



CH SHENYANG ELECTRONICS

APPROVAL APPLICATION

|                    |                   |        |
|--------------------|-------------------|--------|
| 厂商编码<br>Number in: | OA-DM004-H        |        |
| 客户编码<br>Item Name: | /                 |        |
| 产品名称<br>Type:      | DM Inductance     |        |
| 规格型号<br>Client:    | 10A 20uH ±15% 10K |        |
| 编制日期<br>Date:      | 2024.09.10        | REV: A |
| 修改日期<br>Date:      |                   | REV:   |

|                             |       |        |            |
|-----------------------------|-------|--------|------------|
| APPROVED FOR CUSTOMER 客户认可: |       |        |            |
| ED 工程                       | TD 质量 | R&D 研发 | APPROVE 批准 |
|                             |       |        |            |
| PRODUCERS CONFIRMED 制造商认可:  |       |        |            |
| ED 工程                       | TD 质量 | R&D 研发 | APPROVE 批准 |
|                             |       |        |            |

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|                                                                                                                                                      |                             |                                   |            |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------|------------|------------|
| <div> CH SHENYANG ELECTRONICS</div> <div>APPROVAL APPLICATION</div> |                             | Customer:                         | /          |            |
|                                                                                                                                                      |                             | REV:                              | A          |            |
| product name/Type:                                                                                                                                   |                             | CM Inductance / 10A 20uH ±15% 10K | Date:      | 2024.09.10 |
| HISTORY OF CHANGED 修改记录                                                                                                                              |                             |                                   |            |            |
| REV 版本                                                                                                                                               | DESCRIPTION OF CHANGES 修改内容 | CHANGE REASON 原因                  | DATE 日期    |            |
| A                                                                                                                                                    | New issue                   | /                                 | 2024.09.10 |            |
|                                                                                                                                                      |                             |                                   |            |            |
|                                                                                                                                                      |                             |                                   |            |            |
|                                                                                                                                                      |                             |                                   |            |            |
|                                                                                                                                                      |                             |                                   |            |            |



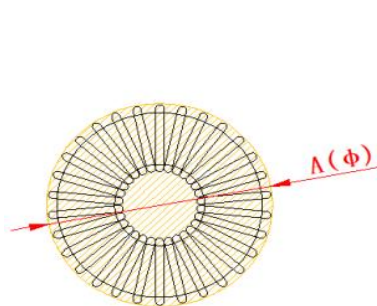
Customer: /

REV: A

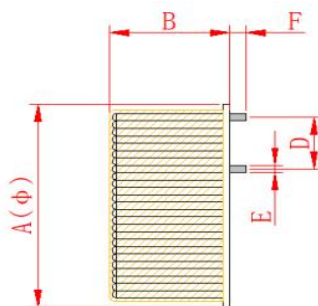
product name/Type: CM Inductance / 10A 20uH  $\pm 15\%$  10K

Date: 2024.09.10

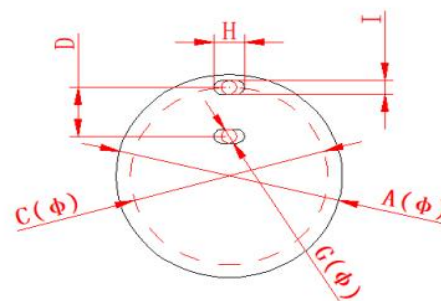
Material size chart (unit:mm)/Construction



Front view



Side view



Bottom view

| NO.            | Model (uH)              | A (max) | B (max) | C (max) | D (±0.5) | E (±0.5) | F (±0.5) | G (±0.3) | H (±0.3) | I (±0.2) | J (±0.2) | Weight (g) |
|----------------|-------------------------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|------------|
| OA-DM00<br>4-H | 10A 20uH $\pm 15\%$ 10K | 28      | 17      | /       | 10       | /        | 3.5      | /        | 2.3      | 1.2      | /        | 19.4       |

“A” Significant size; Mark: OA-DM004-H CHSHENYANG Y/W

注意事项:

