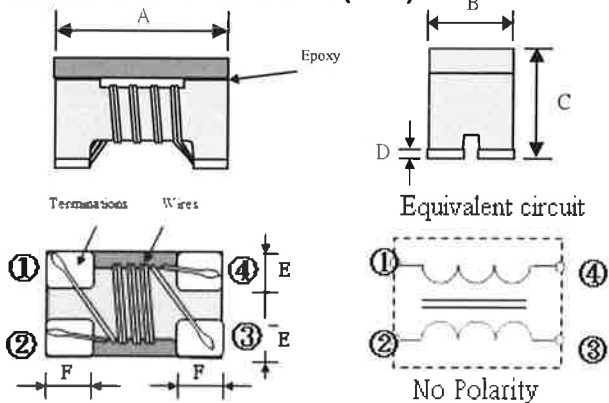


SPECIFICATION

RoHS
COMPLIANT

| | | | |
|----------|-------------------|-----------------|-----------------------------|
| ITEM P/N | CM1210C-SERIES | TEST INSTRUMENT | Agilent4291B / Agilent4338B |
| PRODUCT | COMMON MODE CHOKE | TEST FREQUENCY | 100 MHz / 0.5V |

PACKING DIMENSIONS (mm)



| CM1210 | Dimensions |
|--------|------------|
| A | 1.2 ± 0.2 |
| B | 1.0 ± 0.2 |
| C | 0.9 max. |
| D | 0.15 max. |
| E | 0.36Typ. |
| F | 0.33Typ. |

EXPLANATION OF PART NUMBERS

| | | | | | | | | | | | |
|-----|---|---|-----|---|---|-----|---|-----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| C | M | 1 | 2 | 1 | 0 | C | - | 2 | 5 | 0 | S |
| (1) | | | (2) | | | (3) | | (4) | | | (5) |

- (1) Product name
 (2) Shapes and dimensions
 (3) Shielding Type

| | |
|---|-------------------|
| C | HDMI1.4 Cat2 / 6G |
|---|-------------------|

- (4) Impedance 【 at 100MHz 】
 161:160Ω
 (5) Tolerance
 S=±25% ; M=±20%

ELECTRICAL CHARACTERISTICS

| P/N | Z(Ω) | DCR (Ω) | I _{dc} (mA) | Rated Voltage | Insulation Resistance | Cut-off Frequency | Characteristic Resistance |
|--------------|-------------|---------|----------------------|---------------|-----------------------|-------------------|---------------------------|
| | Common Mode | | | | | | |
| | Impedance | | | | | | |
| | at 100MHz | | | | | | |
| | [Max] | [Max] | V _{dc} | IR | (GHz) | (Ω) | |
| | | | (V)Typical | (MΩ)Min. | | | |
| CM1210C-250□ | 25 | 0.30 | 300 | 20 | 10 | 6.0 typ. | — |
| CM1210C-670□ | 67 | 0.40 | 300 | 20 | 10 | 6.0 typ. | — |
| CM1210C-900□ | 90 | 0.50 | 280 | 20 | 10 | 6.0 typ. | — |
| CM1210C-121□ | 120 | 0.55 | 270 | 20 | 10 | 6.0 typ. | — |

