

# SPECIFICATION FOR APPROVAL

## 承 认 书

|                      |          |
|----------------------|----------|
| CUSTOMER             | NUMBER   |
| 客户名称:                | 编 号:     |
| DESCRIPTION          | QUANTITY |
| 品 名: 贴片共模电感          | 数 量:     |
| PART NO.             | DATE     |
| 型 号: BCDM1080-SERIES | 日 期:     |
| CUSTOMER PART NO.    | NOTE     |
| 客户料号:                | 注 解:     |

|                              |
|------------------------------|
| APPROVAL SIGNATURE<br>客户承认签章 |
|                              |

|                    |                    |                   |                 |
|--------------------|--------------------|-------------------|-----------------|
| APPROVED BY<br>核 准 | Q. C. DEPT.<br>品 管 | CHECKED BY<br>核 查 | DRAWN BY<br>制 作 |
|                    |                    |                   |                 |

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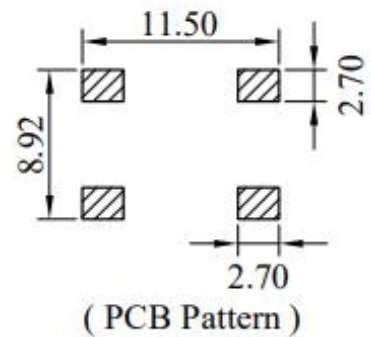
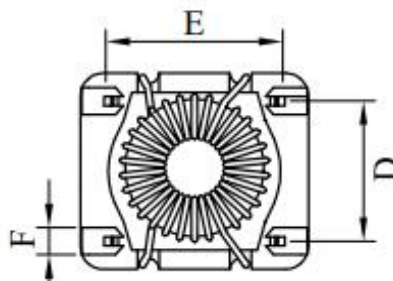
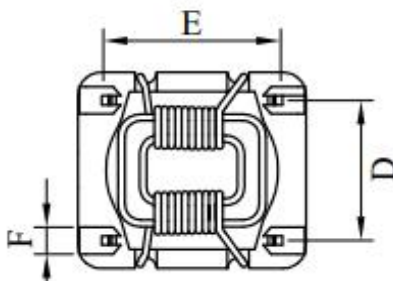
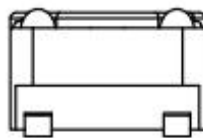
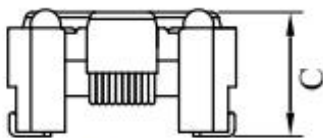
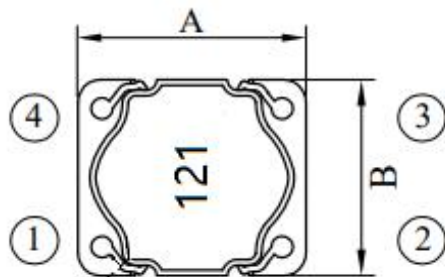
# BCDM1080-SERIES

## SMD COMMON MODE CHOKE

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED

PC BOARD PATTERN(REFLOW SOLDERING)

◆ Dimensions

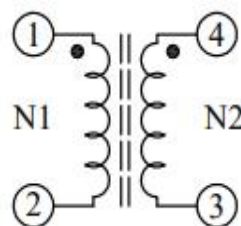


sectional

bifilar

| A         | B       | C        | D        | E        | F        |
|-----------|---------|----------|----------|----------|----------|
| 10.00±0.3 | 8.7±0.3 | 6.50 max | 6.22±0.1 | 7.62±0.1 | 1.40 ref |

◆ Schematics (Bottom)



