

## Type BMC Series

### Key Features

Effective EMI protection

Low DC resistance

High soldering heat resistance

Multiple size availability

Other specifications can be made on application



The BMC Series of beads cover a wide range of impedance characteristics. The chip beads have a monolithic inorganic material construction that minimises the effect of electromagnetic interference. This series is offered in 0402, 0603, 0805 1204 and 1210 package sizes

## Characteristics – Electrical

### Applications

Cellular Phones

Computers and Peripheral Equipment

Automation Controls

Sensors

VCRS, Television, Pagers

Circuit Where a Stable Ground is Unavailable

### Electrical Specifications

#### For General Signal Line Use (AN)

#### BMC 0201 AN

| Part No.     | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC1HY0010AN | 10                     | ±25%      | 100             | 0.10                 | 500                            |
| BMC1HY0030AN | 30                     | ±25%      | 100             | 0.30                 | 300                            |
| BMC1HY0033AN | 33                     | ±25%      | 100             | 0.30                 | 300                            |
| BMC1HY0040AN | 40                     | ±25%      | 100             | 0.30                 | 300                            |
| BMC1HY0050AN | 50                     | ±25%      | 100             | 0.30                 | 300                            |
| BMC1HY0060AN | 60                     | ±25%      | 100             | 0.35                 | 300                            |
| BMC1HY0070AN | 70                     | ±25%      | 100             | 0.35                 | 300                            |
| BMC1HY0100AN | 100                    | ±25%      | 100             | 0.40                 | 200                            |
| BMC1HY0120AN | 120                    | ±25%      | 100             | 0.45                 | 200                            |
| BMC1HY0150AN | 150                    | ±25%      | 100             | 0.50                 | 200                            |
| BMC1HY0220AN | 220                    | ±25%      | 100             | 0.75                 | 200                            |
| BMC1HY0300AN | 300                    | ±25%      | 100             | 0.90                 | 150                            |

**BMC 0402 AN**

| Part No.     | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC1EY0010AN | 10                     | ±25%      | 100             | 0.05                 | 500                            |
| BMC1EY0030AN | 30                     | ±25%      | 100             | 0.20                 | 300                            |
| BMC1EY0040AN | 40                     | ±25%      | 100             | 0.20                 | 300                            |
| BMC1EY0060AN | 60                     | ±25%      | 100             | 0.40                 | 200                            |
| BMC1EY0068AN | 68                     | ±25%      | 100             | 0.15                 | 500                            |
| BMC1EY0070AN | 70                     | ±25%      | 100             | 0.40                 | 200                            |
| BMC1EY0080AN | 80                     | ±25%      | 100             | 0.40                 | 200                            |
| BMC1EY0100AN | 100                    | ±25%      | 100             | 0.45                 | 200                            |
| BMC1EY0120AN | 120                    | ±25%      | 100             | 0.50                 | 200                            |
| BMC1EY0150AN | 150                    | ±25%      | 100             | 0.60                 | 200                            |
| BMC1EY0180AN | 180                    | ±25%      | 100             | 0.65                 | 100                            |
| BMC1EY0220AN | 220                    | ±25%      | 100             | 0.28                 | 700                            |
| BMC1EY0240AN | 240                    | ±25%      | 100             | 0.30                 | 500                            |
| BMC1EY0300AN | 300                    | ±25%      | 100             | 0.75                 | 100                            |
| BMC1EY0330AN | 330                    | ±25%      | 100             | 0.75                 | 100                            |
| BMC1EY0430AN | 430                    | ±25%      | 100             | 0.50                 | 350                            |
| BMC1EY0470AN | 470                    | ±25%      | 100             | 0.90                 | 100                            |
| BMC1EY0500AN | 500                    | ±25%      | 100             | 1.00                 | 100                            |
| BMC1EY0600AN | 600                    | ±25%      | 100             | 1.10                 | 50                             |
| BMC1EY1000AN | 1000                   | ±25%      | 100             | 1.50                 | 50                             |

**BMC 0603 AN**

| Part No.     | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC1JY0019AN | 19                     | ±25%      | 100             | 0.10                 | 400                            |
| BMC1JY0031AN | 31                     | ±25%      | 100             | 0.10                 | 400                            |
| BMC1JY0052AN | 52                     | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0060AN | 60                     | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0075AN | 75                     | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0080AN | 80                     | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0100AN | 100                    | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0120AN | 120                    | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0150AN | 150                    | ±25%      | 100             | 0.15                 | 400                            |
| BMC1JY0180AN | 180                    | ±25%      | 100             | 0.20                 | 400                            |
| BMC1JY0200AN | 200                    | ±25%      | 100             | 0.20                 | 400                            |
| BMC1JY0220AN | 220                    | ±25%      | 100             | 0.20                 | 400                            |
| BMC1JY0240AN | 240                    | ±25%      | 100             | 0.17                 | 500                            |
| BMC1JY0300AN | 300                    | ±25%      | 100             | 0.2                  | 600                            |
| BMC1JY0400AN | 400                    | ±25%      | 100             | 0.30                 | 400                            |
| BMC1JY0420AN | 420                    | ±25%      | 100             | 0.30                 | 400                            |

