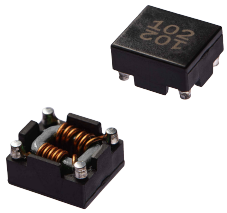
BCMA Series

Common Mode Filters For Automotive Signal Line
Size 1009



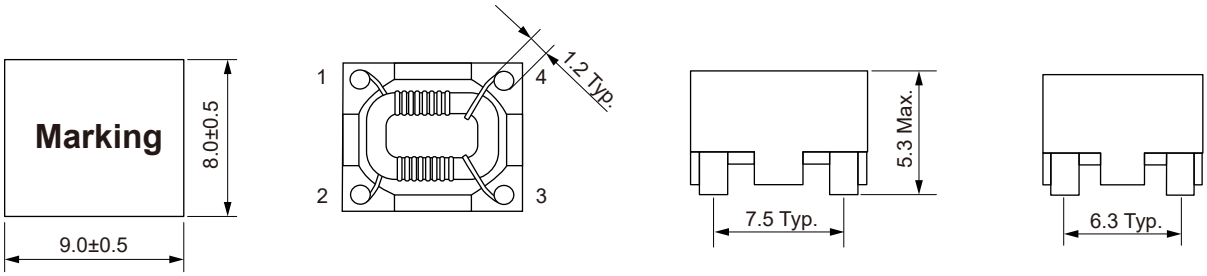
FEATURES

- High common mode impedance at high frequency cause excellent noise suppression performance
- Designed to be low profile and Supports large currents (up to 5 A)
- Operating temperature range: -40 to +125°C
- AEC-Q200 qualified
- Quantity: 1000pcs

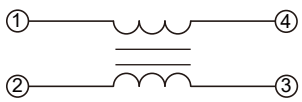
APPLICATION

- Measures against common mode noise in power lines Headlamps, tail lamps and interior lighting
- HVAC
- Doors, window lift and seat control
- Audio subsystem
- Digital instrument cluster
- In-Vehicle Infotainment and navigation

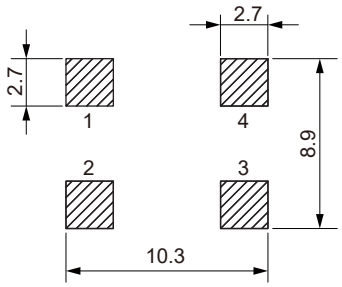
Dimensions: [mm]



Schematic:



Land Pattern: [mm]

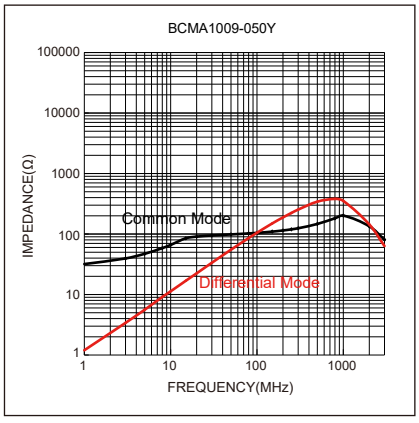


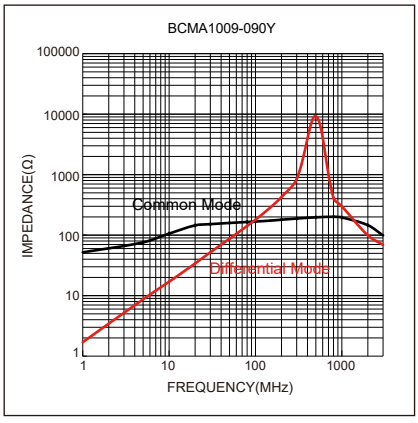
Electrical Properties:

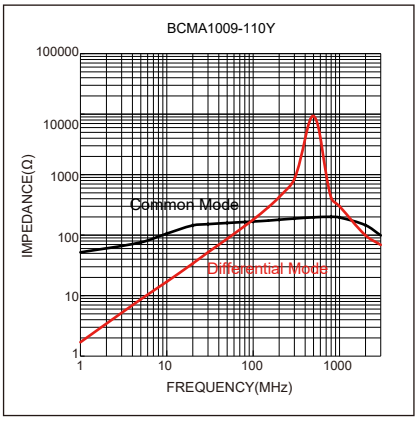
Part No	Inductance @100KHz/0.1V (μH)	Tolerance	Impedance Max. (Ω)	Temperature Rise Current Max. (A)	DC Resistance Max. (mΩ)	Frequency (MHz)
BCMA1009-050Y	5	±50%	500	5.00	10	108
BCMA1009-090Y	9	±50%	800	3.50	11	105
BCMA1009-110Y	11	±50%	1000	2.50	30	100
BCMA1009-300Y	30	±50%	2200	1.40	60	60
BCMA1009-500Y	50	±50%	3200	0.50	96	22
BCMA1009-121Y	120	±40%	600	2.50	30	40
BCMA1009-151Y	150	±40%	600	3.50	13	10
BCMA1009-221Y	220	±40%	1200	2.20	32	18
BCMA1009-251Y	250	±40%	1200	2.00	40	15
BCMA1009-471Y	470	±40%	2100	1.60	70	12
BCMA1009-102Y	1000	±40%	4200	0.95	180	6.0
BCMA1009-222Y	2200	±40%	7500	0.75	300	4.0
BCMA1009-332Y	3300	±40%	8900	0.65	360	2.0
BCMA1009-392Y	3900	±40%	9600	0.52	540	2.0
BCMA1009-472Y	4700	±40%	13000	0.35	720	1.2

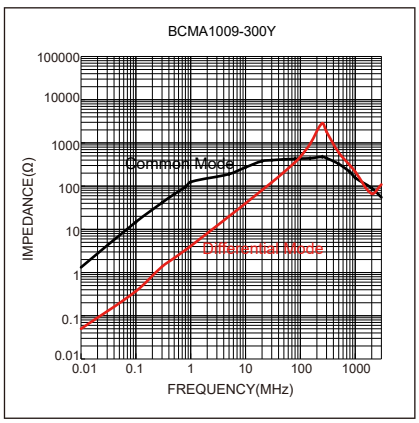
Temperature Rise Current: The actual value of DC current when the temperature rise is △T=40°C

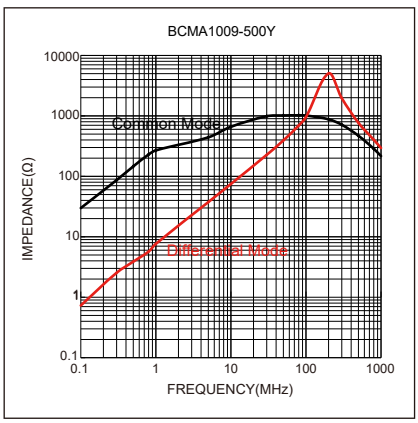
Typical Electrical Characteristics:

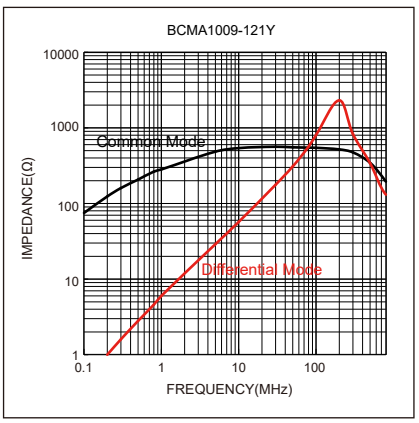


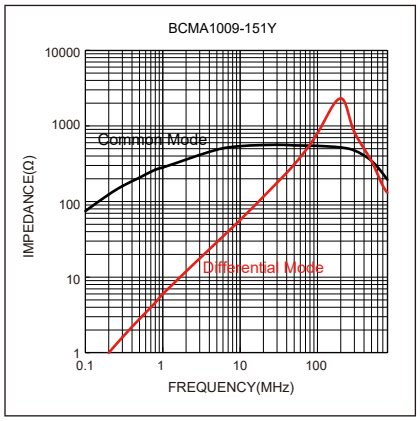


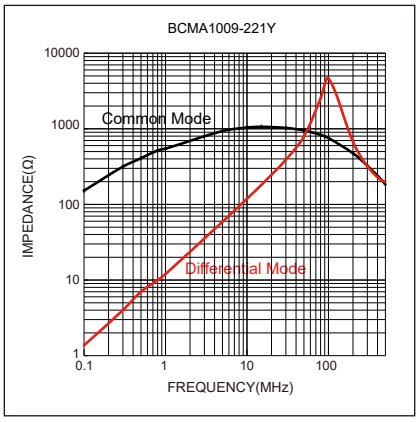


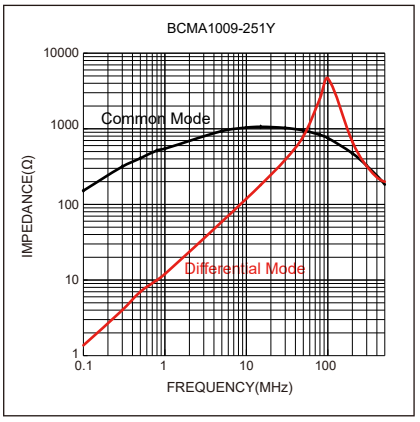


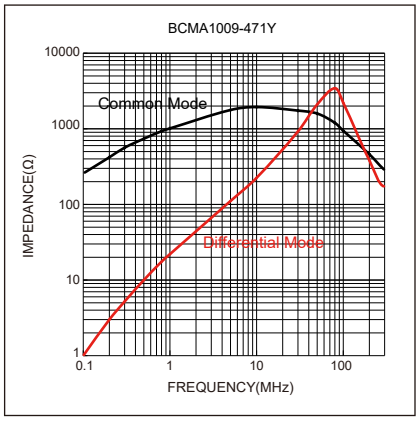


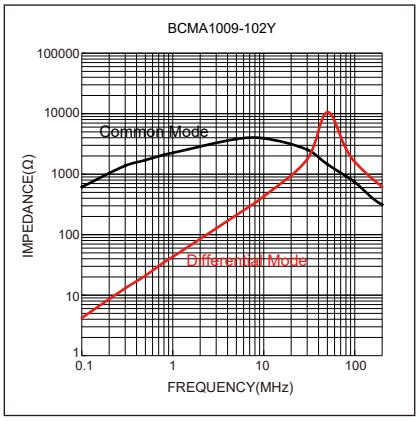


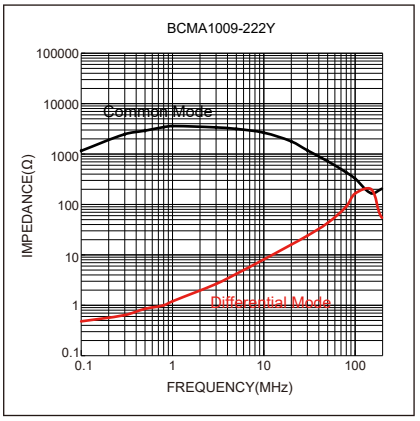

BCMA1009-151Y
IMPEDANCE(Ω)
10000
1000
100
10
1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)

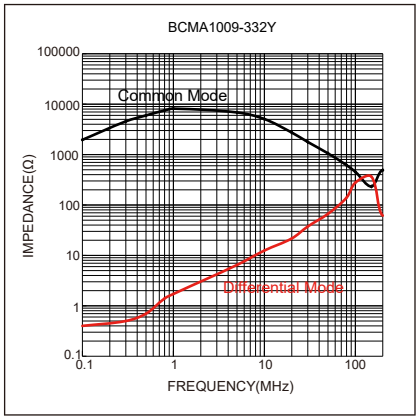

BCMA1009-221Y
IMPEDANCE(Ω)
10000
1000
100
10
1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)

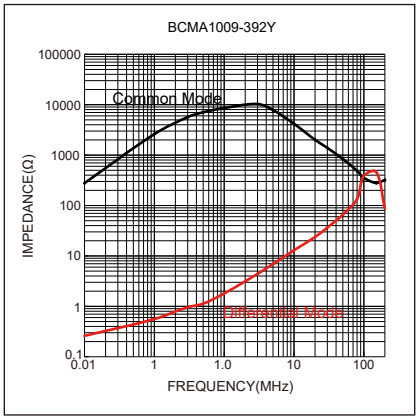

BCMA1009-251Y
IMPEDANCE(Ω)
10000
1000
100
10
1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)

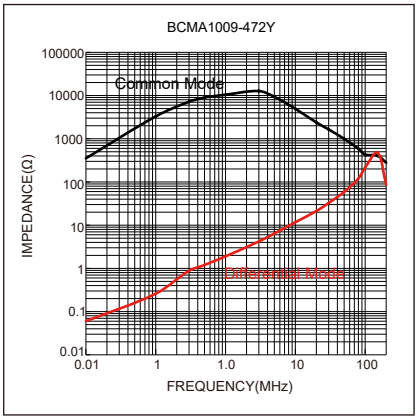

BCMA1009-471Y
IMPEDANCE(Ω)
10000
1000
100
10
1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)


