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# DEMINT

## Electronics Co., Ltd.

### (TCDA)

# High Current Power Inductors

**DeMint Electronics Co., Ltd.**

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**▶ Product Introduction****Technology of Diagonal Through Hole High Current Power Inductors (TCDA) Design.****Features :**

- Low DCR.
- High Frequency (up to 1MHz).
- Low Profile: 7.5mm ~ 10.0mm
- For Large Current Use: 12 ~ 45 amp.
- Diagonal Through Hole Power Inductor.

**Applications :**

- Graphic Card/ VGA Module.
- Inductor for general purpose use.
- Laptop Computer / Notebook Computer.
- DC/DC converter or VRM applications.
- Thin type on-board power supply module for exchanger.

DeMint's TCDA Large Current Series power inductors feature with high current, low DC resistance, high frequency, easy heat dissipation, and high reliability advantages.

DeMint utilizes the latest technology of diagonal through hole power inductor design enabling the most cost-effective propose in manufacturing TCDA Products.


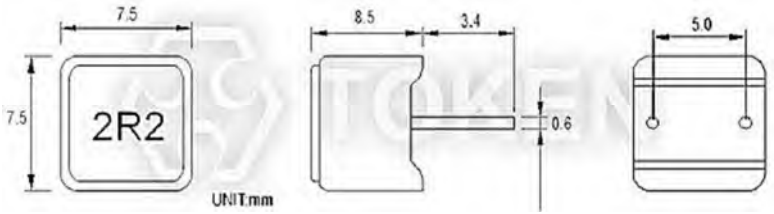

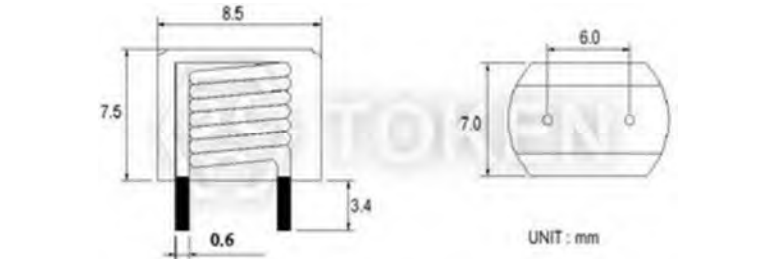

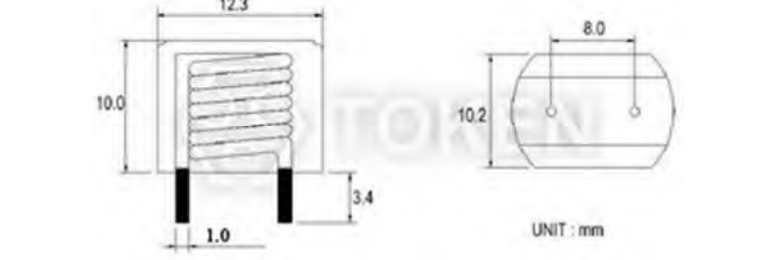

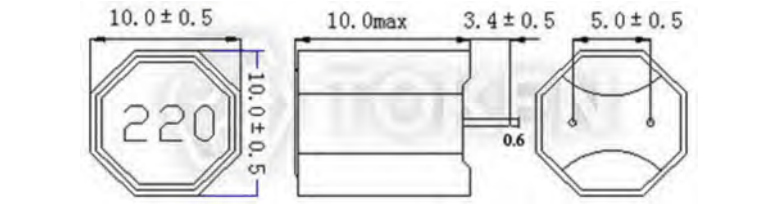

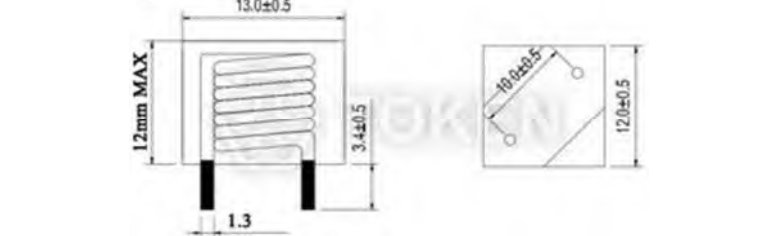
DeMint will also produce devices outside these specifications to meet customer requirements, with comprehensive application engineering and design support available for customers worldwide.

The TCDA series is lead-free and RoHS compliant. Detailed specifications, both mechanical and electrical. Please contact our sales or link to DeMint official website "[Through Hole Inductors](#)" for more information.