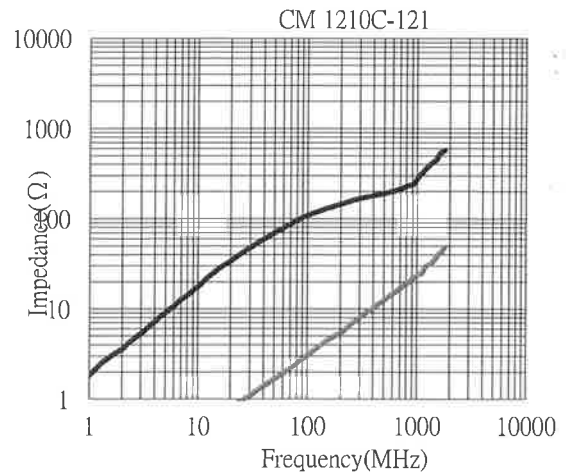
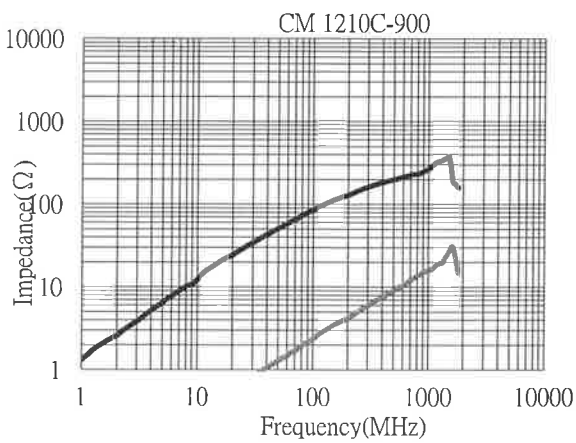
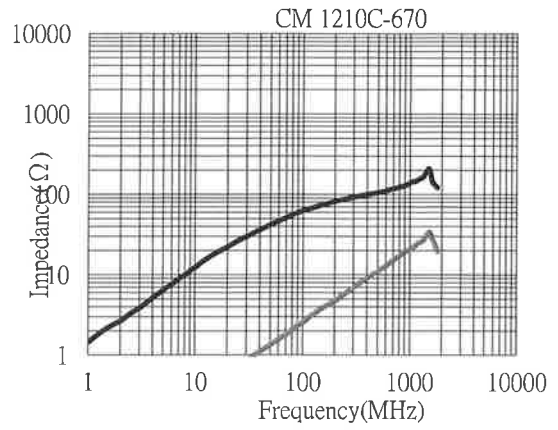
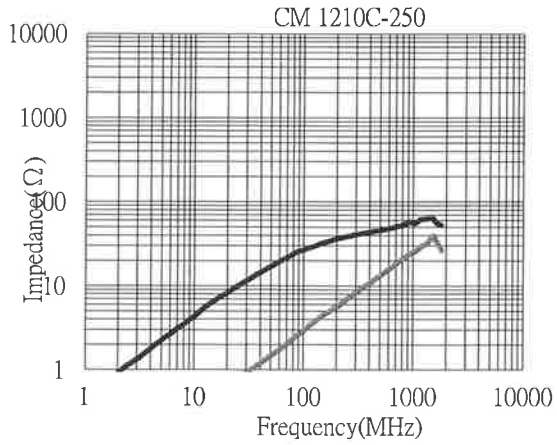
Operating temperature : -25 to +85°C

Storage temp. and humidity : -40 to +85°C ,70%RH max

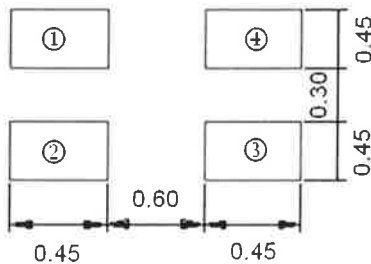
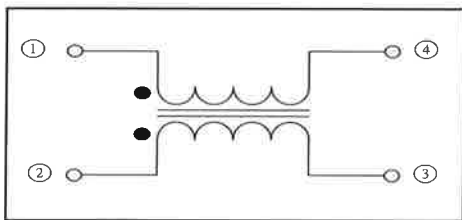
If Use Wave soldering is there will be some risk. Re-flow soldering temperatures below 240 degrees, there will be unwitting risk

| | | | |
|----------|-------------------|-----------------|-----------------------------|
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| PRODUCT | COMMON MODE CHOKE | TEST FREQUENCY | 100 MHz / 0.5V |

PERFORMANCE CURVES



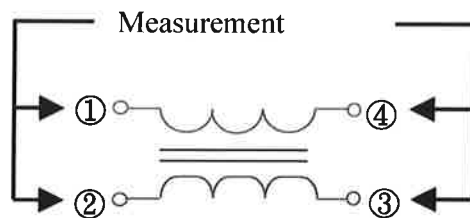
Equivalent Circuit & Recommended Footprint



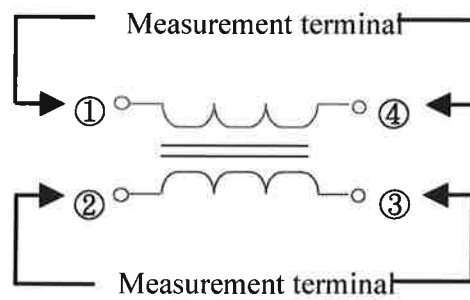
| | | | |
|----------|-------------------|-----------------|-----------------------------|
| ITEM P/N | CM1210C-SERIES | TEST INSTRUMENT | Agilent4291B / Agilent4338B |
| PRODUCT | COMMON MODE CHOKE | TEST FREQUENCY | 100 MHz / 0.5V |

Test Equipment**Impedance**

Measured by using Agilent 4291B RF Impedance Analyzer.

