductance (nH) | Tolerance (%) | Q (Min.)     | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|--------------|-----------------|---------------|--------------|-----------------|---------------|----------|------------|
| TRWL08*TL4N2 | 4.2 @ 50MHz     | 10,5          | 42 @ 1500MHz | 6.00            | 0.15          | 600      | Black      |
| TRWL08*TL6N8 | 6.8 @ 50MHz     | 10,5          | 50 @ 1500MHz | 5.40            | 0.17          | 600      | Brown      |
| TRWL08*TL8N2 | 8.2 @ 50MHz     | 10,5          | 50 @ 1500MHz | 5.00            | 0.22          | 600      | Red        |
| TRWL08*TL15N | 15 @ 50MHz      | 10,5          | 57 @ 500MHz  | 3.00            | 0.22          | 600      | Orange     |
| TRWL08*TL20N | 20 @ 50MHz      | 10,5          | 72 @ 500MHz  | 2.40            | 0.33          | 600      | Yellow     |
| TRWL08*TL27N | 27 @ 50MHz      | 10,5          | 50 @ 350MHz  | 1.60            | 0.13          | 600      | Green      |
| TRWL08*TL30N | 30 @ 50MHz      | 10,5          | 69 @ 500MHz  | 2.40            | 0.38          | 600      | Blue       |
| TRWL08*TL40N | 40 @ 50MHz      | 10,5          | 67 @ 500MHz  | 2.00            | 0.43          | 600      | Violet     |
| TRWL08*TL50N | 50 @ 50MHz      | 10,5,2        | 72 @ 500MHz  | 1.90            | 0.48          | 600      | Gray       |
| TRWL08*TL60N | 60 @ 50MHz      | 10,5,2        | 75 @ 500MHz  | 1.80            | 0.52          | 600      | White      |
| TRWL08*TL70N | 70 @ 50MHz      | 10,5,2        | 68 @ 500MHz  | 1.70            | 0.55          | 510      | Black      |
| TRWL08*TL80N | 80 @ 50MHz      | 10,5,2        | 75 @ 500MHz  | 1.40            | 0.56          | 510      | Brown      |
| TRWL08*TLR56 | 560 @ 25MHz     | 10,5,2        | 40 @ 100MHz  | 0.40            | 1.33          | 400      | Red        |

● Note: Working Temperature Range: -40°C ~ 125°C

### Standard Electrical Specifications High Current (TRWL03) - EIA 0603

| Part Number  | Inductance (nH) | Tolerance (%) | Q (Min.) | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|--------------|-----------------|---------------|----------|-----------------|---------------|----------|------------|
| TRWL03*TH1N6 | 1.6 @ 250MHz    | 10,5          | 24       | 12.50           | 0.030         | 2400     | Black      |
| TRWL03*TH3N6 | 3.6 @ 250MHz    | 10,5          | 24       | 5.90            | 0.048         | 2300     | Brown      |
| TRWL03*TH3N9 | 3.9 @ 250MHz    | 10,5          | 25       | 5.90            | 0.054         | 2200     | Red        |
| TRWL03*TH6N8 | 6.8 @ 250MHz    | 10,5          | 35       | 5.80            | 0.054         | 2100     | Orange     |
| TRWL03*TH7N5 | 7.5 @ 250MHz    | 10,5          | 35       | 3.70            | 0.059         | 2100     | Yellow     |
| TRWL03*TH8N2 | 8.2 @ 250MHz    | 10,5          | 38       | 3.70            | 0.060         | 2000     | White      |
| TRWL03*TH10N | 10.0 @ 250MHz   | 10,5,2        | 38       | 3.70            | 0.071         | 2000     | Green      |
| TRWL03*TH12N | 12.0 @ 250MHz   | 10,5,2        | 38       | 3.00            | 0.075         | 2000     | Blue       |
| TRWL03*TH15N | 15.0 @ 250MHz   | 10,5,2        | 38       | 2.80            | 0.080         | 1900     | Violet     |
| TRWL03*TH18N | 18.0 @ 250MHz   | 10,5,2        | 40       | 2.80            | 0.099         | 1900     | Gray       |
| TRWL03*TH22N | 22.0 @ 250MHz   | 10,5,2        | 42       | 2.40            | 0.099         | 1800     | White      |
| TRWL03*TH24N | 24.0 @ 250MHz   | 10,5,2        | 42       | 2.40            | 0.105         | 1800     | Black      |