**BMC 0603 AN (continued)**

| Part No.      | Impedance<br>( $\Omega$ ) | Tolerance  | TestFreq.<br>(MHz) | DCR<br>( $\Omega$ )max. | Rated<br>Current<br>(mA)max.<br>at 85°C |
|---------------|---------------------------|------------|--------------------|-------------------------|-----------------------------------------|
| BMC1JY0450AN  | 450                       | $\pm 25\%$ | 100                | 0.30                    | 400                                     |
| BMC1JY0600AN  | 600                       | $\pm 25\%$ | 100                | 0.35                    | 400                                     |
| BMC1JY0750AN  | 750                       | $\pm 25\%$ | 100                | 0.35                    | 400                                     |
| BMC1JY1000AN  | 1000                      | $\pm 25\%$ | 100                | 0.55                    | 300                                     |
| BMC1JY1000AN1 | 1000                      | $\pm 25\%$ | 100                | 0.25                    | 800                                     |
| BMC1JY1500AN  | 1500                      | $\pm 25\%$ | 100                | 0.60                    | 200                                     |

**BMC 0805 AN**

| Part No.     | Impedance<br>( $\Omega$ ) | Tolerance  | TestFreq.<br>(MHz) | DCR<br>( $\Omega$ )max. | Rated<br>Current<br>(mA)max.<br>at 85°C |
|--------------|---------------------------|------------|--------------------|-------------------------|-----------------------------------------|
| BMC2AY0017AN | 17                        | $\pm 25\%$ | 100                | 0.10                    | 300                                     |
| BMC2AY0026AN | 26                        | $\pm 25\%$ | 100                | 0.10                    | 300                                     |
| BMC2AY0030AN | 30                        | $\pm 25\%$ | 100                | 0.10                    | 300                                     |
| BMC2AY0031AN | 31                        | $\pm 25\%$ | 100                | 0.10                    | 300                                     |
| BMC2AY0052AN | 52                        | $\pm 25\%$ | 100                | 0.15                    | 300                                     |
| BMC2AY0060AN | 60                        | $\pm 25\%$ | 100                | 0.15                    | 300                                     |
| BMC2AY0080AN | 80                        | $\pm 25\%$ | 100                | 0.15                    | 300                                     |
| BMC2AY0100AN | 100                       | $\pm 25\%$ | 100                | 0.20                    | 300                                     |
| BMC2AY0120AN | 120                       | $\pm 25\%$ | 100                | 0.20                    | 300                                     |
| BMC2AY0150AN | 150                       | $\pm 25\%$ | 100                | 0.20                    | 300                                     |
| BMC2AY0220AN | 220                       | $\pm 25\%$ | 100                | 0.25                    | 300                                     |
| BMC2AY0300AN | 300                       | $\pm 25\%$ | 100                | 0.25                    | 300                                     |
| BMC2AY0400AN | 400                       | $\pm 25\%$ | 100                | 0.30                    | 300                                     |
| BMC2AY0470AN | 470                       | $\pm 25\%$ | 100                | 0.18                    | 700                                     |
| BMC2AY0530AN | 530                       | $\pm 25\%$ | 100                | 0.35                    | 300                                     |
| BMC2AY0600AN | 600                       | $\pm 25\%$ | 100                | 0.35                    | 300                                     |
| BMC2AY1000AN | 1000                      | $\pm 25\%$ | 100                | 0.45                    | 300                                     |
| BMC2AY1500AN | 1500                      | $\pm 25\%$ | 100                | 0.70                    | 300                                     |

**BMC 1204 AN**

| Part No.     | Impedance<br>( $\Omega$ ) | Tolerance  | TestFreq.<br>(MHz) | DCR<br>( $\Omega$ )max. | Rated<br>Current<br>(mA)max.<br>at 85°C |
|--------------|---------------------------|------------|--------------------|-------------------------|-----------------------------------------|
| BMC2CY0019AN | 19                        | $\pm 25\%$ | 100                | 0.10                    | 800                                     |
| BMC2CY0026AN | 26                        | $\pm 25\%$ | 100                | 0.10                    | 800                                     |
| BMC2CY0031AN | 31                        | $\pm 25\%$ | 100                | 0.10                    | 800                                     |
| BMC2CY0052AN | 52                        | $\pm 25\%$ | 100                | 0.15                    | 800                                     |

