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 (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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

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BMC 0402 AN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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 (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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

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BMC 0603 AN (continued)

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC1JY0450AN	450	±25%	100	0.30	400
BMC1JY0600AN	600	±25%	100	0.35	400
BMC1JY0750AN	750	±25%	100	0.35	400
BMC1JY1000AN	1000	±25%	100	0.55	300
BMC1JY1000AN1	1000	±25%	100	0.25	800
BMC1JY1500AN	1500	±25%	100	0.60	200

BMC 0805 AN

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

BMC 1204 AN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC2CY0019AN	19	±25%	100	0.10	800
BMC2CY0026AN	26	±25%	100	0.10	800
BMC2CY0031AN	31	±25%	100	0.10	800
BMC2CY0052AN	52	±25%	100	0.15	800

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BMC 1204 AN (continued)

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC2CY0060AN	60	±25%	100	0.15	500
BMC2CY0070AN	70	±25%	100	0.15	500
BMC2CY0100AN	100	±25%	100	0.20	450
BMC2CY0120AN	120	±25%	100	0.20	450
BMC2CY0150AN	150	±25%	100	0.20	450
BMC2CY0220AN	220	±25%	100	0.20	350
BMC2CY0300AN	300	±25%	100	0.20	350
BMC2CY0400AN	400	±25%	100	0.25	350
BMC2CY0600AN	600	±25%	100	0.25	350
BMC2CY0750AN	750	±25%	100	0.30	350
BMC2CY0800AN	800	±25%	100	0.30	350
BMC2CY1000AN	1000	±25%	100	0.35	350
BMC2CY1200AN	1200	±25%	100	0.35	350

BMC 1210 AN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC2EY0031AN	31	±25%	100	0.10	500
BMC2EY0052AN	52	±25%	100	0.30	400
BMC2EY0060AN	60	±25%	100	0.30	400

Electrical Specifications

For General Signal Line, Frequency Higher Than A Use (KN)

BMC 0402 KN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC1EY0220KN	220	±25%	100	0.80	100
BMC1EY0300KN	300	±25%	100	0.85	100

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BMC 0603 KN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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℃
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℃
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

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BMC 0603 AG

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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℃
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

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Standard Electrical Specifications

For High Speed Signal Line Use (BN)

BMC 0402 BN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC1EY0470BN	470	±25%	100	1.00	100
BMC1EY0600BN	600	±25%	100	1.50	50

Other impedance values on application

BMC 0603 BN

On Application only

BMC 0805 BN

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC2AY1500BN	1500	±25%	100	0.35	200
BMC2AY1800BN	1800	±25%	100	0.40	200
BMC2AY2000BN	2000	±25%	100	0.40	200
BMC2AY2200BN	2200	±25%	100	0.50	200
BMC2AY2500BN	2500	±25%	100	0.60	200
BMC2AY2700BN	2700	±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 (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC1EY0022HN	22	±25%	100	0.20	300
BMC1EY0030HN	30	±25%	100	0.20	300
BMC1EY0033HN	33	±25%	100	0.40	300
BMC1EY0047HN	47	±25%	100	0.35	300

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BMC 0402 HN (continued)

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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 (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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 (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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 (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC2AY0017AH	17	±25%	100	0.008	6000

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BMC 0805 AH (continued)

Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
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

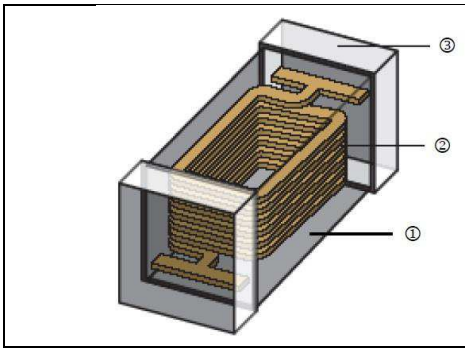
Part No.	Impedance (Ω)	Tolerance	TestFreq. (MHz)	DCR (Ω)max.	Rated Current (mA)max. at 85℃
BMC2CY0026AH	26	±25%	100	0.006	6000
BMC2CY0031AH	31	±25%	100	0.006	6000
BMC2CY0033AH	33	±25%	100	0.006	6000
BMC2CY0048AH	48	±25%	100	0.008	6000
BMC2CY0050AH	50	±25%	100	0.008	6000
BMC2CY0052AH	52	±25%	100	0.008	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℃
BMC2EY0052AH	52	±25%	100	0.008	6000
BMC2EY0060AH	60	±25%	100	0.008	6000

