

## Type BMB-A Series

### Key Features

Effective EMI  
Protection

Wide  
Frequency  
Characteristics

High soldering  
Heat  
Resistance

Various  
Package Sizes  
Available

Suited to a  
Variety of  
Applications

Terminal finish  
matte Sn over  
Cu/Ni  
underplate



The BMB A 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. These are high loss types for general use. This series is offered in 0402, 0603, 0805 and 1206 package sizes

### Electrical Performance

| Part Number     | Impedance ( $\Omega$ ) at 100MHz | DC Resistance ( $\Omega$ ) maximum | Rated Current (mA) maximum |
|-----------------|----------------------------------|------------------------------------|----------------------------|
| BMB-1E-0030A-N8 | 30 $\pm$ 25%                     | 0.15                               | 500                        |
| BMB-1E-0060A-N8 | 60 $\pm$ 25%                     |                                    |                            |
| BMB-1E-0120A-N8 | 120 $\pm$ 25%                    |                                    |                            |
| BMB-1E-0220A-N8 | 220 $\pm$ 25%                    | 0.25                               | 300                        |
| BMB-1E-0300A-N8 | 300 $\pm$ 25%                    | 0.35                               |                            |
| BMB-1E-0470A-N8 | 470 $\pm$ 25%                    | 0.45                               |                            |
| BMB-1E-0600A-N8 | 600 $\pm$ 25%                    | 0.55                               | 200                        |
| BMB-1E-1000A-N8 | 1000 $\pm$ 25%                   | 0.65                               | 150                        |
| BMB-1J-0030A-N8 | 30 $\pm$ 25%                     | 0.20                               | 400                        |
| BMB-1J-0040A-N8 | 40 $\pm$ 25%                     |                                    |                            |
| BMB-1J-0060A-N8 | 60 $\pm$ 25%                     |                                    |                            |
| BMB-1J-0080A-N8 | 80 $\pm$ 25%                     | 0.40                               | 300                        |
| BMB-1J-0100A-N8 | 100 $\pm$ 25%                    |                                    |                            |
| BMB-1J-0120A-N8 | 120 $\pm$ 25%                    |                                    |                            |
| BMB-1J-0180A-N8 | 180 $\pm$ 25%                    | 0.50                               | 200                        |
| BMB-1J-0220A-N8 | 220 $\pm$ 25%                    |                                    |                            |
| BMB-1J-0240A-N8 | 240 $\pm$ 25%                    |                                    |                            |
| BMB-1J-0300A-N8 | 300 $\pm$ 25%                    | 0.70                               | 150                        |
| BMB-1J-0450A-N8 | 450 $\pm$ 25%                    |                                    |                            |
| BMB-1J-0600A-N8 | 600 $\pm$ 25%                    |                                    |                            |
| BMB-1J-1000A-N8 | 1000 $\pm$ 25%                   | 1.00                               | 100                        |
| BMB-1J-1200A-N8 | 1200 $\pm$ 25%                   |                                    |                            |
| BMB-1J-1500A-N8 | 1500 $\pm$ 25%                   |                                    |                            |

## Electrical Performance (continued)

| Part Number     | Impedance (Ω)<br>at 100MHz<br>* 50MHz<br>* 30MHz | DC Resistance (Ω)<br>maximum | Rated Current (mA)<br>maximum |
|-----------------|--------------------------------------------------|------------------------------|-------------------------------|
| BMB-2A-0010A-N8 | 10 ±25%                                          | 0.10                         | 600                           |
| BMB-2A-0017A-N8 | 17 ±25%                                          |                              |                               |
| BMB-2A-0030A-N8 | 30 ±25%                                          |                              | 500                           |
| BMB-2A-0080A-N4 | 80 ±25%                                          | 0.30                         | 400                           |
| BMB-2A-0120A-N4 | 120 ±25%                                         |                              | 300                           |
| BMB-2A-0120A-N8 |                                                  |                              |                               |
| BMB-2A-0150A-N8 |                                                  |                              |                               |
| BMB-2A-0220A-N4 | 220 ±25%                                         | 0.50                         | 250                           |
| BMB-2A-0300A-N8 | 300 ±25%                                         |                              |                               |
| BMB-2A-0400A-N8 | 400 ±25%                                         |                              |                               |
| BMB-2A-0600A-N4 | 600 ±25%                                         | 0.60                         | 200                           |
| BMB-2A-0600A-N8 |                                                  |                              |                               |
| BMB-2A-1000A-N4 | 1000 ±25%                                        | 0.80                         | 100                           |
| BMB-2A-1200A-N4 | 1200 ±25%                                        |                              |                               |
| BMB-2A-1500A-N4 | 1500 ±25%                                        | 1.00                         |                               |
| BMB-2A-2000A-N4 | 2000 ±25%                                        |                              |                               |
| BMB-2A-2200A-N4 | 2200 ±25%                                        |                              |                               |
| BMB-2A-2700A-N4 | 2700 ±25%                                        | 1.50                         |                               |
|                 |                                                  |                              |                               |
| BMB-2B-0026A-N8 | 26 ±25%                                          | 0.20                         | 600                           |
| BMB-2B-0031A-N8 | 31 ±25%                                          |                              |                               |
| BMB-2B-0050A-N8 | 50 ±25%                                          |                              | 500                           |
| BMB-2B-0070A-N8 | 70 ±25%                                          |                              |                               |
| BMB-2B-0090A-N8 | 90 ±25%                                          | 0.30                         |                               |
| BMB-2B-0120A-N4 | 120 ±25%                                         |                              |                               |
| BMB-2B-0150A-N4 | 150 ±25%                                         |                              |                               |
| BMB-2B-0220A-N4 | 220 ±25%                                         | 0.40                         | 400                           |
| BMB-2B-0400A-N4 | 400 ±25%                                         |                              | 300                           |
| BMB-2B-0500A-N8 | 500 ±25%                                         |                              |                               |
| BMB-2B-0600A-N8 | 600 ±25%                                         | 0.50                         | 250                           |
| BMB-2B-1200A-N8 | *1200 ±25%                                       | 0.70                         | 200                           |
| BMB-2B-1500A-N8 | *1500 ±25%                                       | 1.00                         |                               |
| BMB-2B-2000A-N8 | **2000 ±25%                                      | 1.50                         | 150                           |