**BMC 1204 AN (continued)**

| Part No.     | Impedance<br>( $\Omega$ ) | Tolerance  | TestFreq.<br>(MHz) | DCR<br>( $\Omega$ )max. | Rated<br>Current<br>(mA)max.<br>at 85°C |
|--------------|---------------------------|------------|--------------------|-------------------------|-----------------------------------------|
| BMC2CY0060AN | 60                        | $\pm 25\%$ | 100                | 0.15                    | 500                                     |
| BMC2CY0070AN | 70                        | $\pm 25\%$ | 100                | 0.15                    | 500                                     |
| BMC2CY0100AN | 100                       | $\pm 25\%$ | 100                | 0.20                    | 450                                     |
| BMC2CY0120AN | 120                       | $\pm 25\%$ | 100                | 0.20                    | 450                                     |
| BMC2CY0150AN | 150                       | $\pm 25\%$ | 100                | 0.20                    | 450                                     |
| BMC2CY0220AN | 220                       | $\pm 25\%$ | 100                | 0.20                    | 350                                     |
| BMC2CY0300AN | 300                       | $\pm 25\%$ | 100                | 0.20                    | 350                                     |
| BMC2CY0400AN | 400                       | $\pm 25\%$ | 100                | 0.25                    | 350                                     |
| BMC2CY0600AN | 600                       | $\pm 25\%$ | 100                | 0.25                    | 350                                     |
| BMC2CY0750AN | 750                       | $\pm 25\%$ | 100                | 0.30                    | 350                                     |
| BMC2CY0800AN | 800                       | $\pm 25\%$ | 100                | 0.30                    | 350                                     |
| BMC2CY1000AN | 1000                      | $\pm 25\%$ | 100                | 0.35                    | 350                                     |
| BMC2CY1200AN | 1200                      | $\pm 25\%$ | 100                | 0.35                    | 350                                     |

**BMC 1210 AN**

| Part No.     | Impedance<br>( $\Omega$ ) | Tolerance  | TestFreq.<br>(MHz) | DCR<br>( $\Omega$ )max. | Rated<br>Current<br>(mA)max.<br>at 85°C |
|--------------|---------------------------|------------|--------------------|-------------------------|-----------------------------------------|
| BMC2EY0031AN | 31                        | $\pm 25\%$ | 100                | 0.10                    | 500                                     |
| BMC2EY0052AN | 52                        | $\pm 25\%$ | 100                | 0.30                    | 400                                     |
| BMC2EY0060AN | 60                        | $\pm 25\%$ | 100                | 0.30                    | 400                                     |

**Electrical Specifications****For General Signal Line, Frequency Higher Than A Use (KN)****BMC 0402 KN**

| Part No.     | Impedance<br>( $\Omega$ ) | Tolerance  | TestFreq.<br>(MHz) | DCR<br>( $\Omega$ )max. | Rated<br>Current<br>(mA)max.<br>at 85°C |
|--------------|---------------------------|------------|--------------------|-------------------------|-----------------------------------------|
| BMC1EY0220KN | 220                       | $\pm 25\%$ | 100                | 0.80                    | 100                                     |
| BMC1EY0300KN | 300                       | $\pm 25\%$ | 100                | 0.85                    | 100                                     |

**BMC 0603 KN**

| Part No.     | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|--------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC1JY1000KN | 1000          | ±25%      | 100             | 0.85        | 100                            |
| BMC1JY1200KN | 1200          | ±25%      | 100             | 0.85        | 100                            |
| BMC1JY1500KN | 1500          | ±25%      | 100             | 0.90        | 100                            |
| BMC1JY1800KN | 1800          | ±25%      | 100             | 1.00        | 100                            |
| BMC1JY2000KN | 2000          | ±25%      | 100             | 1.00        | 100                            |
| BMC1JY2500KN | 2500          | ±25%      | 100             | 1.00        | 50                             |