# BCDM1080-SERIES

## SMD COMMON MODE CHOKE

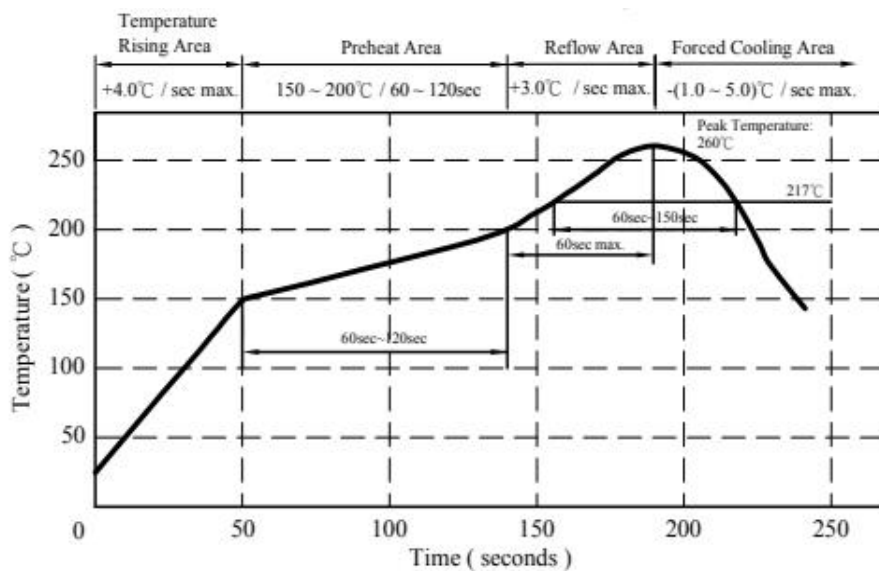
### DESCRIPTION:

- a . Ferrite toroidal core construction
- b . Enamelled copper wire: H class
- c . Product weight: 0.79g (ref.)
- d . Moisture sensitivity Level 1
- e . Products comply with RoHS' requirements
- f . Halogen free

### GENERAL SPECIFICATION:

- a . Storage temp.: -20°C ---- +80°C
- b . Operating temp.: -20°C ---- +80°C  
(Temp. rise included)
- c . Resistance to solder heat:  
260°C.10 secs.

Peak Temp: 260°C max  
 Max. Peak Temp - 5°C: 30sec max.  
 Max time above 217°C :  
 60sec~150sec max.



### ELECTRICAL CHARACTERISTICS:

| DWG. No.      | Winding style | Inductance ( $\mu$ H) | Peak Common Mode Impedance( $\Omega$ ) Typical | Rated Current (A) Max | DCR ( $\Omega$ /line) Max | Marking |
|---------------|---------------|-----------------------|------------------------------------------------|-----------------------|---------------------------|---------|
| BCDM1080-121T | sectional     | 120 $\pm$ 40%         | 460 at 30MHz                                   | 2.5                   | 0.025                     | 121     |
| BCDM1080-221T | sectional     | 220 $\pm$ 40%         | 780 at 18MHz                                   | 2.2                   | 0.032                     | 221     |
| BCDM1080-251T | sectional     | 250 $\pm$ 40%         | 970 at 15MHz                                   | 2.0                   | 0.035                     | 251     |
| BCDM1080-471T | sectional     | 470 $\pm$ 40%         | 1750 at 15MHz                                  | 1.6                   | 0.065                     | 471     |
| BCDM1080-102T | sectional     | 1000 $\pm$ 40%        | 3600 at 6.5MHz                                 | 0.95                  | 0.18                      | 102     |
| BCDM1080-222T | bifilar       | 2200 $\pm$ 40%        | 7500 at 4.2MHz                                 | 0.75                  | 0.30                      | 222     |
| BCDM1080-332T | bifilar       | 3300 $\pm$ 40%        | 8900 at 2.0MHz                                 | 0.65                  | 0.36                      | 332     |
| BCDM1080-392T | bifilar       | 3900 $\pm$ 40%        | 9600 at 2.8MHz                                 | 0.52                  | 0.54                      | 392     |
| BCDM1080-472T | bifilar       | 4700 $\pm$ 40%        | 13000 at 1.0MHz                                | 0.35                  | 0.72                      | 472     |