● Note: Working Temperature Range: -40°C ~ 125°C



### Standard Electrical Specifications High Q (TRWL05) - EIA 0805

| Part Number  | Inductance (nH) | Tolerance (%) | Q (Min.)     | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|--------------|-----------------|---------------|--------------|-----------------|---------------|----------|------------|
| TRWL05*TH2N5 | 2.5 @ 250MHz    | 10,5          | 80 @ 1500MHz | 6.00            | 0.020         | 1600     | Black      |
| TRWL05*TH5N6 | 5.6 @ 250MHz    | 10,5          | 98 @ 1500MHz | 6.00            | 0.035         | 1600     | Brown      |
| TRWL05*TH6N2 | 6.2 @ 250MHz    | 10,5          | 88 @ 1000MHz | 4.75            | 0.035         | 1600     | Red        |
| TRWL05*TH6N8 | 6.8 @ 250MHz    | 10,5          | 80 @ 1000MHz | 4.40            | 0.035         | 1600     | White      |
| TRWL05*TH8N2 | 8.2 @ 250MHz    | 10,5          | 75 @ 1000MHz | 3.00            | 0.075         | 1000     | Gray       |
| TRWL05*TH12N | 12 @ 250MHz     | 10,5          | 80 @ 1000MHz | 3.00            | 0.045         | 1600     | Orange     |
| TRWL05*TH15N | 15 @ 250MHz     | 10,5,2        | 80 @ 1000MHz | 2.80            | 0.100         | 1200     | Black      |
| TRWL05*TH16N | 16 @ 250MHz     | 10,5,2        | 72 @ 500MHz  | 2.95            | 0.060         | 1500     | Yellow     |
| TRWL05*TH18N | 18 @ 250MHz     | 10,5,2        | 75 @ 500MHz  | 2.55            | 0.060         | 1400     | Green      |
| TRWL05*TH20N | 20 @ 250MHz     | 10,5,2        | 70 @ 500MHz  | 2.05            | 0.055         | 1400     | Blue       |
| TRWL05*TH22N | 22 @ 250MHz     | 10,5,2        | 80 @ 500MHz  | 2.00            | 0.100         | 1200     | Black      |
| TRWL05*TH27N | 27 @ 250MHz     | 10,5,2        | 75 @ 500MHz  | 2.00            | 0.070         | 1300     | Violet     |
| TRWL05*TH30N | 30 @ 250MHz     | 10,5,2        | 65 @ 500MHz  | 1.95            | 0.095         | 1200     | Gray       |
| TRWL05*TH39N | 39 @ 250MHz     | 10,5,2        | 65 @ 500MHz  | 1.60            | 0.110         | 1100     | White      |
| TRWL05*TH48N | 48 @ 200MHz     | 10,5,2        | 65 @ 500MHz  | 1.40            | 0.095         | 1200     | Black      |
| TRWL05*TH51N | 51 @ 200MHz     | 10,5,2        | 65 @ 500MHz  | 1.40            | 0.120         | 1000     | Brown      |

● Note: Working Temperature Range: -40°C ~ 125°C

### Standard Electrical Specifications High Q (TRWL08) - EIA 1008

| Part Number  | Inductance (nH) | Tolerance (%) | Q (Min.)     | SRF (GHz)(Min.) | DCR (Ω)(Max.) | IDC (mA) | Color Code |
|--------------|-----------------|---------------|--------------|-----------------|---------------|----------|------------|
| TRWL08*TH3N0 | 3.0 @ 50MHz     | 10,5          | 70 @ 1500MHz | 6.00            | 0.04          | 1600     | Black      |
| TRWL08*TH4N1 | 4.1 @ 50MHz     | 10,5          | 75 @ 1500MHz | 6.00            | 0.05          | 1600     | Brown      |
| TRWL08*TH7N8 | 7.8 @ 50MHz     | 10,5          | 75 @ 500MHz  | 3.80            | 0.05          | 1600     | Red        |
| TRWL08*TH10N | 10 @ 50MHz      | 10,5,2        | 60 @ 500MHz  | 3.60            | 0.06          | 1600     | Orange     |
| TRWL08*TH12N | 12 @ 50MHz      | 10,5,2        | 70 @ 500MHz  | 2.80            | 0.06          | 1500     | Yellow     |
| TRWL08*TH18N | 18 @ 50MHz      | 10,5,2        | 62 @ 350MHz  | 2.70            | 0.07          | 1400     | Green      |
| TRWL08*TH22N | 22 @ 50MHz      | 10,5,2        | 62 @ 350MHz  | 2.05            | 0.07          | 1400     | Blue       |
| TRWL08*TH33N | 33 @ 50MHz      | 10,5,2        | 75 @ 350MHz  | 1.70            | 0.09          | 1300     | Violet     |
| TRWL08*TH39N | 39 @ 50MHz      | 10,5,2        | 75 @ 350MHz  | 1.30            | 0.09          | 1300     | Gray       |
| TRWL08*TH47N | 47 @ 50MHz      | 10,5,2        | 75 @ 350MHz  | 1.45            | 0.12          | 1200     | White      |
| TRWL08*TH56N | 56 @ 50MHz      | 10,5,2        | 75 @ 350MHz  | 1.23            | 0.12          | 1200     | Black      |
| TRWL08*TH68N | 68 @ 50MHz      | 10,5,2        | 80 @ 350MHz  | 1.15            | 0.13          | 1100     | Brown      |
| TRWL08*TH82N | 82 @ 50MHz      | 10,5,2        | 80 @ 350MHz  | 1.06            | 0.16          | 1100     | Red        |
| TRWL08*THR10 | 100 @ 50MHz     | 10,5,2        | 52 @ 350MHz  | 0.82            | 0.16          | 1000     | Orange     |

● Note: Working Temperature Range: -40°C ~ 125°C

Parts (3.0nH, 7.8nH) are wound on a low profile bobbin with High Q.





