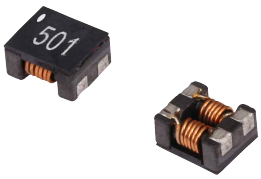
BCMA Series

Common Mode Filters For Automotive Power Line
Size 4520



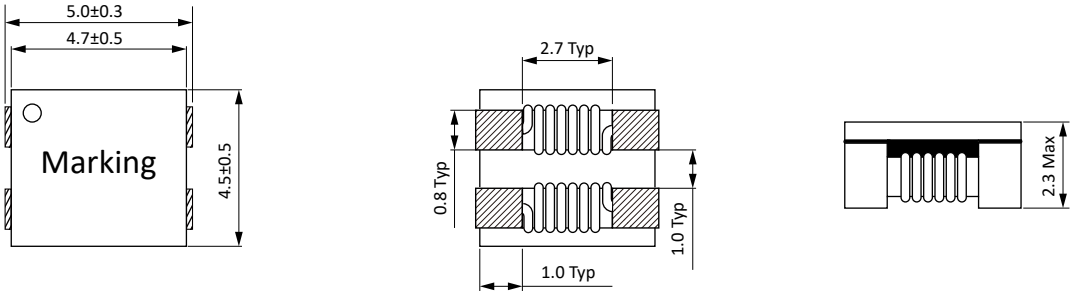
FEATURES

- High common mode impedance at high frequency cause excellent noise suppression performance
- Designed to be low profile and Supports large currents (up to 6 A)
- Operating temperature range: -40 to +125°C(including self-temperature rise)
- AEC-Q200 qualified
- Quantity: 1000pcs

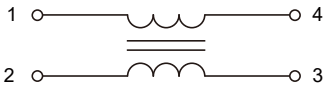
APPLICATION

- Headlamps, tail lamps and interior lighting
- HVAC
- Doors, window lift and seat control
- Audio subsystem
- Digital instrument cluster
- In-Vehicle Infotainment and navigation

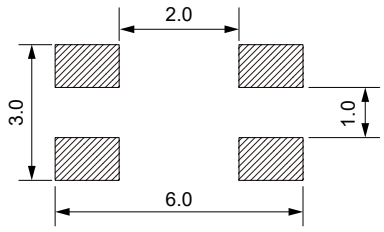
Dimensions: [mm]



Schematic:



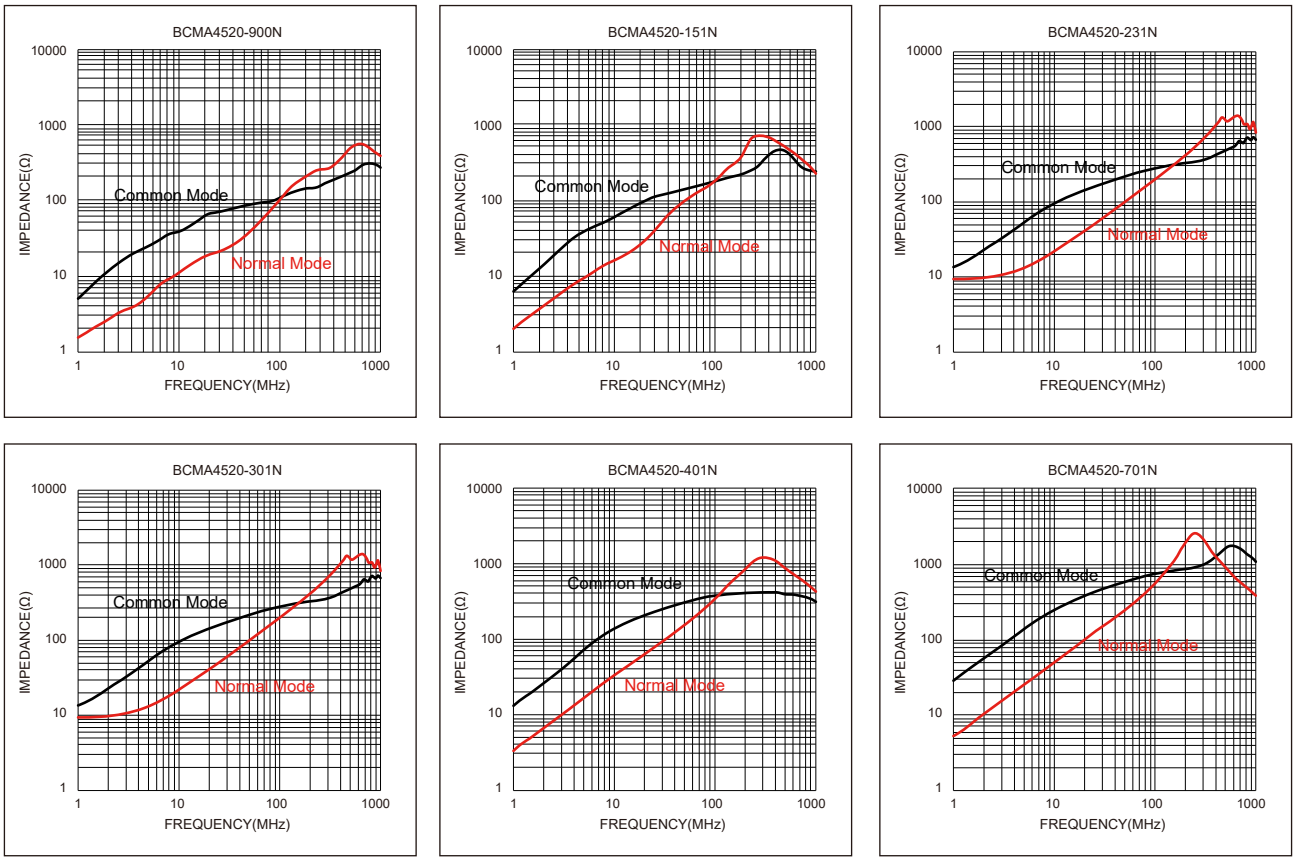
Land Pattern: [mm]

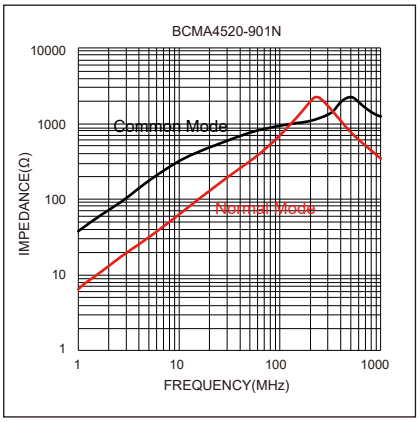


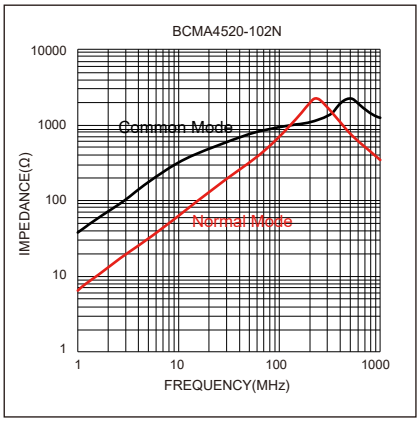
Electrical Properties:

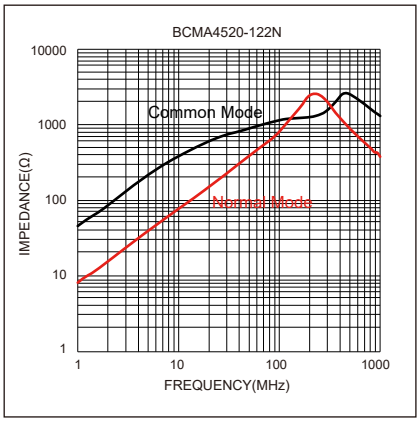
Part No	Impedance @ 100 MHz Min. (Ω)	Impedance @ 100 MHz Typ. (Ω)	DC Resistance Max. (mΩ)	Rated Current Max. (A)	Rated Volt Max. (V)	IR Min. (MΩ)
BCMA4520-900N	60	90	35	3.2	125	10
BCMA4520-151N	90	150	40	3.1	125	10
BCMA4520-231N	180	230	45	3.0	125	10
BCMA4520-301N	200	300	45	3.0	125	10
BCMA4520-401N	300	400	50	2.5	125	10
BCMA4520-701N	500	700	59	2.2	125	10
BCMA4520-901N	650	900	68	2.1	125	10
BCMA4520-102N	800	1000	68	2.1	125	10
BCMA4520-122N	1000	1200	74	2.0	125	10
BCMA4520-142N	1200	1400	81	1.9	125	10