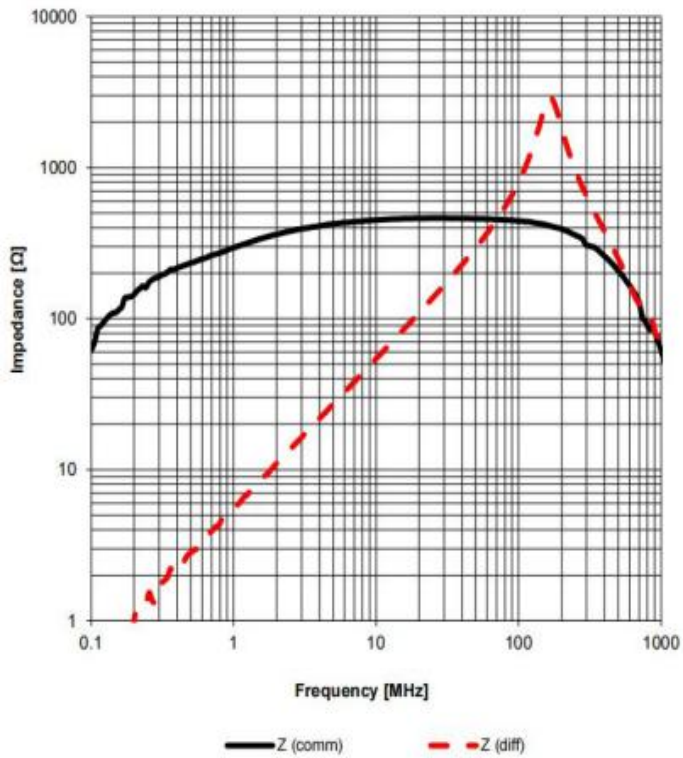
- (1). Electrical specifications at 25°C
- (2). Inductance Test Condition.: 100kHz / 0.1V
- (3). Nominal voltage : 60Vdc
- (4). IDC base on Temp. rise 45°C max.