## Order Codes

### Order Codes (TRWL)

| TRWL        | 03                       |           |         | J                       |      | T       |             | S           |                         | 1N6        |         | S        |                                            |
|-------------|--------------------------|-----------|---------|-------------------------|------|---------|-------------|-------------|-------------------------|------------|---------|----------|--------------------------------------------|
| Part Number | Dimensions (L×W)<br>(mm) |           |         | Resistance<br>Tolerance |      | Package |             | Design code |                         | Inductance |         | Terminal |                                            |
| TRWL        | 02                       | 1.00×0.50 | EIA0402 | G                       | ±2%  | T       | Taping Reel | S           | Standard Inductor       | 1N6        | 1.6nH   | G        | Mo / Mn<br>Or W<br>with<br>Gold<br>plated. |
|             | 03                       | 1.60×0.80 | EIA0603 | J                       | ±5%  |         |             |             |                         | 82N        | 82nH    |          |                                            |
|             | 05                       | 2.00×1.20 | EIA0805 | K                       | ±10% |         |             | L           | Low Profile Inductor    | R27        | 270nH   |          |                                            |
|             | 06                       | 3.20×1.60 | EIA1206 | M                       | ±20% |         |             |             |                         | 1R0        | 1000nH  | S        | Pd / Ag<br>with Tin<br>plated.             |
|             | 08                       | 2.50×2.00 | EIA1008 |                         |      |         |             | H           | High Current and High Q | 100        | 10000nH |          |                                            |



## ► General Information

### DeMint Cuts Inductor Size and Cost

DeMint utilizes the latest technology enabling the most cost-effective designs in manufacturing inductors. The 0402, 0603, 0805, 1206, 1210, to 1812 series of RF Miniature Inductors all contain wire wound or multi-layer technology with material substrate in ceramic or ferrite cores. Thus providing economic cost with the ultimate performance demanded by today's RF applications. Inductors feature high Q factor, SRFs (self-resonant or series resonant frequency), and Idc (maximum current carrying capacity).

### How to quickly search RF inductors for all of the characteristics?

Searching and comparing data sheets of inductor manufacturers can be time consuming. DeMint's Parameter Sorting Search Mode allows selection of inductors based on different parameters. To enter Searching Mode:

- By entering just the inductance value,
- By sorting parameter to narrow down searching range,
- Or by enter keyword / part number / size dimensions L\*W\*H to partial or exact searching.

### Inductors Selection Notes:

**For choke applications,** the SRFs (self-resonant or series resonant frequency) is the frequency that provides the best signal blocking.

- At the SRF, impedance is at its maximum.
- At frequencies below the SRF, impedance increases with frequency.
- At frequencies above the SRF, impedance decreases with frequency.

**For higher order filter or impedance matching applications,** in general, the choice of inductance value typically determines the SRF and vice versa. The higher the inductance value, the lower the SRF, due to increased winding capacitance. It is more important to have a relatively flat inductance curve (constant inductance vs. frequency) near the required frequency. This suggests selecting an inductor with an SRF well above the design frequency. A rule of thumb is to select an inductor with an SRF that is a decade (10X) higher than the operating frequency.

**What is Q factor?** High Q leads to low insertion loss, minimizing power consumption, and narrow bandwidth. It is important if the inductor is to be used as part of an LC (oscillator) circuit or in narrow band pass applications. In general, wire wound inductors have much higher Q values than multilayer inductors of the same size and value. DeMint's material science and manufacturing expertise effectively bridges the gap between wire-wound performance and multi-layer inductors with its TRMF100505 (EIA 0402) and TRMI160808 (EIA 0603) series.

**How does current requirement affect inductor?** Higher current requires larger wire or more threads of the same wire size to keep losses and temperature rise to a minimum. Larger wire lowers the DCR and increases the Q factor. Using a ferrite core inductor with a lower turn count can achieve higher current capacity and lower DCR. Ferrite, however, may introduce new limitations such as larger variation of inductance with temperature, looser tolerances, lower Q, and reduced saturation current ratings. DeMint's ferrite inductors with open magnetic structures, will not saturate, even at full rated current.