**BMC 0805 KN**

| Part No.     | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|--------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC2AY0080KN | 80            | ±25%      | 100             | 0.30        | 300                            |
| BMC2AY0600KN | 600           | ±25%      | 100             | 0.35        | 200                            |
| BMC2AY1000KN | 1000          | ±25%      | 100             | 0.40        | 200                            |
| BMC2AY1200KN | 1200          | ±25%      | 100             | 0.40        | 200                            |
| BMC2AY1500KN | 1500          | ±25%      | 100             | 0.45        | 200                            |
| BMC2AY2000KN | 2000          | ±25%      | 100             | 0.60        | 200                            |
| BMC2AY2200KN | 2200          | ±25%      | 100             | 0.60        | 200                            |
| BMC2AY2500KN | 2500          | ±25%      | 100             | 0.70        | 200                            |
| BMC2AY2700KN | 2700          | ±25%      | 100             | 0.70        | 200                            |

**Electrical Specifications****For Medium Current Line Use (AG)****BMC 0402 AG**

| Part No.     | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|--------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC1EY0010AG | 10            | ±25%      | 100             | 0.03        | 2000                           |
| BMC1EY0030AG | 30            | ±25%      | 100             | 0.03        | 3000                           |
| BMC1EY0060AG | 60            | ±25%      | 100             | 0.075       | 1500                           |
| BMC1EY0070AG | 70            | ±25%      | 100             | 0.09        | 1200                           |
| BMC1EY0100AG | 100           | ±25%      | 100             | 0.09        | 1200                           |
| BMC1EY0120AG | 120           | ±25%      | 100             | 0.075       | 1500                           |
| BMC1EY0220AG | 220           | ±25%      | 100             | 0.20        | 1000                           |

**BMC 0603 AG**

| Part No.     | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|--------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC1JY0022AG | 22            | ±25%      | 100             | 0.04        | 3000                           |
| BMC1JY0030AG | 30            | ±25%      | 100             | 0.04        | 3000                           |
| BMC1JY0033AG | 33            | ±25%      | 100             | 0.025       | 3000                           |
| BMC1JY0047AG | 47            | ±25%      | 100             | 0.04        | 3000                           |
| BMC1JY0060AG | 60            | ±25%      | 100             | 0.04        | 3000                           |
| BMC1JY0062AG | 62            | ±25%      | 100             | 0.04        | 3000                           |
| BMC1JY0100AG | 100           | ±25%      | 100             | 0.05        | 3000                           |
| BMC1JY0120AG | 120           | ±25%      | 100             | 0.05        | 2000                           |
| BMC1JY0180AG | 180           | ±25%      | 100             | 0.08        | 2000                           |
| BMC1JY0220AG | 220           | ±25%      | 100             | 0.08        | 2000                           |
| BMC1JY0300AG | 300           | ±25%      | 100             | 0.15        | 2000                           |
| BMC1JY0470AG | 470           | ±25%      | 100             | 0.15        | 1500                           |
| BMC1JY0600AG | 600           | ±25%      | 100             | 0.30        | 1000                           |
| BMC1JY0750AG | 750           | ±25%      | 100             | 0.30        | 1000                           |
| BMC1JY1000AG | 1000          | ±25%      | 100             | 0.25        | 1000                           |

**BMC 0805 AG**

| Part No.     | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|--------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC2AY0011AG | 11            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0017AG | 17            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0030AG | 30            | ±25%      | 100             | 0.05        | 3000                           |
| BMC2AY0031AG | 31            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0039AG | 39            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0040AG | 40            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0047AG | 47            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0050AG | 50            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0052AG | 52            | ±25%      | 100             | 0.03        | 3000                           |
| BMC2AY0060AG | 60            | ±25%      | 100             | 0.04        | 3000                           |
| BMC2AY0080AG | 80            | ±25%      | 100             | 0.04        | 3000                           |
| BMC2AY0100AG | 100           | ±25%      | 100             | 0.04        | 3000                           |
| BMC2AY0120AG | 120           | ±25%      | 100             | 0.05        | 3000                           |
| BMC2AY0180AG | 180           | ±25%      | 100             | 0.05        | 3000                           |
| BMC2AY0220AG | 220           | ±25%      | 100             | 0.05        | 3000                           |
| BMC2AY0300AG | 300           | ±25%      | 100             | 0.05        | 3000                           |
| BMC2AY0330AG | 330           | ±25%      | 100             | 0.05        | 3000                           |
| BMC2AY0470AG | 470           | ±25%      | 100             | 0.10        | 2000                           |
| BMC2AY0600AG | 600           | ±25%      | 100             | 0.10        | 2000                           |
| BMC2AY1000AG | 1000          | ±25%      | 100             | 0.30        | 1000                           |
| BMC2AY1500AG | 1500          | ±25%      | 100             | 0.30        | 1000                           |