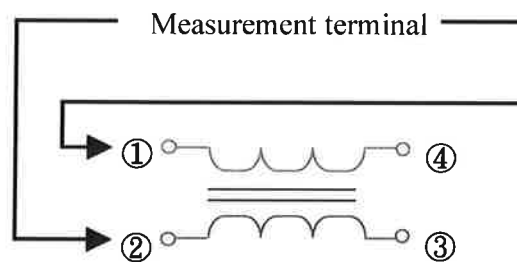
**DC Resistance**

Measured by using Agilent 4338B mill ohm meter.

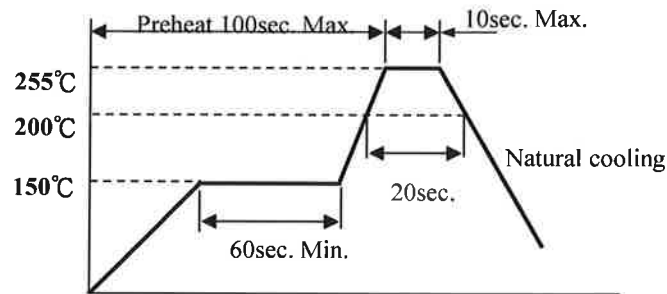
**Insulation Resistance**

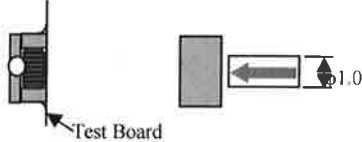
Measured by using Chroma 19073

Measurement voltage : 50v , Measurement time : 60 sec.



| | | | |
|----------|-------------------|-----------------|-----------------------------|
| ITEM P/N | CM1210C-SERIES | TEST INSTRUMENT | Agilent4291B / Agilent4338B |
| PRODUCT | COMMON MODE CHOKE | TEST FREQUENCY | 100 MHz / 0.5V |

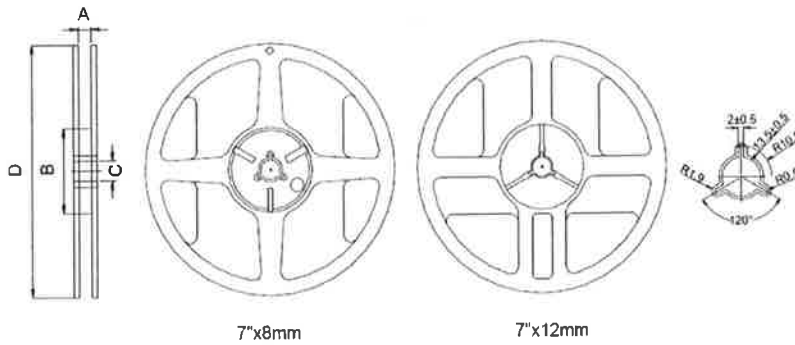
RECOMMENDED SOLDERING TEMP. GRAPH**MECHANICAL RELIABILITY**

| TEST | Specification & Requirement | Method Used |
|------------------------|--|---|
| Solderability | The surface of terminal/pin tested shall be covered with new solder by 90% | Solder heat proof: Preheating: 150 ±10°C 60 seconds Soldering: 245 ±5°C for 4 ±1 sec |
| Solder Heat Resistance | Components should have not evidence of electrical and mechanical damage Impedance: within ±15% of initial value | Preheating: 150°C 60secs Solder temperature: 260±5°C Flux: rosin Dip time: 10±0.5 secs |
| Terminal strength | Series No. | F (Kg) |
| | CM1210A/D | 0.2 |
| | CM1608A/C | 0.5 |
| | CM2012A/B/C | 0.5 |
| | CM3216A | 1.0 |
| | | Solder a chip to test substrate and then laterally apply a force in the arrow direction |
| | |  |