BCMA1009-102Y
IMPEDANCE(Ω)
100000
10000
1000
100
10
1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)

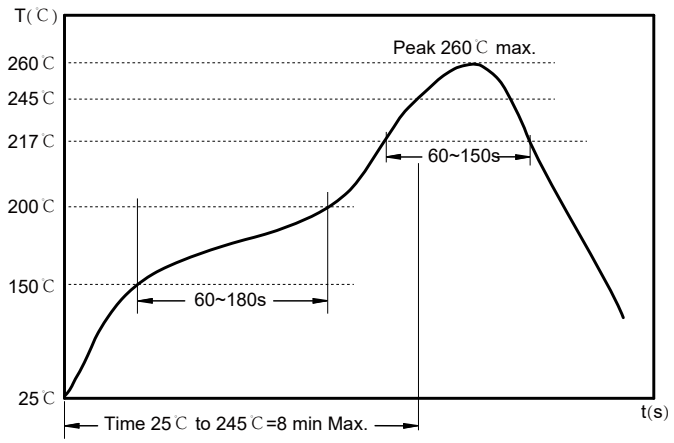

BCMA1009-222Y
IMPEDANCE(Ω)
100000
10000
1000
100
10
1
0.1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)


BCMA1009-332Y
IMPEDANCE(Ω)
100000
10000
1000
100
10
1
0.1
Common Mode
Differential Mode
0.1
1
10
100
FREQUENCY(MHz)


BCMA1009-392Y
IMPEDANCE(Ω)
100000
10000
1000
100
10
1
0.1
Common Mode
Differential Mode
0.01
1
1.0
10
100
FREQUENCY(MHz)


BCMA1009-472Y
IMPEDANCE(Ω)
100000
10000
1000
100
10
1
0.1
0.01
Common Mode
Differential Mode
0.01
1
1.0
10
100
FREQUENCY(MHz)

Soldering Reflow:



Preheat condition: 150 ~200℃/ 60~180 sec.

Allowed time above 217℃: 60~150 sec.

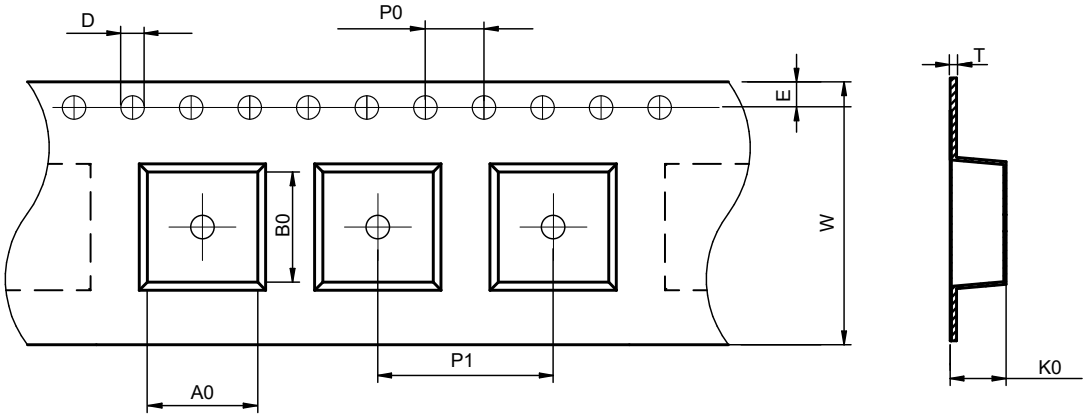
Max temperature: 260℃.

Max time at max temperature: 10 sec.

Allowed Reflow time: 3x max.

