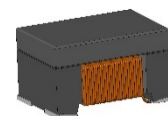


## Wire Wound Common Mode Chokes AMCW-B Series for Automotive CAN BUS



The article pictures are originally from Sunlord

### Overview

Wire Wound CMC AMCW-B series with inductance from 11 $\mu$ H -100 $\mu$ H and working temperature from -40~+150 $^{\circ}$ C , can be used to suppress common mode noise in high speed differential signal lines and is widely used for noise suppression in automotive buses such as CAN and FlexRay.

### Background

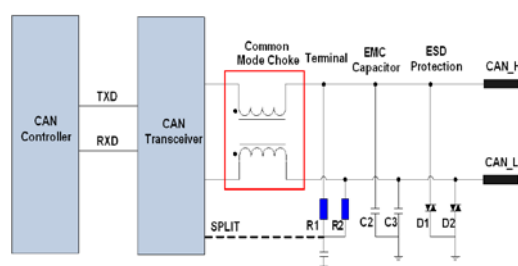
With the automotive industry revolution continues, the application and innovation of automotive electronic technology have greatly promoted the progress of the automotive industry. The number of electronic equipments in the automotive has significantly increased. This trend has enabled the vehicle to be equipped with diversified functions, such as entertainment, office and communications, navigation systems, smart drive, and so on. All ECUs and vehicle-mounted appliances will be gradually loaded onto the automotive network platform to achieve data sharing and intelligent control. Commonly multimedia functions are connected by LIN (Local Interconnect Network) or MOST (Media Guided System Transport) bus, and CAN and FlexRay bus systems are critical to safety systems such as engine control, ABS systems, and airbags. CAN and FlexRay bus systems must be satisfied with the highest electromagnetic compatibility specifications. In order to ensure reliable communication between various control units, Sunlord's AMCW-B series common mode chokes have been developed to solve the EMI in CANBUS. AMCW-B series common mode choke as a countermeasure against EMC and noise suppression at the interface.

### Features

- Wire would structure ,small size
- Good suppression for high frequency common mode noise
- AEC-Q200 compliant