## Standard Electrical Specifications

### For High Speed Signal Line Use (BN)

#### BMC 0402 BN

| Part No.     | Impedance ( $\Omega$ ) | Tolerance  | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|------------|-----------------|----------------------|--------------------------------|
| BMC1EY0470BN | 470                    | $\pm 25\%$ | 100             | 1.00                 | 100                            |
| BMC1EY0600BN | 600                    | $\pm 25\%$ | 100             | 1.50                 | 50                             |

Other impedance values on application

#### BMC 0603 BN

On Application only

#### BMC 0805 BN

| Part No.     | Impedance ( $\Omega$ ) | Tolerance  | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|------------|-----------------|----------------------|--------------------------------|
| BMC2AY1500BN | 1500                   | $\pm 25\%$ | 100             | 0.35                 | 200                            |
| BMC2AY1800BN | 1800                   | $\pm 25\%$ | 100             | 0.40                 | 200                            |
| BMC2AY2000BN | 2000                   | $\pm 25\%$ | 100             | 0.40                 | 200                            |
| BMC2AY2200BN | 2200                   | $\pm 25\%$ | 100             | 0.50                 | 200                            |
| BMC2AY2500BN | 2500                   | $\pm 25\%$ | 100             | 0.60                 | 200                            |
| BMC2AY2700BN | 2700                   | $\pm 25\%$ | 100             | 0.60                 | 200                            |

Other impedance values on application

#### BMC 1204 BN

On Application only

## Standard Electrical Specifications

### For Ultra High Speed Signal Line Use (HN)

#### BMC 0402 HN

| Part No.     | Impedance ( $\Omega$ ) | Tolerance  | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|------------|-----------------|----------------------|--------------------------------|
| BMC1EY0022HN | 22                     | $\pm 25\%$ | 100             | 0.20                 | 300                            |
| BMC1EY0030HN | 30                     | $\pm 25\%$ | 100             | 0.20                 | 300                            |
| BMC1EY0033HN | 33                     | $\pm 25\%$ | 100             | 0.40                 | 300                            |
| BMC1EY0047HN | 47                     | $\pm 25\%$ | 100             | 0.35                 | 300                            |

**BMC 0402 HN (continued)**

| Part No.      | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|---------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC1EY0047HN1 | 47                     | ±25%      | 100             | 0.33                 | 350                            |
| BMC1EY0060HN  | 60                     | ±25%      | 100             | 0.40                 | 300                            |
| BMC1EY0075HN  | 75                     | ±25%      | 100             | 0.40                 | 300                            |
| BMC1EY0100HN  | 100                    | ±25%      | 100             | 0.55                 | 300                            |
| BMC1EY0120HN  | 120                    | ±25%      | 100             | 0.55                 | 300                            |
| BMC1EY0220HN  | 220                    | ±25%      | 100             | 0.80                 | 200                            |
| BMC1EY0300HN  | 300                    | ±25%      | 100             | 1.00                 | 100                            |

Other impedance values on application

**BMC 0603 HN**

| Part No.      | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|---------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC1JY0010HN  | 10                     | ±25%      | 100             | 0.10                 | 900                            |
| BMC1JY0020HN  | 20                     | ±25%      | 100             | 0.20                 | 600                            |
| BMC1JY0047HN  | 47                     | ±25%      | 100             | 0.30                 | 500                            |
| BMC1JY0047HN1 | 47                     | ±25%      | 100             | 0.15                 | 600                            |
| BMC1JY0120HN  | 120                    | ±25%      | 100             | 0.30                 | 300                            |
| BMC1JY0300HN  | 300                    | ±25%      | 100             | 0.35                 | 300                            |
| BMC1JY0600HN  | 600                    | ±25%      | 100             | 0.65                 | 300                            |
| BMC1JY1000HN  | 1000                   | ±25%      | 100             | 1.10                 | 50                             |

Other impedance values on application

**BMC 0805 HN**

| Part No.     | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC2AY0600HN | 600                    | ±25%      | 100             | 0.65                 | 200                            |

Other impedance values on application

**Standard Electrical Specifications For High Current Line Use (AH)****BMC 0805 AH**

| Part No.     | Impedance ( $\Omega$ ) | Tolerance | TestFreq. (MHz) | DCR ( $\Omega$ )max. | Rated Current (mA)max. at 85°C |
|--------------|------------------------|-----------|-----------------|----------------------|--------------------------------|
| BMC2AY0017AH | 17                     | ±25%      | 100             | 0.008                | 6000                           |