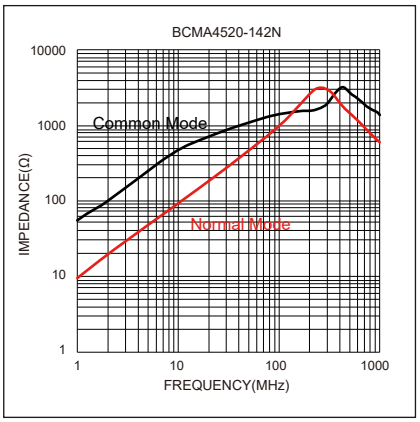
Typical Electrical Characteristics:



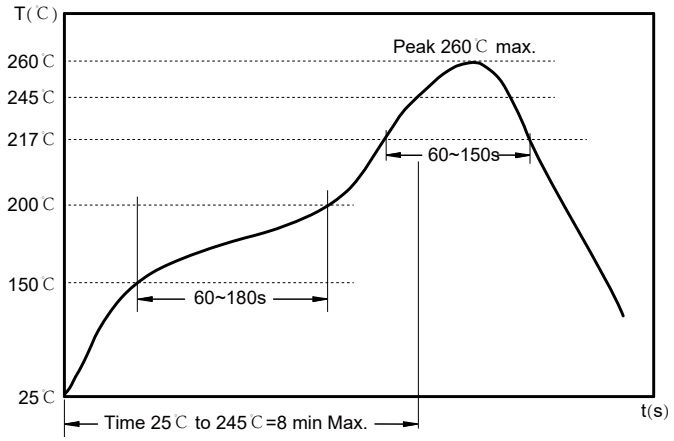

BCMA4520-901N
10000
1000
100
10
1
IMPEDANCE(Ω)
Common Mode
Normal Mode
1
10
100
1000
FREQUENCY(MHz)


BCMA4520-102N
10000
1000
100
10
1
IMPEDANCE(Ω)
Common Mode
Normal Mode
1
10
100
1000
FREQUENCY(MHz)


BCMA4520-122N
10000
1000
100
10
1
IMPEDANCE(Ω)
Common Mode
Normal Mode
1
10
100
1000
FREQUENCY(MHz)


BCMA4520-142N
10000
1000
100
10
1
IMPEDANCE(Ω)
Common Mode
Normal Mode
1
10
100
1000
FREQUENCY(MHz)

Soldering Reflow:



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

Allowed time above 217℃: 60~150 sec.

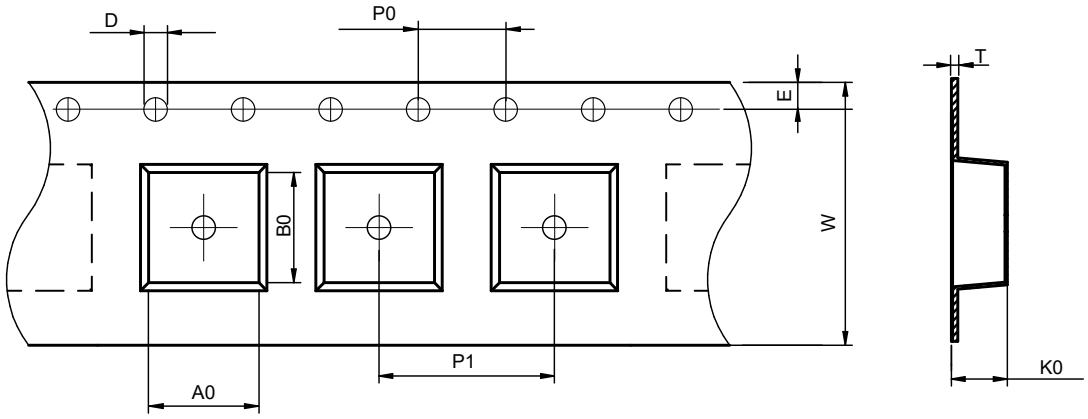
Max temperature: 260℃.