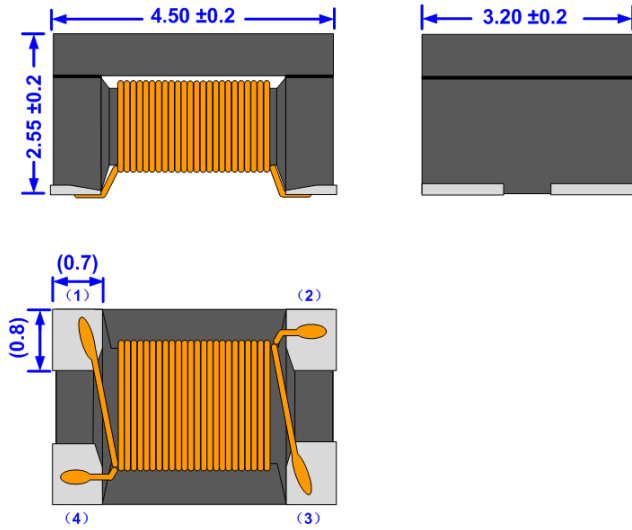
### Application

- Common mode noise filtering for automotive CAN BUS

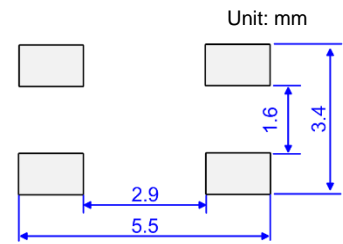


# Dimension and Land-pattern

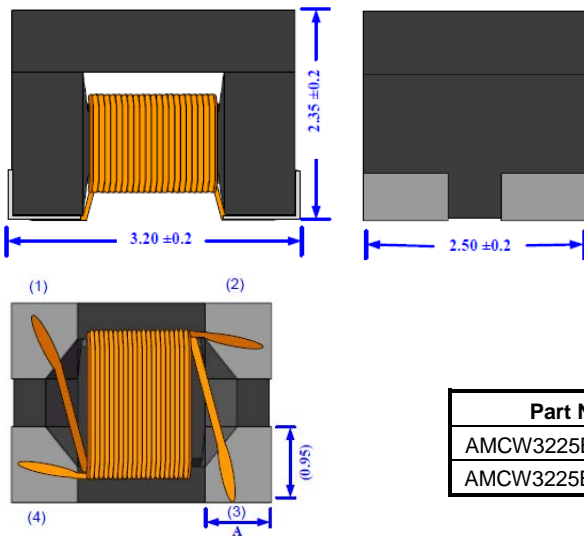
## AMCW4532B Series



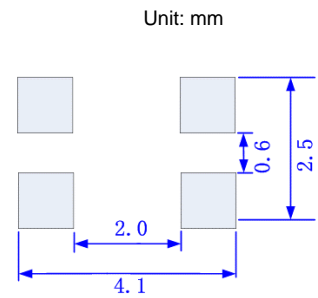
## Recommended Land Pattern



## AMCW3225B Series



## Recommended Land Pattern



Part Number	A
AMCW3225B-2-110T/220T	0.80mm
AMCW3225B-2-510T/101T	0.70mm

## Part Number

① <u>AMCW</u>	② <u>4532</u>	③ <u>B</u>	④ <u>-2</u>	⑤ <u>-110</u>	⑥ <u>T</u>																	
①	②	③	④	⑤	⑥																	
<table border="1"> <tr><th colspan="2">Type</th></tr> <tr><td>AMCW</td><td>Winding Type Common Mode Choke Coil</td></tr> </table>	Type		AMCW	Winding Type Common Mode Choke Coil	<table border="1"> <tr><th colspan="2">(LxW) (mm)</th></tr> <tr><th colspan="2">External Dimensions (LxW) (mm)</th></tr> <tr><td>4532 [1812]</td><td>4.5x3.2</td></tr> <tr><td>3225 [1210]</td><td>3.2x2.5</td></tr> </table>	(LxW) (mm)		External Dimensions (LxW) (mm)		4532 [1812]	4.5x3.2	3225 [1210]	3.2x2.5	<table border="1"> <tr><th colspan="2">Code</th></tr> <tr><td>B</td><td>for CAN BUS</td></tr> </table>	Code		B	for CAN BUS				
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## Specification

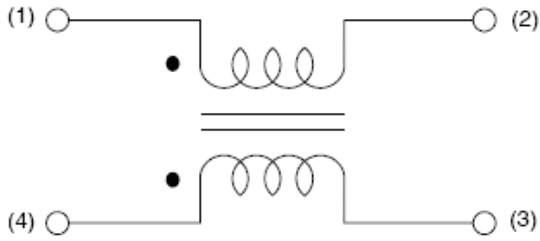
### AMCW4532B TYPE

Part Number	Inductance	DC Resistance	Rated Current	Rated Voltage	Insulation Resistance
	+50%/-30%	Max.	Max.	Max.	Min.
Units	μH	Ω	mA	Volts	MΩ
Symbol	L	DCR	I <sub>r</sub>	V <sub>DC</sub>	IR
AMCW4532B-2-110T	11(@ 100KHz/0.1V)	0.5	360	50	10
AMCW4532B-2-220T	22(@ 100KHz/0.1V)	0.8	310	50	10
AMCW4532B-2-510T	51(@ 1.0MHz/0.1V)	1.0	230	50	10
AMCW4532B-2-101T	100(@ 1.0MHz/0.1V)	2.0	200	50	10

### AMCW3225B TYPE

Part Number	Inductance	DC Resistance	Rated Current	Rated Voltage	Insulation Resistance
	+50%/-30%	Max.	Max.	Max.	Min.
Units	μH	Ω	mA	Volts	MΩ
Symbol	L	DCR	I <sub>rms</sub>	V <sub>DC</sub>	IR
AMCW3225B-2-110T	11(@100KHz/0.1V)	0.3	400	80	10
AMCW3225B-2-220T	22(@100KHz/0.1V)	0.5	300	80	10
AMCW3225B-2-510T	51(@100KHz/0.1V)	1.5	200	80	10
AMCW3225B-2-101T	100(@100KHz/0.1V)	2.2	150	80	10

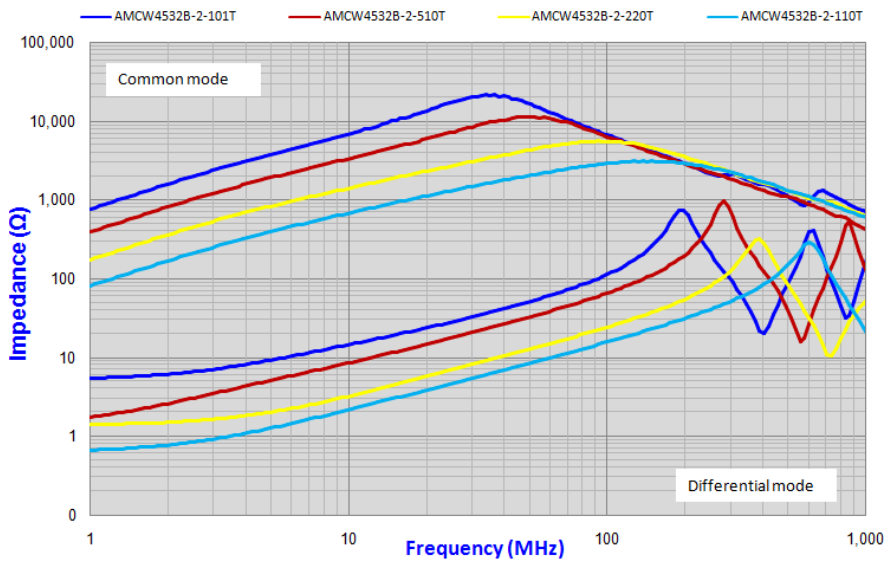
## Equivalent Circuit



## Electrical Characteristics

### AMCW4532B TYPE

Impedance vs. Frequency



### AMCW3225B TYPE

Impedance vs. Frequency