**BMC 0805 AH (continued)**

| Part No.      | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|---------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC2AY0022AH  | 22            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2AY0030AH  | 30            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2AY0030AH1 | 30            | ±25%      | 100             | 0.015       | 4000                           |
| BMC2AY0033AH  | 33            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2AY0039AH  | 39            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2AY0050AH  | 50            | ±25%      | 100             | 0.010       | 6000                           |
| BMC2AY0060AH  | 60            | ±25%      | 100             | 0.020       | 6000                           |
| BMC2AY0080AH  | 80            | ±25%      | 100             | 0.020       | 6000                           |
| BMC2AY0080AH2 | 80            | ±25%      | 100             | 0.010       | 5000                           |
| BMC2AY0100AH  | 100           | ±25%      | 100             | 0.020       | 5000                           |
| BMC2AY0100AH1 | 100           | ±25%      | 100             | 0.020       | 4000                           |
| BMC2AY0120AH  | 120           | ±25%      | 100             | 0.020       | 4000                           |
| BMC2AY0120AH1 | 120           | ±25%      | 100             | 0.015       | 5000                           |

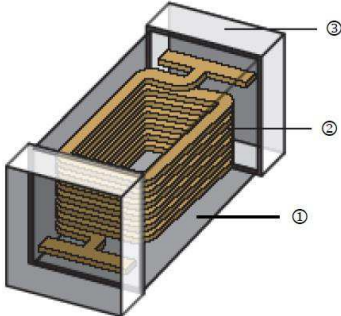
**BMC 1204 AH**

| Part No.      | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|---------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC2CY0026AH  | 26            | ±25%      | 100             | 0.006       | 6000                           |
| BMC2CY0031AH  | 31            | ±25%      | 100             | 0.006       | 6000                           |
| BMC2CY0033AH  | 33            | ±25%      | 100             | 0.006       | 6000                           |
| BMC2CY0048AH  | 48            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2CY0050AH  | 50            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2CY0052AH  | 52            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2CY0060AH  | 60            | ±25%      | 100             | 0.020       | 4000                           |
| BMC2CY0080AH  | 80            | ±25%      | 100             | 0.020       | 4000                           |
| BMC2CY0120AH  | 120           | ±25%      | 100             | 0.020       | 4000                           |
| BMC2CY0120AH1 | 120           | ±25%      | 100             | 0.012       | 6000                           |

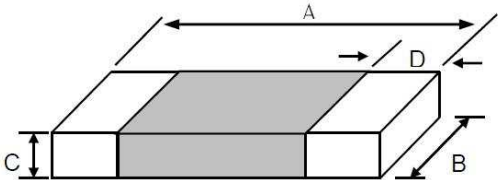
**BMC 1210 AH**

| Part No.     | Impedance (Ω) | Tolerance | TestFreq. (MHz) | DCR (Ω)max. | Rated Current (mA)max. at 85°C |
|--------------|---------------|-----------|-----------------|-------------|--------------------------------|
| BMC2EY0052AH | 52            | ±25%      | 100             | 0.008       | 6000                           |
| BMC2EY0060AH | 60            | ±25%      | 100             | 0.008       | 6000                           |

Construction

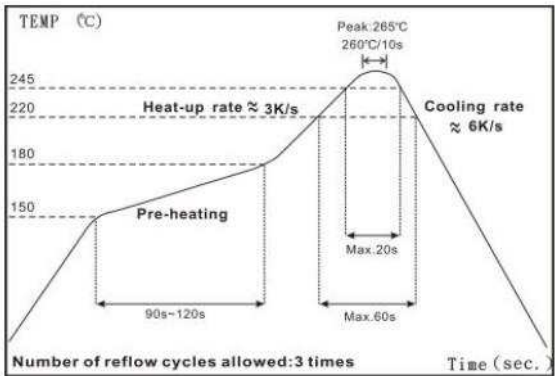
|                                                                                   |   |                    |
|-----------------------------------------------------------------------------------|---|--------------------|
|  | ① | Ferrite            |
|                                                                                   | ② | Internal Electrode |
|                                                                                   | ③ | Electrode Plating  |

Dimensions



| Type  | Size (Inch) | A (mm)   | B (mm)    | C (mm)    | D (mm)   | Weight (g) (1000pcs) |
|-------|-------------|----------|-----------|-----------|----------|----------------------|
| BMC1H | 0201        | 0.6±0.03 | 0.30±0.03 | 0.30±0.03 | 0.1~0.2  | 1.1                  |
| BMC1E | 0402        | 1.0±0.10 | 0.50±0.10 | 0.5±0.10  | 0.1~0.35 | 2.6                  |
| BMC1J | 0603        | 1.6±0.20 | 0.80±0.15 | 0.8±0.15  | 0.1~0.6  | 6.2                  |
| BMC2A | 0805        | 2.0±0.20 | 1.25±0.20 | 0.9±0.20  | 0.2~0.8  | 10                   |
| BMC2C | 1204        | 3.2±0.20 | 1.60±0.20 | 1.1±0.20  | 0.2~1.0  | 30                   |
| BMC2E | 1210        | 3.2±0.20 | 2.50±0.20 | 1.3±0.20  | 0.2~1.0  | 54                   |