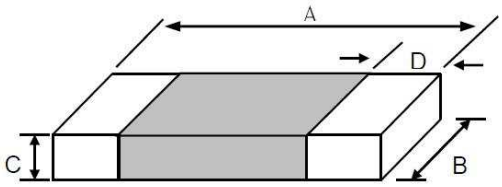
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Construction



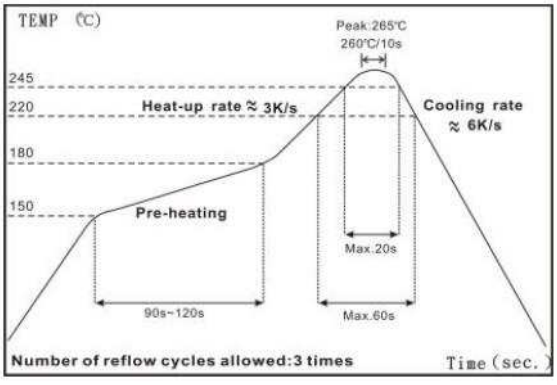
①	Ferrite
②	Internal Electrode
③	Electrode Plating

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

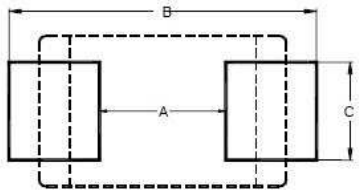


Time of IR reflow soldering at maximum temperature point 260°C : 10s

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

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Recommended PCB layout plan



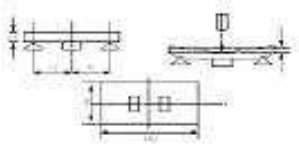
Type	Size (Inch)	A (mm)	B (mm)	C (mm)
BMC1H	0201	0.25	0.69	0.32
BMC1E	0402	0.50	2.10	0.55
BMC1J	0603	0.60	2.60	0.80
BMC2A	0805	0.66	3.23	1.47
BMC2C	1204	2.20	4.40	2.06
BMC2E	1210	2.13	4.06	2.74

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 Impedance: within ±30% of initial value DC Resistance shall be satisfied	Test device shall be soldered on the substrate Substrate Dimension:100x40x0.8mm Deflection: 3.0mm Keeping Time: 10 seconds then return 
Vibration	Appearance: No damage Impedance: within ±30% of initial value DC Resistance shall be satisfied	Test device shall be soldered on the substrate Oscillation Frequency : 10 to 55 to 10Hz for 1min Amplitude : 1.5mm(peak-peak) Time : 2hrs for each axis (X,Y&Z), total 6hrs

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Mechanical Performance Test (continued)

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

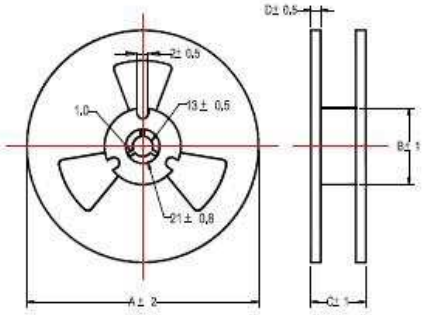
Operating Temperature: -55℃ ~ 125℃

Storage Temperature: <40℃ ; Humidity 30~70%RH

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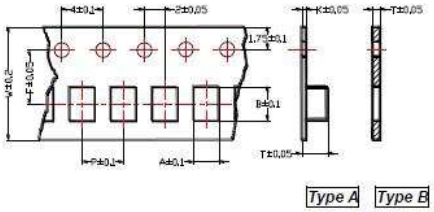
Packaging

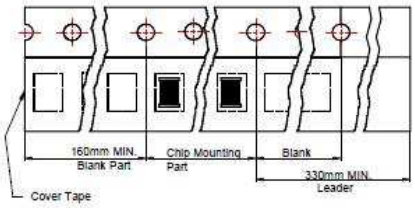
Reel Specifications



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 1E - 0402 1J – 0603 2A – 0805 2C – 1204 2E – 1210	Y: ±25%	0010 - 10Ω 0300 - 300Ω 1000 – 1KΩ	A B H K Y	H: High current G: Medium current N: General current F: High Frequency C: High current & High Frequency	Blank – Standard 1, 2, 3 - Option

NOTE:

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

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