## Configurations & Dimensions

### Configurations & Dimensions (Unit: mm) (TCDA0707/0808/1012/1010A/1312)

|  |  |
|--|--|
| <p>TCDA0707</p>     |    |
| <p>TCDA0808</p>     |    |
| <p>TCDA1210</p>    |   |
| <p>TCDA1010A</p>  |  |
| <p>TCDA1312</p>   |  |

## ▶ TCDA0707

### Electrical Characteristics (TCDA0707)

| PART NO        | L (μH) | DCR Max. (mΩ) | IDC Max. (A) | TEST FREQ. (Hz) |
|----------------|--------|---------------|--------------|-----------------|
| TCDA0707-R56MB | 0.56   | 2.50          | 32           | 100k/0.1v       |
| TCDA0707-1R0MB | 1.00   | 5.6           | 21           | 100k/0.1v       |
| TCDA0707-1R5MB | 1.5    | 7.5           | 18           | 100k/0.1v       |
| TCDA0707-2R2MB | 2.2    | 10.00         | 16           | 100k/0.1v       |
| TCDA0707-2R8MB | 2.8    | 11.8          | 15           | 100k/0.1v       |
| TCDA0707-3R3MB | 3.3    | 13.6          | 14           | 100k/0.1v       |
| TCDA0707-4R7MB | 4.7    | 17.00         | 12           | 100k/0.1v       |

**Note:**

- **I<sub>ms</sub>**: The value of current indicates that the temperature of the coil is increase 40°C ( trpcial ) ◦
- **I<sub>sat</sub>**: The valve of current indicates that inductance drops 20% (trpcial)from its initial value without DC current.
- Test condition: Ta = 25°C ◦
- Test condition: 100 KHZ 0.1V ◦
- In Bulk packing.
- Special inquiries besides the above common used types can be met on your require ment.
- TEMPERATURE RATING: Operating -55°C to ~ 125°C ◦

## ▶ TCDA0808

### Electrical Characteristics (TCDA0808)

| PART NO        | L (μH) | DCR Max. (mΩ) | IDC Max. (A) | TEST FREQ. (Hz) |
|----------------|--------|---------------|--------------|-----------------|
| TCDA0808-R56MB | 0.56   | 2.50          | 32           | 100k/0.1v       |
| TCDA0808-1R0MB | 1.00   | 5.6           | 21           | 100k/0.1v       |
| TCDA0808-1R5MB | 1.5    | 7.5           | 18           | 100k/0.1v       |
| TCDA0808-2R2MB | 2.2    | 10.00         | 16           | 100k/0.1v       |
| TCDA0808-2R8MB | 2.8    | 11.8          | 15           | 100k/0.1v       |
| TCDA0808-3R3MB | 3.3    | 13.6          | 14           | 100k/0.1v       |
| TCDA0808-4R7MB | 4.7    | 17.00         | 12           | 100k/0.1v       |

**Note:**

- **I<sub>ms</sub>**: The value of current indicates that the temperature of the coil is increase 40°C ( trpcial ) ◦
- **I<sub>sat</sub>**: The valve of current indicates that inductance drops 20% (trpcial)from its initial value without DC current.
- Test condition: Ta = 25°C ◦
- Test condition: 100 KHZ 0.1V ◦
- In Bulk packing.
- Special inquiries besides the above common used types can be met on your require ment.
- TEMPERATURE RATING: Operating -55°C to ~ 125°C ◦



## TCDA1010A

### Electrical Characteristics (TCDA1010A)

| PART NO         | L (μH) | DCR Max. (mΩ) | IDC Max. (A)          | TEST FREQ. (Hz) |
|-----------------|--------|---------------|-----------------------|-----------------|
| TCDA1010A-100MB | 10     | 16.00         | Isat 9.0A / Irms 5.0A | 100k/0.1v       |
| TCDA1010A-150MB | 15     | 28.00         | Isat 7.0A / Irms 4.5A | 100k/0.1v       |
| TCDA1010A-220MB | 22     | 32.00         | Isat 6.0A / Irms 4.0A | 100k/0.1v       |
| TCDA1010A-330MB | 33     | 52.00         | Isat 5.0A / Irms 3.5A | 100k/0.1v       |
| TCDA1010A-470MB | 47     | 80.00         | Isat 3.0A / Irms 2.0A | 100k/0.1v       |

**Note:**

- **Ims:** The value of current indicates that the temperature of the coil is increase 40°C ( trpcial ) ◦
- **Isat:** The valve of current indicates that inductance drops 20% (trpcial)from its initial value without DC current.
- **Test condition:** Ta = 25°C ◦
- **Test condition:** 100 KHZ 0.1V ◦
- **In Bulk packing.**
- Special inquiries besides the above common used types can be met on your require ment.
- **TEMPERATURE RATING:** Operating -55°C to ~ 125°C ◦

