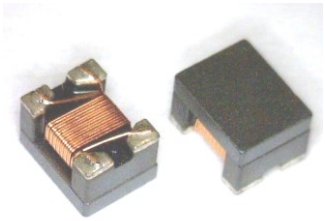
# SMD Common Mode Choke - 3225AC (CAN-bus)

BINGRI TECH

Features & Application 2020/1/1



• Designed for common mode noise suppression on CAN
or CAN FD in automotive or general industrial automation applications
• Can be used for FlexRay automotive bus system
50% lower DCR and higher current handling than other
CANbus chokes in the market
• Filters a broad frequency range of common mode noise
• Low profile 1210 footprint: 3.40 × 2.70 × 2.40 mm Core material Fe

Environmental RoHS compliant, halogen free

Terminations RoHS compliant matte tin over nickel over silver palladium-glass frit.

Ambient temperature –40°C to +125°C with Irms current.

Maximum Part Temperature +150°C

Storage temperature Component: –40°C to +150°C. Tape and reel packaging: –40°C to +80°C

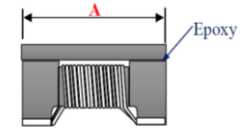
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature

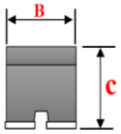
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C /85% relative humidity)

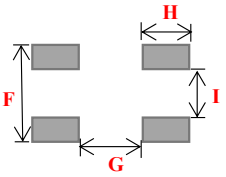
★ When ordering, please check part number

| Part number | Inductance(uH) @100KHz ± 30% | Impedance(Ω) @100MHz min. | typ. | DC Resistance (Ω) max | Irms (mA) |
|---|---|---|---|---|---|
| CMC3225AC110-0.42AT | 11 | 300 | 550 | 0.40 | 420 |
| CMC3225AC220-0.36AT | 22 | 500 | 1100 | 0.50 | 360 |
| CMC3225AC510-0.24AT | 51 | 1000 | 2600 | 0.70 | 240 |
| CMC3225AC101-0.22AT | 100 | 2200 | 5100 | 1.50 | 220 |

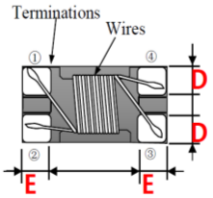
Isolation (Vrms) : 250V. Winding to winding isolation (hipot) tested for one minute.

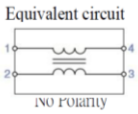



Recommended Land P




| Dimensions | |
|---|---|
| A | 3.20±0.2 |
| B | 2.50±0.2 |
| C | 2.20±0.2 |
| D | 0.80 typ |
| E | 0.65 typ |
| F | 2.55 typ |
| G | 1.90 typ |
| H | 0.90 typ |
| I | 0.75 typ |
| unit : mm | |

Impedance/Inductance/Q/ LCR Angilent E4991A/4263B

Resistance DC Chroma 16502

Current per winding that causes a 20°C rise from 25°C ambient

Electrical specifications at 25°C

Weight 56.5 – 69.4 mg

Packaging 500/7〃 reel; Plastic tape: 8 mm wide.

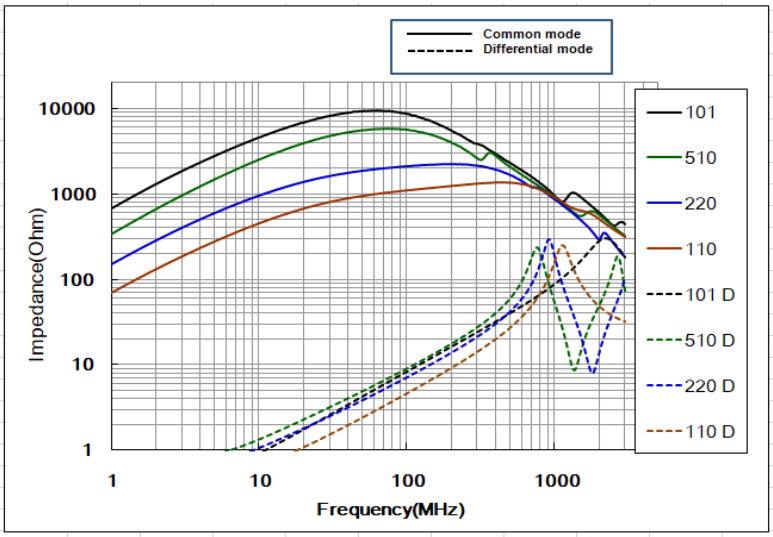
Packaging will different,accroding the various chip size.


| Contact Us | |
|---|---|
| US | sales-us@bing-ri.com.tw |
| Taiwan | sales-tw@bing-ri.com.tw |
| China | sales-cn@bing-ri.com.tw |
| Japan | sales-jp@bing-ri.com.tw |


| Official Website : |
|---|
| https://www.bing-ri.com.tw/ |

**Typical Impedance vs Frequency**

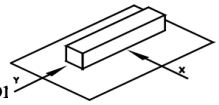
**Common Mode & Differential mode**




## GENERAL CHARACTERISTICS

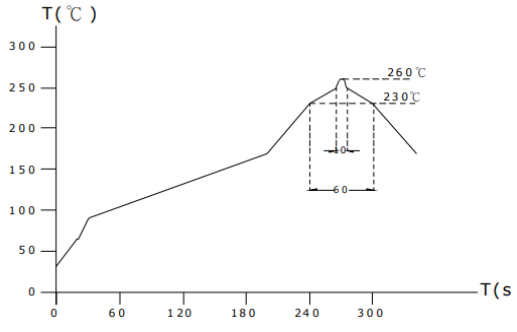
1. Operating temperature range: -40 TO + 125℃(Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Ywithstanding at below conditions.

Terminal should not peel off. (refer to figure at right) 0.5kg Min –3225



4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and co
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core
6. Temperature characteristics: Inductance coefficient (0~2,000)x10-6/ ( ℃ -25~+80 ). ℃ , inductance deviation within±5.0%, after 96 hours.
7. Humidity characteristics(Moisture Resistance): Inductance deviation within ±5%, after 96 hours in 90~95% relative humidity at 40 ±2 and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within ±5%, after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within ±5%, after being dropped once with 981m/s2 (100G) shock attitude upon a rubber block method shock testing machine, in three different
10. Resistance to Soldering Heat: 260 , 10 seconds(See attached recommend reflow)
11. Storage environment: Storage condition: Temperature Range: 10 ~ 35 (Generally: 21 ~ 31 ) , Humidity Range: 50% ~ 80% RH (Generally: 65% ~ 75%) ; Transportation condition: Temperature Range:-35 ~ 85 , Humidity Range: 50% ~ 95% RH
12. Use components within 12 months. If 12 months or more have elapsed, check soldarability before use.
13. Reflow profile recommend:

**Lead-free heat en duran ce test**




**Lead-free the recommended reflow condition**