# BCDM1080-SERIES

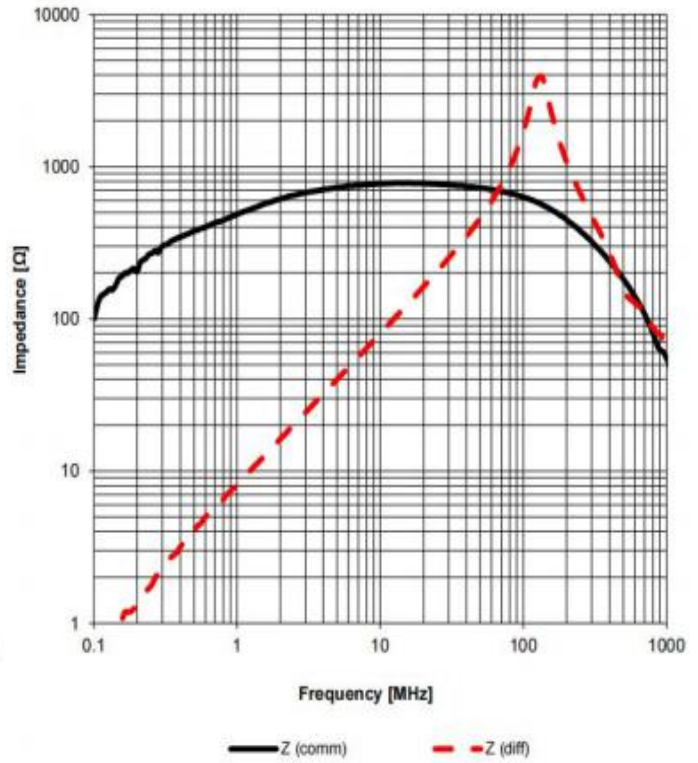
## SMD COMMON MODE CHOKE

### TYPICAL ELECTRICAL CHARACTERISTICS

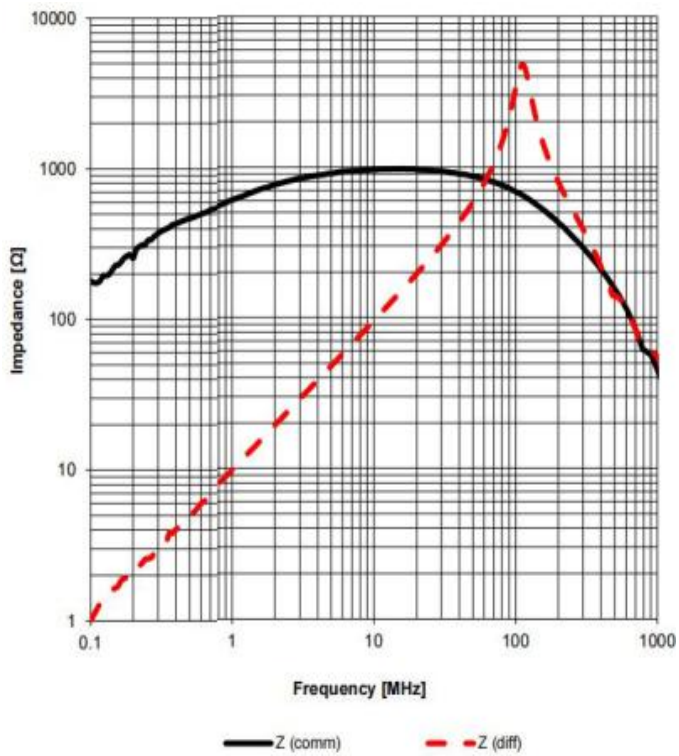
BCDM1080-121T



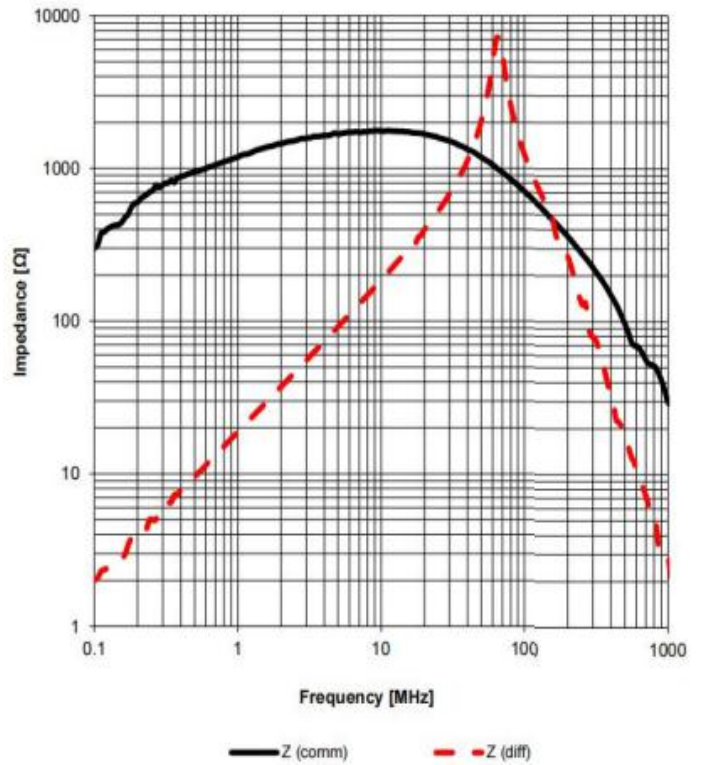
BCDM1080-221T



BCDM1080-251T



BCDM1080-471T

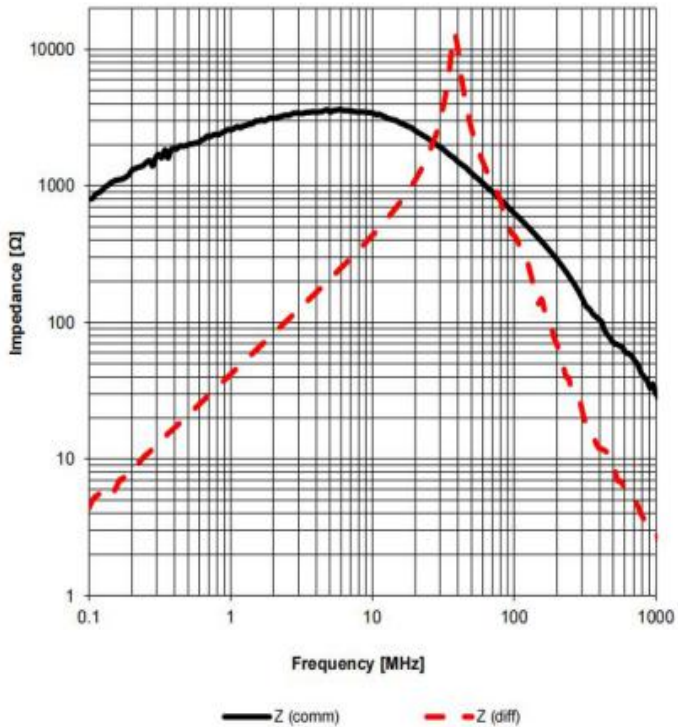


# BCDM1080-SERIES

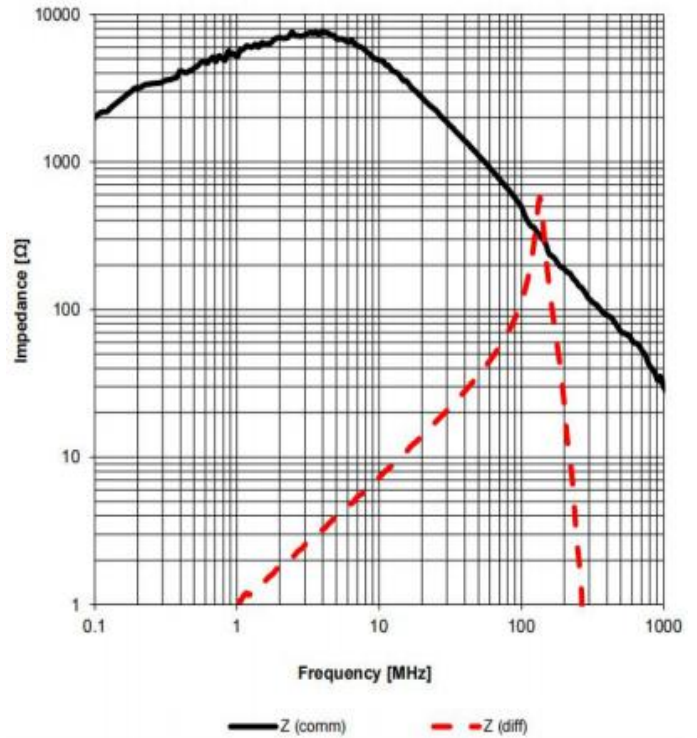
## SMD COMMON MODE CHOKE

### TYPICAL ELECTRICAL CHARACTERISTICS

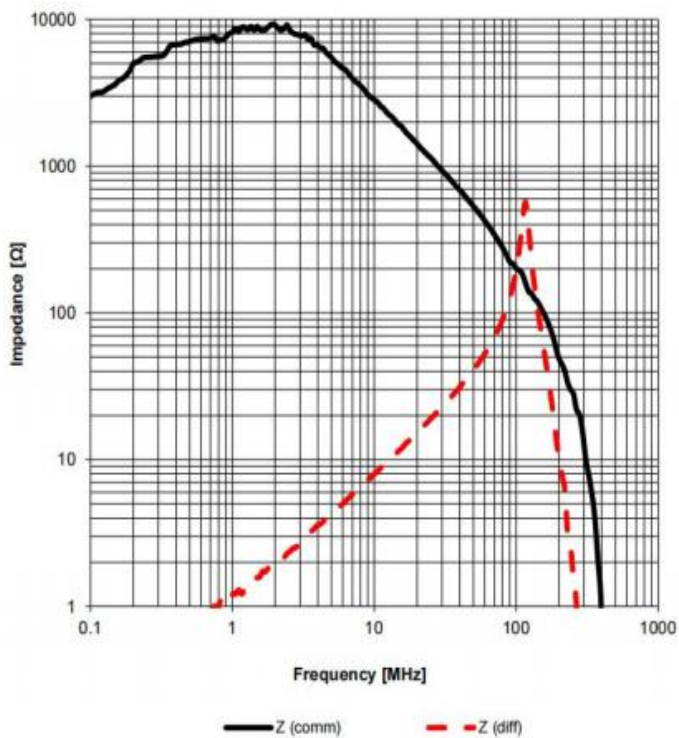
BCDM1080-102T



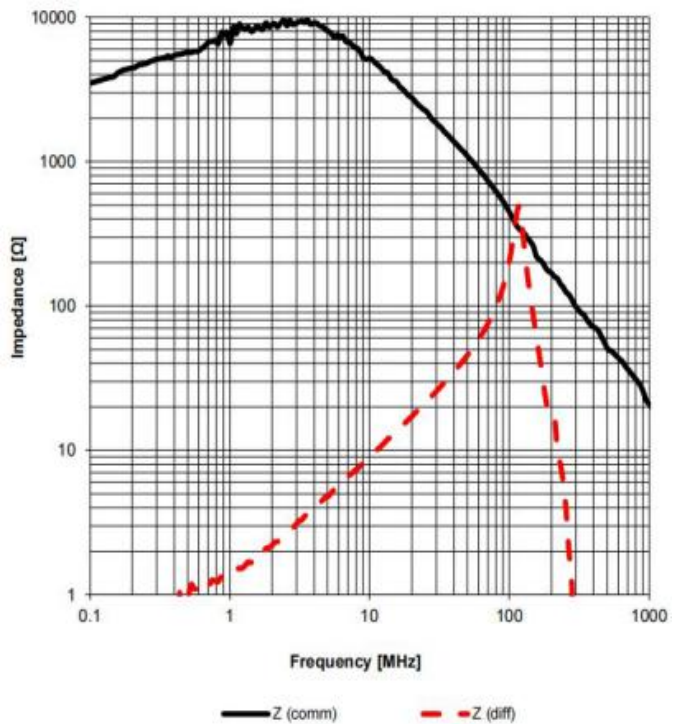
BCDM1080-222T



BCDM1080-332T



BCDM1080-392T