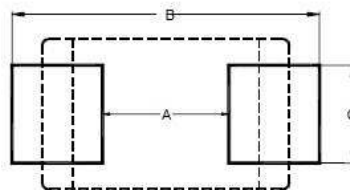
Soldering Condition



Time of IR reflow soldering at maximum temperature point 260°C : 10s

Time of soldering iron at maximum temperature point 280°C : 3s

## Recommended PCB layout plan



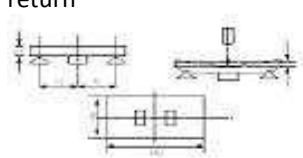
| Type  | Size (Inch) | A (mm) | B (mm) | C (mm) |
|-------|-------------|--------|--------|--------|
| BMC1H | 0201        | 0.25   | 0.69   | 0.32   |
| BMC1E | 0402        | 0.50   | 2.10   | 0.55   |
| BMC1J | 0603        | 0.60   | 2.60   | 0.80   |
| BMC2A | 0805        | 0.66   | 3.23   | 1.47   |
| BMC2C | 1204        | 2.20   | 4.40   | 2.06   |
| BMC2E | 1210        | 2.13   | 4.06   | 2.74   |

## Environmental Characteristics

### Electrical Performance Test

| Item      | Specification           | Test Methods                   |
|-----------|-------------------------|--------------------------------|
| Impedance | As per Electrical spec. | HP4286A                        |
| DCR       |                         | HP 4338 digital mili-ohm meter |

### Mechanical Performance Test

| Item                   | Specification                                                                                                  | Test Methods                                                                                                                                                                                                                                 |
|------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substrate Bending Test | Without deformation cases<br>Impedance: within $\pm 30\%$ of initial value<br>DC Resistance shall be satisfied | Test device shall be soldered on the substrate<br>Substrate<br>Dimension: 100x40x0.8mm<br>Deflection: 3.0mm<br>Keeping Time: 10 seconds then return<br> |
| Vibration              | Appearance: No damage<br>Impedance: within $\pm 30\%$ of initial value<br>DC Resistance shall be satisfied     | Test device shall be soldered on the substrate<br>Oscillation<br>Frequency : 10 to 55 to 10Hz for 1min<br>Amplitude : 1.5mm(peak-peak)<br>Time : 2hrs for each axis (X,Y&Z), total 6hrs                                                      |

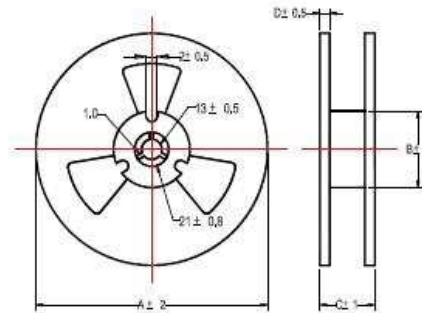
**Mechanical Performance Test (continued)**