## Process requirements

- 1, Product Appearance 100% Inspection Test;
- 2, Electrical Performance 100% Inspection Test;
- 3, RoHS、UL94 (in line with EU standards) ;
- 4, Reliable Performance Reference AEC-Q200 Standard Test;
- 5, Storage temperature and humidity:  $<35^{\circ}\text{C}$ ; 35-65% RH
- 6, working temperature range :  $-40^{\circ}\text{C}$ ~ $+125^{\circ}\text{C}$ ;



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/

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product name/Type:

CM Inductance / 10A 20uH  $\pm 15\%$  10K

Date:

2024.09.10

## Electrical characteristic

| NO | Non-woven<br>en 挡墙 | Wire(电流) | Turns<br>(匝比) | START<br>起线 | FINISH<br>尾线 | Tape 胶<br>带 | Case 套管 |   | Note |
|----|--------------------|----------|---------------|-------------|--------------|-------------|---------|---|------|
|    |                    |          |               |             |              |             | S       | F |      |
| N1 | /                  | 10A      | 1: 1          | 1           | 2            | /           | /       | / |      |
|    |                    |          |               |             |              |             |         |   |      |

| Project                                | unit | Test Conditions                          | MIN            | MAX | test instrument | Note |
|----------------------------------------|------|------------------------------------------|----------------|-----|-----------------|------|
| L 1-2                                  | uH   | 10KHz,0.3V, Ser                          | 17             | 23  | GKT3259         | ●    |
|                                        |      |                                          | 20±15%         |     |                 |      |
| Fight Voltage（AC*1.2, 3S, Can replace） | mA   | PRI/SEC-Core,AC1500V,1min,0.5mA ,50/60Hz | No abnormality |     | 19053           | ○    |
| DCR 1-2                                | m Ω  | 25℃                                      | 5（REF）         |     | GKT3259         | ○    |
| Insulation resistance                  | G Ω  | PRI-SEC DC1000V,10s,1G Ω                 | No abnormality |     | 19053           | ○    |
|                                        | G Ω  | PRI/SEC-Core DC1000V,10s,1G Ω            | No abnormality |     | 19053           | ○    |

“●” 代表关键特性 Important performance, “○” 代表一般特性 General performance



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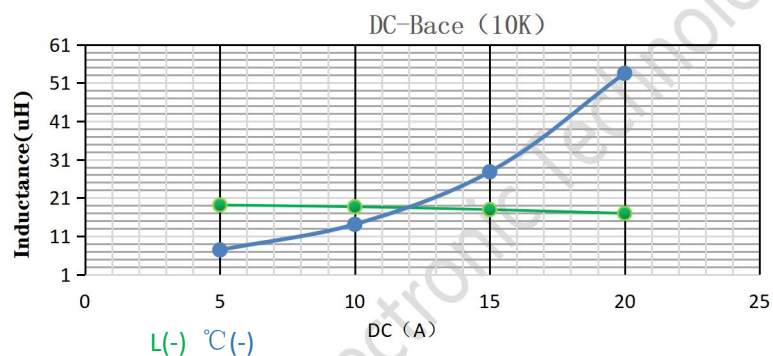
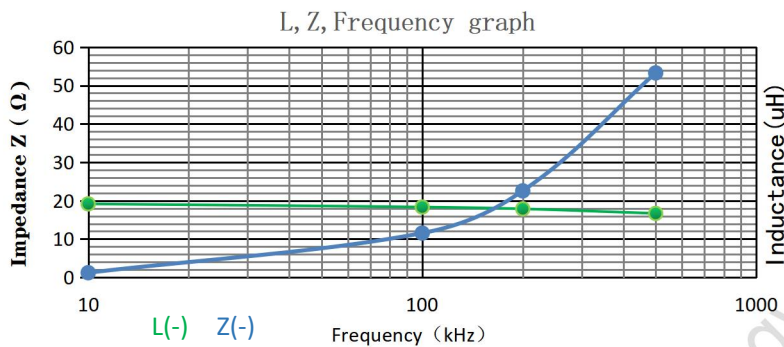
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Electrical performance test (Reference data)