Operating temperature range - -55 ~ +125°C

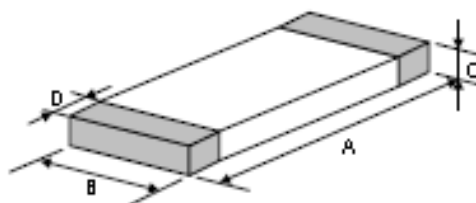
Temperature should be less than 25°C when rated current is applied.

Storage:

Temperature Range: -40 ~ +85°C

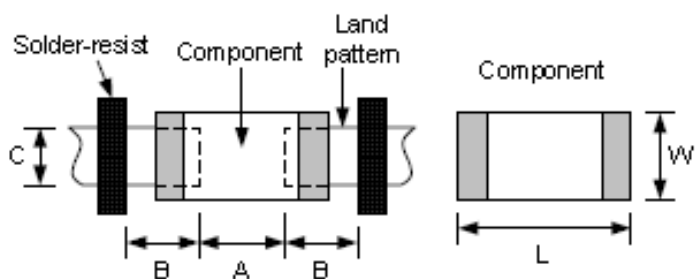
Humidity: Less than 75% RH

## Product Dimensions



| Size | A (mm)    | B (mm)    | C (mm)    | D (mm)     |
|------|-----------|-----------|-----------|------------|
| 0402 | 1.0 ±0.10 | 0.5 ±0.10 | 0.5 ±0.10 | 0.25 ±0.10 |
| 0603 | 1.6 ±0.15 | 0.8 ±0.15 | 0.8 ±0.15 | 0.3 ±0.20  |
| 0805 | 2.0 ±0.20 | 1.2 ±0.20 | 0.9 ±0.20 | 0.5 ±0.30  |
| 1206 | 3.2 ±0.20 | 1.6 ±0.20 | 1.1 ±0.20 | 0.5 ±0.30  |

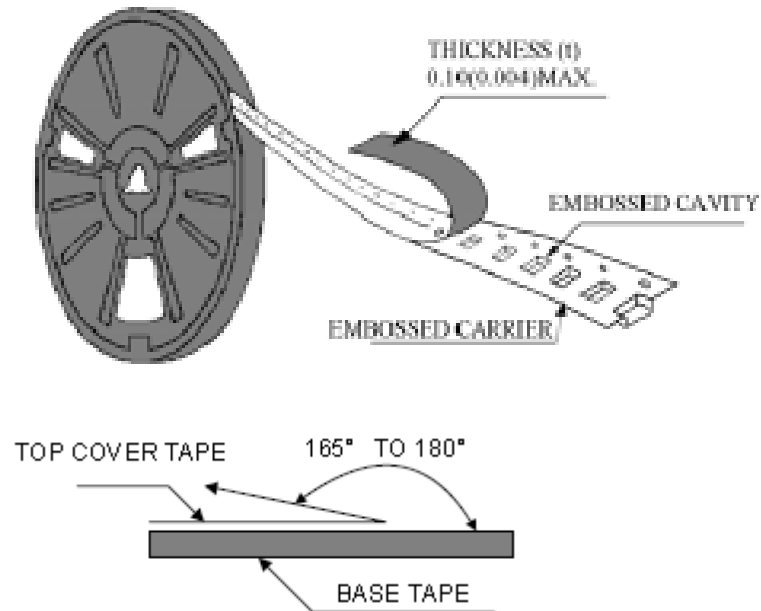
## Recommended PCB Layout



| Size      |   | 0402        | 0603      | 0805      | 1206      |
|-----------|---|-------------|-----------|-----------|-----------|
| Component | L | 1.0         | 1.6       | 2.0       | 3.2       |
|           | W | 0.5         | 0.8       | 1.2       | 1.6       |
| A         |   | 0.45 ~ 0.55 | 0.6 ~ 0.8 | 0.8 ~ 1.2 | 1.8 ~ 2.2 |
| B         |   | 0.40 ~ 0.50 | 0.6 ~ 0.8 | 0.8 ~ 1.2 | 1.1 ~ 1.6 |
| C         |   | 0.40 ~ 0.50 | 0.6 ~ 0.8 | 0.9 ~ 1.6 | 0.9 ~ 1.6 |