| Item                              | Specification                                                                                                  | Test Methods                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resistance to Soldering Heat      | No visible damage<br>Electrical characteristics and mechanical characteristics shall be satisfied              | Solder temp: $265\pm 5^{\circ}\text{C}$<br>Immersion time: $6\pm 1\text{sec}$<br>Preheating: $100^{\circ}\text{C}$ to $150^{\circ}\text{C}$ , 1 minute<br>Measured after exposure in the room condition for 24hrs<br>Solder: Sn-3Ag-0.5Cu                                                                                                                 |
| Solderability                     | 95% min. coverage of all metallized area                                                                       | Solder Temperature: $240\pm 5^{\circ}\text{C}$<br>Immersion Time: $3\pm 1\text{sec}$ Solder: Sn-3Ag-0.5Cu                                                                                                                                                                                                                                                 |
| Terminal Strength                 | Without deformation cases<br>Impedance: within $\pm 30\%$ of initial value<br>DC Resistance shall be satisfied | Solder chip on PCB and applied 10N (1.02Kgf) for 10 sec                                                                                                                                                                                                                                                                                                   |
| Temperature Cycle                 | Appearance: No damage. Impedance: within $\pm 30\%$ of initial value<br>DC Resistance shall be satisfied       | One cycle:<br><b>step1:</b> $-55\pm 3^{\circ}\text{C}$ for $30\pm 3\text{min}$<br><b>step2:</b> standard atmospheric conditions 5s or less<br><b>step3:</b> $125\pm 2^{\circ}\text{C}$ for $30\pm 3\text{min}$<br><b>step4:</b> standard atmospheric conditions 5s or less<br>Total: 100cycles<br>Measured after exposure in the room condition for 24hrs |
| Humidity Resistance               |                                                                                                                | Temperature: $60\pm 2^{\circ}\text{C}$<br>Relative Humidity: 90 ~ 95%<br>Applied Current: Rated Current (maximum value)<br>Time: $1008\pm 12\text{hrs}$<br>Measured after exposure in the room condition for 24hrs                                                                                                                                        |
| High Temperature Resistance       |                                                                                                                | Temperature: $125\pm 2^{\circ}\text{C}$<br>Applied Current: Rated Current (maximum value)<br>Time: $1008\pm 12\text{hrs}$<br>Measured after exposure in the room condition for 24hrs                                                                                                                                                                      |
| Low Temperature Storage Life Test |                                                                                                                | Temperature: $-55\pm 2^{\circ}\text{C}$<br>Time: $1008\pm 12\text{hrs}$<br>Measured after exposure in the room condition for 24hrs                                                                                                                                                                                                                        |
| Thermal Shock                     |                                                                                                                | $-55^{\circ}\text{C}\sim 125^{\circ}\text{C}$ kept stabilized for 30 minutes each for 100 cycles<br>Measured after exposure in the room condition for 24hrs                                                                                                                                                                                               |

Operating Temperature:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$ Storage Temperature:  $<40^{\circ}\text{C}$  ; Humidity 30~70%RH

## Packaging

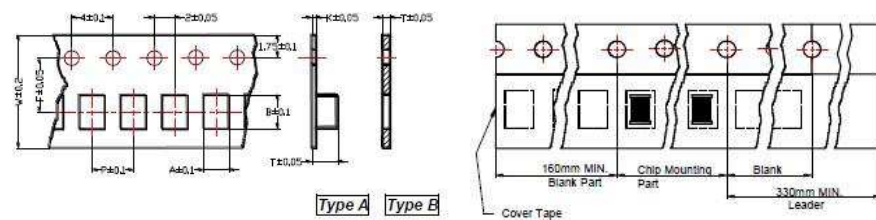
### Reel Specifications



### Reel Dimensions

| A   | B  | C  | D |
|-----|----|----|---|
| 178 | 60 | 10 | 2 |

### Tape Specifications



| Type  | A    | B    | T    | W   | P   | F   | K   | Tape | Quantity |
|-------|------|------|------|-----|-----|-----|-----|------|----------|
| BMC1H | 0.38 | 0.68 | 1.10 | 8.0 | 2.0 | 3.5 | -   | B    | 15000    |
| BMC1E | 0.65 | 1.15 | 0.80 | 8.0 | 2.0 | 3.5 | -   | B    | 10000    |
| BMC1J | 1.10 | 1.90 | 1.10 | 8.0 | 4.0 | 3.5 | -   | B    | 4000     |
| BMC2A | 1.55 | 2.30 | 1.20 | 8.0 | 4.0 | 3.5 | -   | B    | 4000     |
| BMC2C | 1.90 | 3.50 | 1.40 | 8.0 | 4.0 | 3.5 | 0.2 | A    | 3000     |
| BMC2E | 2.90 | 3.60 | 1.70 | 8.0 | 4.0 | 3.5 | 0.2 | A    | 2000     |

## How To Order

| BMC         | 2A                                                                         | Y         | 0600                                    | A                     | N                                                                                                                   |                                          |
|-------------|----------------------------------------------------------------------------|-----------|-----------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Common Part | Size                                                                       | Tolerance | Impedance                               | Use Code              | Current Type                                                                                                        | Option                                   |
| BMC         | 1H - 0201<br>1E - 0402<br>1J - 0603<br>2A - 0805<br>2C - 1204<br>2E - 1210 | Y: ±25%   | 0010 - 10Ω<br>0300 - 300Ω<br>1000 - 1KΩ | A<br>B<br>H<br>K<br>Y | H: High current<br>G: Medium current<br>N: General current<br>F: High Frequency<br>C: High current & High Frequency | Blank - Standard<br><br>1, 2, 3 - Option |

NOTE:

...AN configuration preferred – other configurations on case-by-case request.