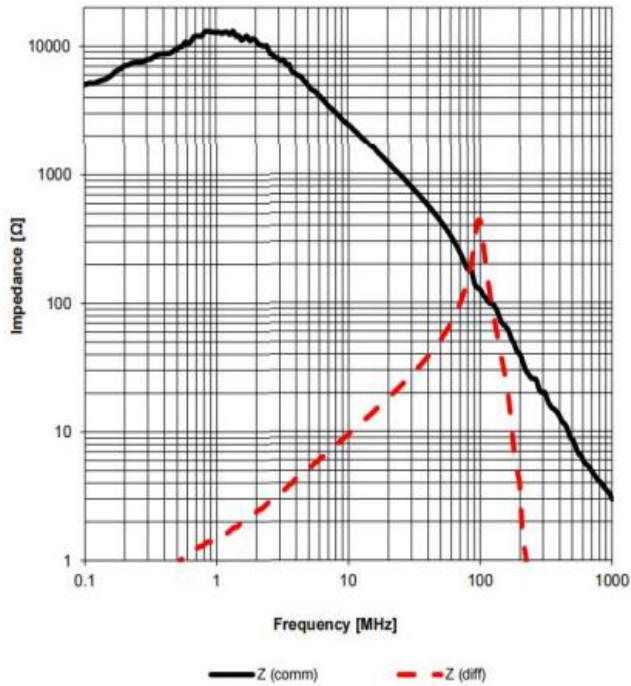


# BCDM1080-SERIES

## SMD COMMON MODE CHOKE

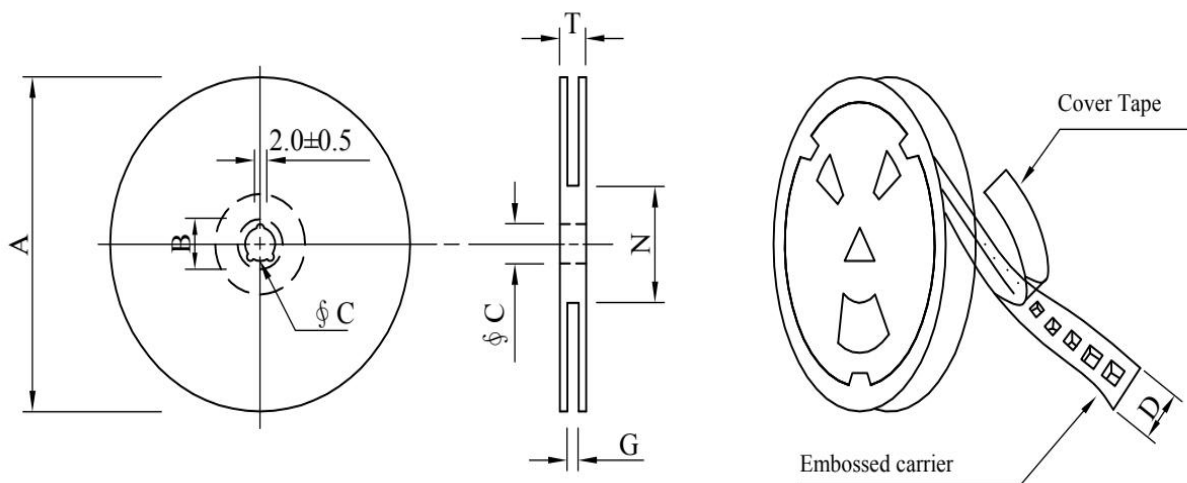
### TYPICAL ELECTRICAL CHARACTERISTICS

BCDM1080-472T



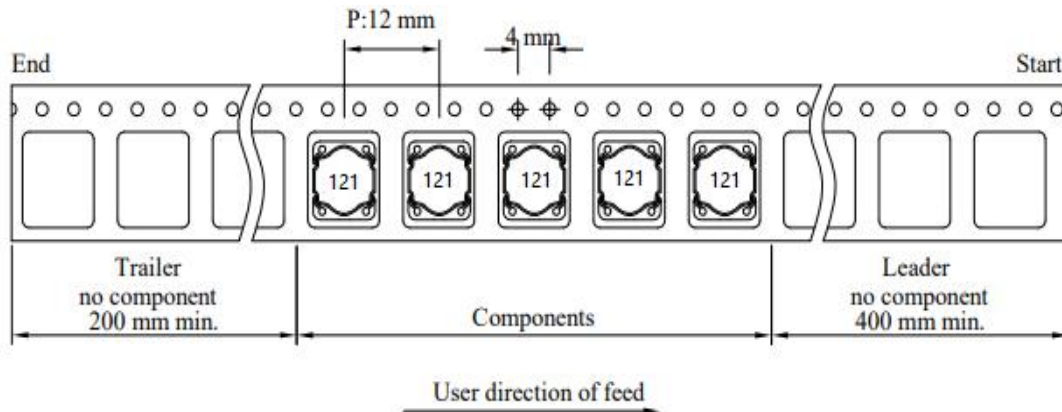
### PACKAGING INFORMATION:

#### ( 1 ) Configuration



# BCDM1080-SERIES

## SMD COMMON MODE CHOKE



### ( 2 ) Dimensions

Unit:mm

| Style | A   | B      | C      | D  | G    | N    | T    |
|-------|-----|--------|--------|----|------|------|------|
| 13-24 | 330 | 21±0.8 | 13±0.5 | 24 | 26+0 | 60-0 | 30.4 |

### ( 3 ) Q'TY & G.W. Per package

| Code | Inner:Reel |          |       | Outer:Carton |           |           |
|------|------------|----------|-------|--------------|-----------|-----------|
|      | QTY(pcs)   | G.W. (g) | Style | QTY(pcs)     | G.W. (kg) | Size (cm) |
| B    | 800        | 480      | 13-24 | 3200         | 5.6       | 36×36×22  |

### SAFETY NOTES

- Products do not be used in related applications that directly affect the personal safety system or cause significant impacts and losses on society. If you apply to these applications, please be sure to contact us at first to confirm.
- The storage period is less than 12 months. Ensure to follow the storage conditions (Temperature: 5 to 30 ° C, Humidity: 10 to 60% RH or less). If the storage time is exceeded the limit, the electrodes might be deteriorate of terminal soldering.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When using, it should try to avoid excessive mechanical impact on the product, such as collision / drop ... and other reasons.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Do not expose the products to magnets or magnetic fields.
- If you would like to use this products to performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property, or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