## TCDA1210

### Electrical Characteristics (TCDA1210)

| PART NO         | L (μH) | DCR Max. (mΩ) | IDC Max. (A) | TEST FREQ. (Hz) |
|-----------------|--------|---------------|--------------|-----------------|
| TCDA1210-R22MB  | 0.22   | 0.60          | 56           | 100k/0.1v       |
| TCDA1210-R33MB  | 0.33   | 0.80          | 48           | 100k/0.1v       |
| TCDA1210-R39M-B | 0.39   | 0.80          | 48           | 100k/0.1v       |
| TCDA1210-R47M-B | 0.47   | 1.00          | 40           | 100k/0.1v       |
| TCDA1210-R56M-B | 0.56   | 1.00          | 40           | 100k/0.1v       |
| TCDA1210-R68M-B | 0.68   | 1.00          | 40           | 100k/0.1v       |
| TCDA1210-R80M-B | 0.80   | 1.25          | 36           | 100k/0.1v       |
| TCDA1210-1R0M-B | 1.00   | 2.00          | 32           | 100k/0.1v       |
| TCDA1210-1R5M-B | 1.50   | 3.50          | 30           | 100k/0.1v       |
| TCDA1210-2R2M-B | 2.20   | 5.00          | 24           | 100k/0.1v       |
| TCDA1210-2R8M-B | 2.80   | 6.40          | 20           | 100k/0.1v       |
| TCDA1210-3R3M-B | 3.30   | 7.70          | 16           | 100k/0.1v       |
| TCDA1210-4R7M-B | 4.70   | 10.00         | 15           | 100k/0.1v       |

**Note:**

- **Ims:** The value of current indicates that the temperature of the coil is increase 40°C ( trpcial ) ◦
- **Isat:** The valve of current indicates that inductance drops 20% (trpcial)from its initial value without DC current.
- **Test condition:** Ta = 25°C ◦
- **Test condition:** 100 KHZ 0.1V ◦
- **In Bulk packing.**
- Special inquiries besides the above common used types can be met on your require ment.
- **TEMPERATURE RATING:** Operating -55°C to ~ 125°C ◦



## TCDA1312

### Electrical Characteristics (TCDA1312)

| PART NO        | L (μH) | DCR Max. (mΩ) | IDC Max. (A) | TEST FREQ. (Hz) |
|----------------|--------|---------------|--------------|-----------------|
| TCDA1312-R33MB | 0.33   | 0.6           | 40           | 100k/0.1v       |
| TCDA1312-R39MB | 0.39   | 0.65          | 39           | 100k/0.1v       |
| TCDA1312-R47MB | 0.47   | 0.68          | 38           | 100k/0.1v       |
| TCDA1312-R56MB | 0.56   | 0.68          | 38           | 100k/0.1v       |
| TCDA1312-R68MB | 0.68   | 0.85          | 35           | 100k/0.1v       |
| TCDA1312-R80MB | 0.80   | 0.90          | 33           | 100k/0.1v       |
| TCDA1312-1R0MB | 1.00   | 1.25          | 28           | 100k/0.1v       |
| TCDA1312-1R5MB | 1.5    | 1.65          | 25           | 100k/0.1v       |

**Note:**

- **Ims:** The value of current indicates that the temperature of the coil is increase 40°C ( trpcial ) ◦
- **Isat:** The valve of current indicates that inductance drops 20% (trpcial)from its initial value without DC current.
- **Test condition:** Ta = 25°C ◦
- **Test condition:** 100 KHZ 0.1V ◦
- **In Bulk packing.**
- **Special inquiries besides the above common used types can be met on your require ment.**
- **TEMPERATURE RATING:** Operating -55°C to ~ 125°C ◦

## Order Codes

### Order Codes (TCDA)

| TCDA        | 1312  | -           | R22        | M      |           |      |
|-------------|-------|-------------|------------|--------|-----------|------|
| Part Number | Size  |             | Inductance |        | Tolerance |      |
| TCDA        | 0707  | 7.5×7.5mm   | R22        | 0.22μH | J         | ±5%  |
|             | 0808  | 8.5×7.0mm   | 1R0        | 1.00μH | K         | ±10% |
|             | 1210  | 12.3×10.2mm |            |        | L         | ±15% |
|             | 1010A | 10.0×10.0mm |            |        | M         | ±20% |
|             | 1312  | 13.0×12.0mm |            |        | P         | ±25% |
|             |       |             |            |        | N         | ±30% |



## ► General Information

### Leading-Edge Technology

DeMint Electronics brand passive component specializes in standard and custom solutions offering the latest in state-of-the-art low profile high power density inductor components. DeMint provides cost-effective, comprehensive solutions that meet the evolving needs of technology-driven markets. In working closely with the industry leaders in chipset and core development, we remain at the forefront of innovation and new technology to deliver the optimal mix of packaging, high efficiency and unbeatable reliability. Our designs utilize high frequency, low core loss materials, new and custom core shapes in combination with innovative construction and packaging to provide designers with the highest performance parts available on the market.

### Find Inductor Solutions Faster

**Find Your Inductor** - [rfq@direct-token.com](mailto:rfq@direct-token.com)

Only timely and accurate information can help manage the changing needs of your customers. The DeMint Inductor Finder puts you only a click away from all of the inductor information you need.

**Find Your Solution** - [rfq@direct-token.com](mailto:rfq@direct-token.com)

Selecting the correct inductor solution will not only save you time, but it will give you a competitive edge. At DeMint, we are committed to helping you find the most efficient alternative for your power design. Our inductor and power supply design experts can help you make that selection.

Please forward us:

- A brief description of your particular application's requirements.
- Details of an existing solution that you'd like to replace, enhance or find an alternative.
- Inquiries for feasibility to tailor a power transformer or inductor to your specific application.

We can also help you with any additional technical information you might need relating to any of our products.

**Ask Us Today**

