# SMD Common Mode Choke - U2012 (Low Profile)

Features & Application 1/1/2020

• For noise suppression in super high speed signal lines: USB 3.x HDMI 2.0, HDBaseT™, DiplayPort, DVI, etc.; and in high speed differential signal lines: USB 2.0, IEEE1394, LVDS, etc.
• Up to 6.0 GHz differential mode 3 dB cutoff frequency; up to 35 dB common mode noise attenuation in GHz range
• Lowest profile 0805 common mode choke – 0.93 mm tall

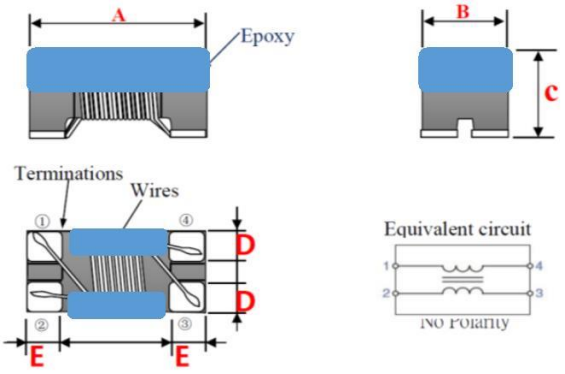
Core material Ferrite ,with UV EXPOXY cover
Environmental RoHS compliant
Terminations Matte tin over nickel over silver-palladium-glass frit.

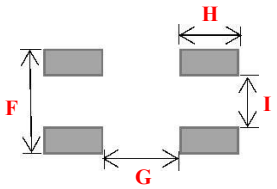
Maximum part temperature 140°C
Storage temperature Component: –40°C to +140°C. Tape and reel packaging: –40°C to +80°C
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

★ When ordering, please check part number

| Part number | Impedance(Ω) @100MHz ± 25% | DC Resistance (Ω) max | Irms (mA) |
|---|---|---|---|
| CMU2012H900-0.3AT | 90 | 0.35 | 300 |
| CMU2012H121-0.3AT | 120 | 0.35 | 300 |
| CMU2012H181-0.3AT | 180 | 0.50 | 300 |

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




Recommended Land Pattern

| Dimensions | |
|---|---|
| A | 2.00±0.2 |
| B | 1.20±0.2 |
| C | 1.00±0.2 |
| D | 0.40 typ |
| E | 0.45 typ |
| F | 1.20 typ |
| G | 0.80 typ |
| H | 0.90 typ |
| I | 0.40 typ |
| unit : mm | |

| | |
|---|---|
| Impedance/Inductance/Q/ | LCR Angilent E4991A |
| Resistance DC | Chroma 16502 |
| Current per winding that causes a 20°C rise from 25°C ambient | |
| Electrical specifications at 25°C | |

Weight 7.9 – 10 mg.
Packaging 2000/7〃 reel; Plastic tape: 8 mm wide.
Packaging will different,accroding the various chip size.

| Contact Us | |
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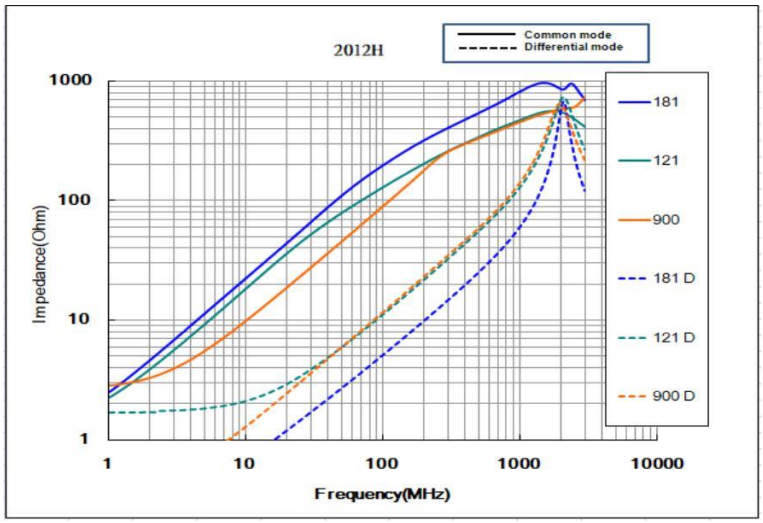
**Typical Impedance vs Frequency**

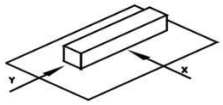
**Common Mode & Differential mode**




## GENERAL CHARACTERISTICS

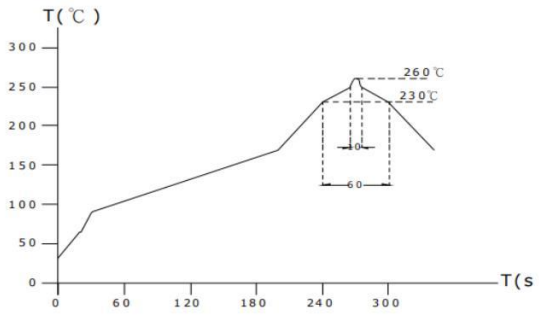
1. Operating temperature range: -40 TO + 125℃(Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Ywithstanding at below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

Terminal should not peel off. (refer to figure at right) 0.5kg Min –2012




4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core
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 orientations.
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**