|                                                                                                                                                      |                                             |                                                                       |            |                   |                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------|------------|-------------------|----------------------|
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|                                                                                                                                                      |                                             |                                                                       | REV:       | A                 |                      |
| product name/Type:                                                                                                                                   | CM Inductance / 10A 20uH ±15% 10K           | Date:                                                                 | 2024.09.10 |                   |                      |
| Reliability Test                                                                                                                                     |                                             |                                                                       |            |                   |                      |
| 序号                                                                                                                                                   | 应力方式                                        | 检测方法                                                                  | 数量 Size    | Number of Lots 批数 | 接受标准 Accept Criteria |
| 1                                                                                                                                                    | Electrical performance 前后电气性能               | AEC-Q200/规格书要求 (Specification)                                        | all        | all               | 0 Fails              |
| 2                                                                                                                                                    | High Temperature Exposure (Storage) 高温存储    | MIL-STD-202 Method 108 (125℃, 1000H)                                  | 77         | 1                 | 0 Fails              |
| 3                                                                                                                                                    | Temperature Cycling 温度循环                    | JESD22 Method JA- 104 (-40~125℃, Every 30minutes)                     | 77         | 1                 | 0 Fails              |
| 4                                                                                                                                                    | Biased Humidity 偏高湿度                        | MIL-STD-202 Method 103 (85℃ 85%RH, 1000H)                             | 77         | 1                 | 0 Fails              |
| 5                                                                                                                                                    | High Temperature Operation Life Test 高温运行寿命 | MIL-PRF-27 (125℃, 1000H, Rating Current)                              | 77         | 1                 | 0 Fails              |
| 6                                                                                                                                                    | External Visual 外观                          | MIL-STD-883 Method 2009 (Specification)                               | all        | all               | 0 Fails              |
| 7                                                                                                                                                    | Physical Dimension 结构尺寸                     | JESD22 Method JB- 100 (Specification)                                 | 30         | 1                 | 0 Fails              |
| 8                                                                                                                                                    | Terminal Strength (Leaded) 端子强度 (引脚)        | MIL-STD-202 Method 211 (17.7N, 60s)                                   | 30         | 1                 | 0 Fails              |
| 9                                                                                                                                                    | Resistance to Solvents 溶剂抵抗                 | MIL-STD-202 Method 215 (The solvent, Brush 2-3 times)                 | 5          | 1                 | 0 Fails              |
| 10                                                                                                                                                   | Mechanical Shock 机械冲击                       | MIL-STD-202 Method 213 (100G, 6ms, 3 axes and 6 directions, 3 times ) | 30         | 1                 | 0 Fails              |
| 11                                                                                                                                                   | Resistance to Soldering Heat 耐热焊接           | MIL-STD-202 Method 210 (260℃, 10S, 0.5inch)                           | all        | all               | 0 Fails              |
| 12                                                                                                                                                   | Vibration 震动                                | MIL-STD-202 Method 204 (10HZ-2000HZ-10HZ, 5G, 4H, 3 Directions.)      | 30         | 1                 | 0 Fails              |
| 13                                                                                                                                                   | ESD 静电放电                                    | AEC-Q200-002 or ISO/DIS (6KV Air discharge)                           | 15         | 1                 | 0 Fails              |
| 14                                                                                                                                                   | Solderability 可焊性                           | J-STD-002 (8H*155℃, 235℃, 5s, >95%)                                   | 45         | 1                 | 0 Fails              |
| 15                                                                                                                                                   | Flammability 可燃性                            | UL-94 (UL report)                                                     | 6          | 1                 | V-1 or V-0           |
| 16                                                                                                                                                   | Board Flex 板弯曲                              | AEC-Q200-005 ( (D) x=2 mm, 60+5S)                                     | 30         | 1                 | 0 Fails              |