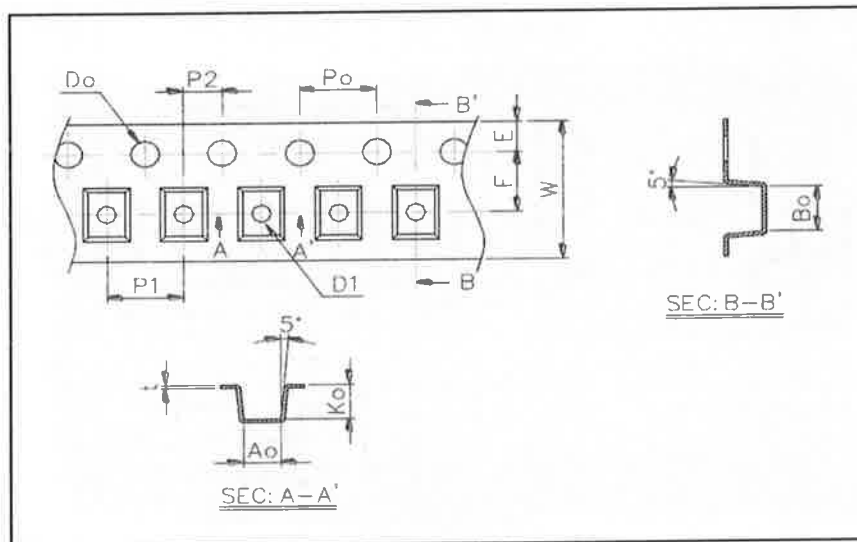
ENDURANCE RELIABILITY

| TEST | Specification & Requirement | Method Used |
|---------------------|---|---|
| Thermal Shock | Impedance change within ± 15% Without mechanical damage | -65°C, (30 mins) -> room temp. (2 mins) -> 125°C, (30 mins) -> room temp. (2 mins) 50 cycles |
| Humidity Resistance | Impedance change within ± 15% Without mechanical damage | Apply IDC current @ 60°C ambient Humidity: 90% Duration: 168 hrs |
| Low Temp. Storing | Impedance change within ± 15% Without mechanical damage | Storing Temp. -40 ±2 °C for total 168 +5/-0 hours |
| High Temp. Storing | Impedance change within ± 15% Without mechanical damage | Storing Temp. 125 ±2 °C for total 168 +5/-0 hours |

| | | | |
|----------|-------------------|-----------------|-----------------------------|
| ITEM P/N | CM1210C-SERIES | TEST INSTRUMENT | Agilent4291B / Agilent4338B |
| PRODUCT | COMMON MODE CHOKE | TEST FREQUENCY | 100 MHz / 0.5V |

Reel Dimension & Tape Dimension

| Type | A(mm) | B(mm) | C(mm) | D(mm) |
|---------|----------|-------|----------|-------|
| 7"x8mm | 9.0±0.5 | 60±2 | 13.5±0.5 | 178±2 |
| 7"x12mm | 13.5±0.5 | 60±2 | 13.5±0.5 | 178±2 |



| Size | Ao(mm) | Bo(mm) | Ko(mm) | W(mm) | E(mm) | F(mm) | Po(mm) | P1(mm) | Do(mm) |
|------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|------------|
| 1210 | 1.15±0.10 | 1.40±0.10 | 0.93±0.10 | 8.00±0.20 | 1.75±0.10 | 3.50±0.05 | 4.0±0.05 | 4.0±0.10 | 1.5+0.1,-0 |
| 1608 | 1.00±0.10 | 1.65±0.10 | 1.18±0.10 | 8.00±0.20 | 1.75±0.10 | 3.50±0.05 | 4.0±0.05 | 4.0±0.10 | 1.5+0.1,-0 |
| 2012 | 1.50±0.10 | 2.35±0.10 | 1.45±0.10 | 8.00±0.20 | 1.75±0.10 | 3.50±0.05 | 4.0±0.05 | 4.0±0.10 | 1.5+0.1,-0 |
| 3216 | 1.88±0.10 | 3.50±0.10 | 2.10±0.10 | 8.00±0.20 | 1.75±0.10 | 3.50±0.05 | 4.0±0.05 | 4.0±0.10 | 1.5+0.1,-0 |

Packaging Quantity

| Chip Size | 1210 | 1608 | 2012 | 3216 |
|-----------|------|------|------|------|
| 8mm/ Reel | 3000 | 2000 | 2000 | 2000 |