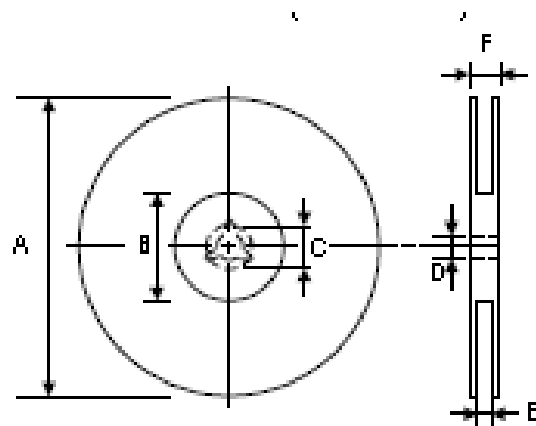
## Packaging

Peel off force:

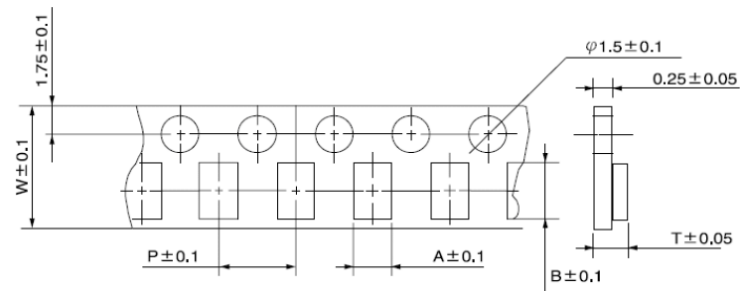


The force for peeling off cover tape is 10 grams in the direction shown

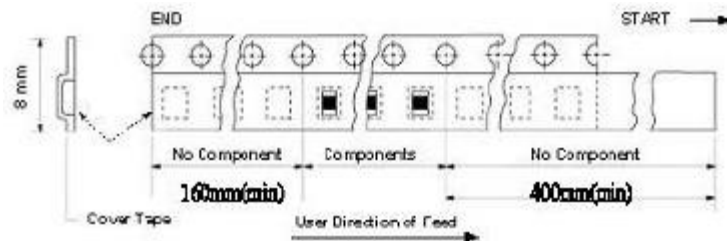
Dimensions (mm)



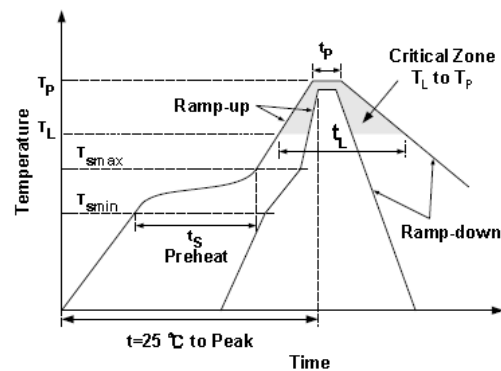
| A           | B                   | C  | D            | E           | F            |
|-------------|---------------------|----|--------------|-------------|--------------|
| $178 \pm 1$ | $60 +0.5$<br>$-0.1$ | -- | $13 \pm 0.2$ | $9 \pm 0.5$ | $12 \pm 0.5$ |



| Size | A   | B   | W | P | T   | Chips / Reel |
|------|-----|-----|---|---|-----|--------------|
| 0402 | 0.6 | 1.1 | 8 | 2 | 1.0 | 10000        |
| 0603 | 1.1 | 1.9 | 8 | 4 | 1.1 | 4000         |
| 0805 | 1.5 | 2.3 | 8 | 4 | 1.3 | 4000         |
| 1206 | 1.9 | 3.5 | 8 | 4 | 1.5 | 3000         |



## Recommended Reflow Solder Profile



|                                                  |                  |                  |
|--------------------------------------------------|------------------|------------------|
| Profile Feature                                  |                  | Pb Free          |
| Preheat                                          | ts               | 60 ~ 180 seconds |
|                                                  | Tsmin            | 150°C            |
|                                                  | Tsmax            | 200°C            |
| Average Ramp up rate (Tsmax to Tp)               |                  | 3°C/second max.  |
| Time main above                                  | Temperature (TL) | 217°C            |
|                                                  | Time (tL)        | 60 ~ 150 seconds |
| Peak Temperature (Tp)                            |                  | 250 ~ 260°C      |
| Time within 5°C of actual peak temperature ((tp) |                  | 10 seconds       |
| Ramp down rate                                   |                  | 6°C/second max.  |
| Time 25°C to peak temperature                    |                  | 8 minutes max.   |

## Typical Characteristic Curves (T=25°C)