# BCDM1080–SERIES

## SMD COMMON MODE FILTER

### RELIABILITY TEST:

| Item                                | Reference documents                       | Test Condition                                                                                                                                                | Test Specification                                                                                       |
|-------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 1.High Temperature Exposure         | MIL-STD-202 Method 108                    | 1.Temperature:85±2℃<br>2.Time:96±2 hours.                                                                                                                     | 1.No mechanical or electrical damage.<br>2.Impedance shall not change more than ±50%.                    |
| 2.Temperature Cycling               | JESD22-A 104                              | 1.Temperature: -25℃ ~+85℃<br>2.Number of cycle:100 cycles<br>3.Dwell time:30 minutes                                                                          | 1.No mechanical or electrical damage.<br>2.Impedance shall not change more than ±50%.                    |
| 3.Biased Humidity Test              | MIL-STD-202 Method 103                    | 1.Temperature : 85±2 ℃<br>2.Humidity: 85% RH.<br>3.Time:96±2 Hours                                                                                            | 1.No mechanical or electrical damage.<br>more than ±50%.                                                 |
| 4.Operational Life                  | JESD22-A 108                              | 1.Temperature: (Temp. rise included)<br>2.Time:96±2 hours.<br>3.Rated current                                                                                 | 1.No mechanical or electrical damage.<br>2.Impedance shall not change more than ±50%.                    |
| 5.External Visua                    | JESD22-B 101 &<br>MIL-STD-883 Method 2009 | Inspect product constructions, marking and workmanship.                                                                                                       | 1.No pollution on the surface of products.<br>2.Clear marking.<br>3.No crac                              |
| 6.Physical Dimensions               | JESD22-B 100                              | Verify physical dimensions to the applicable product detail specification.                                                                                    | Per product specification standard                                                                       |
| 7.Resistance to solvents            | MIL-STD-202 Method 215                    | Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles.                                                                                         | 1.No body change in apperance.<br>2.No marking blurred.<br>3.Impedance shall not change more than ±50%.  |
| 8.Vibration Test                    | MIL-STD-202 Method 204                    | 1.Frequency and Amplitued :<br>10-2000-10 Hz, 1.5 mm.<br>2.Direction:X, Y, Z<br>3.Test duration:2 hours for each direction ,<br>6 hours in total.             | 1.No mechanical or electrical damage.<br>2.Impedance shall not change more than ±50%.                    |
| 9.Resistance To Soldering Heat Test | MIL-STD-202 Method 210<br>&J-STD020D.1    | 1.Highest temperature : 260±5 . ℃<br>2.Time ( temp.≥ 217℃ ) : 60~150 Seconds.<br>3.IR reflow times : 3 times.                                                 | 1.No mechanical or electrical damage.<br>2.Impedance shall not change more than ±50%.                    |
| 10.Over load                        | JIS C 6436 &<br>User SPEC.                | 1.Applied one and half rated current for a period of 5 minutes.<br>2.Rated current                                                                            | No electrical or mechanical damage                                                                       |
| 11.Temperature Rise C               | JIS C 6436 &<br>User SPEC.                | 1.Applied rated current for 10 minutes.<br>2.Temperature measure by digital surface thermometer.<br>3.Irms current                                            | Surface temperature rise is less than 40 ℃ typ                                                           |
| 12.Solderability Test               | J-STD-002 &<br>JESD22-B 102               | 1.Baking in pre-testing :<br>150±5℃ / 16Hours±30 min.<br>2.Peak temperature : 240±5℃<br>3.Time ( temp.≥217℃ ) : 60~150 second.<br>4.IR reflow times : 1 time. | More than 95% soldering coverage min on terminations.                                                    |
| 13.Electrical Characteriazation     | MIL-STD-202 Method 304<br>& User SPEC.    | 1.Operating temperature : -20℃~80 ℃<br>2.Room temperature : 25℃.                                                                                              | 1.No mechanical or electrical damage.<br>2.Impedance shall not change more than ±50%.                    |
| 14.Withstanding Voltage Test        | MIL-STD-202 Method 301 & User SPEC.       | 1.DC: V (Winding to Winding)<br>2.Time : 1minutes                                                                                                             | 1.During the test no breakdown.<br>2.No mechanical or electrical damage.                                 |
| 15.Drop                             | CNS-C6354 & GB/T 2423.8                   | 1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m<br>2.Drop total time : 6 times<br>(Every side of sample drop 2 time)            | 1. Adhesion on PCB shall be enough<br>2. Product appearance shall not break.<br>3. No electrical damage. |
| 16.Terminal Strength Test           | IEC 60068-2-21                            | 1.Apply push force to samples mounted on PCB.<br>2.Force of 1.8 kg for 60±1 seconds.                                                                          | After test, inductors shall be no mechanical damage                                                      |