Packaging Information:

Tape Dimension:

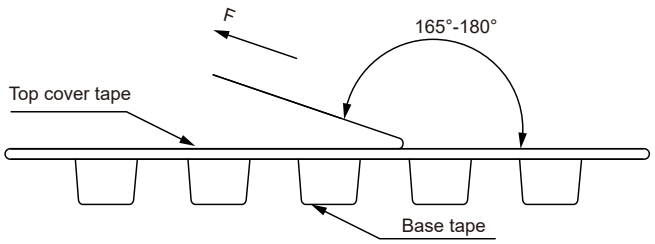


Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
BCMA1009	8.6±0.1	10.5±0.1	1.5±0.1	4.0±0.1	12.0±0.1	24.0±0.3	5.4±0.1	1.75±0.1	0.40±0.05

Product Marking:

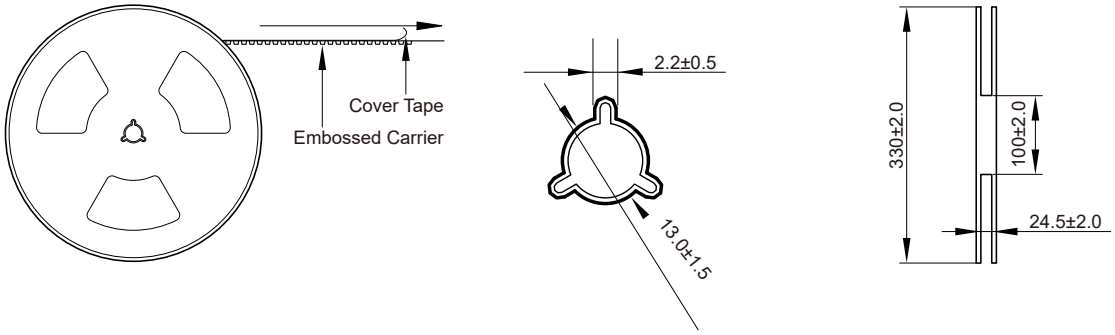
Marking	Printing (Inductance)

Peel force of top cover tape:

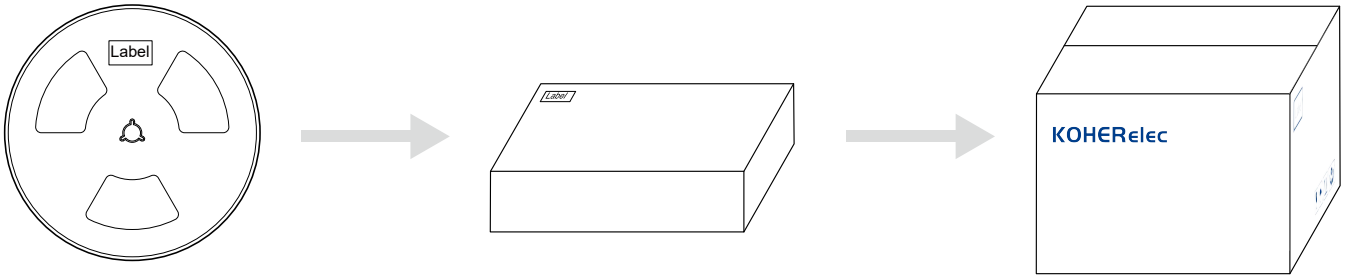


The peel force of top cover tape shall be between 0.20 to 1.17 N

Reel Dimension：[mm]



Packaging Quantity:



1000 Pcs/Reel

2 Reel /Inner box(2000 Pcs)

3 Inner box/Carton box(6K Pcs)

Cautions and Warnings:

Storage Conditions:

- The storage period is within 12 months after the completion of production. Be sure to follow the storage conditions (temperature: -5 to 35°C, humidity: 75% RH Max).If the storage period elapses, the soldering of the terminal electrodes may deteriorate.The warranty period is one year.
- Product should not be exposed to environment with high temperature, high humidity, dust, corrosive gas and etc.
- Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- Please always handle products carefully to prevent any damage caused by dropping down or inappropriate removing.

Operation Instructions:

- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Before soldering, be sure to preheat components.The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- 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.
- Generally, Koher might not be familiar with either customer's specific application or actual requests as customer does.As a result customer shall be responsible for checking and confirming whether Koher product with the performance described in the product specification is suitable for using in customer's particular application or not.

Conformal coating:

- The inductance value may change due to the high cure stress of the resin used for coating or molding.
- An open circuit may occur due to mechanical stress from the resin, its amount, cured shape, or operating conditions.
- Please exercise careful attention when selecting a resin for the coating or molding process.
- Prior to using the coating resin, please verify that no reliability issues are observed.
- When applying conformal coating for product protection, materials with a high shrinkage rate should be avoided.If such materials must be used, it is recommended to apply silicone around the inductor core in a closed loop to prevent the conformal coating from flowing into or penetrating the windings, thereby avoiding open-circuit failures caused by the coating's thermal stress.