Max time at max temperature: 10 sec.

Allowed Reflow time: 3x max.

Packaging Information:

Tape Dimension:

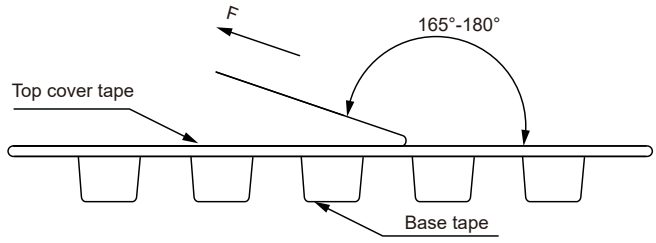


Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
BCMA4520	4.8±0.1	5.4±0.1	1.5±0.1	4.0±0.1	8.0±0.1	12.0±0.3	2.3±0.1	1.75±0.1	0.35±0.05

Product Marking:

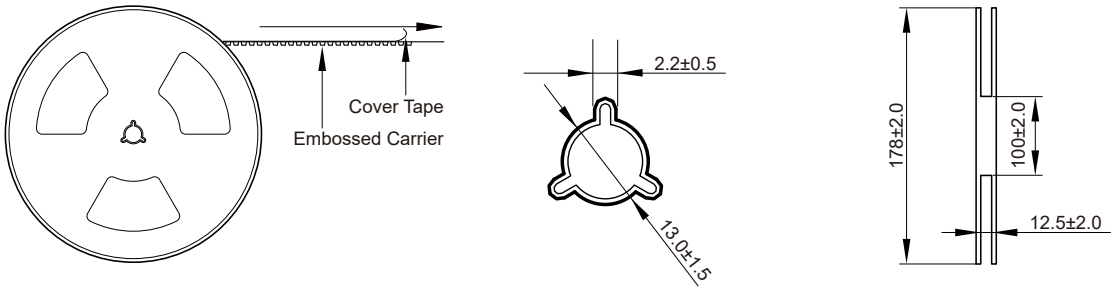
Marking	Dot+Printing (Impedance)

Peel force of top cover tape:

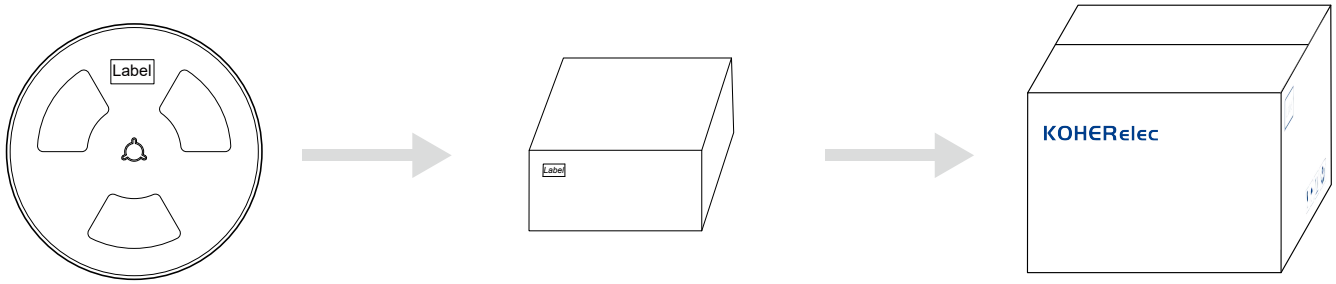


The peel force of top cover tape shall be between 0.10 to 1.17 N

Reel Dimension：[mm]



Packaging Quantity:



1000 Pcs/Reel

5 Reel /Inner box(5000 Pcs)

8 Inner box/Carton box(40K 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.