



COMMON MODE CHOKE CMW

● FEATURE

1. High common mode impedance at high frequency effects excel noise suppression performance
2. Suitable for differential signal line like USB2.0, IEEE 1394 and LVDS



- APPLICATION

1. Ideal for use as common-mode chokes for USB1.1/USB2.0/IEEE 1394 interface

● ORDERING INFORMATION

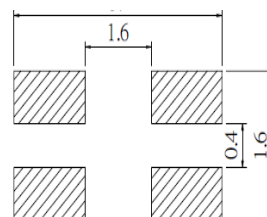
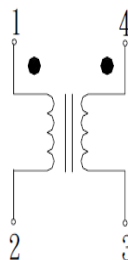
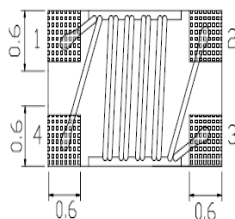
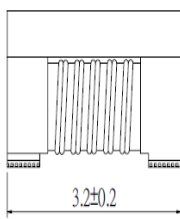
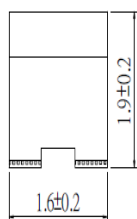
CMW 3216

PN

-900

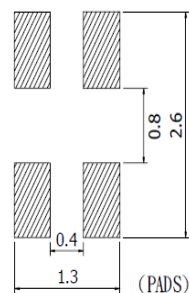
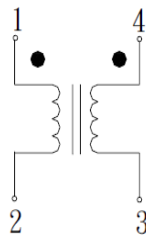
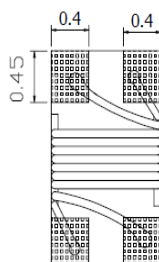
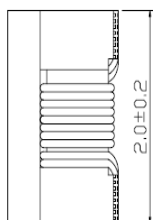
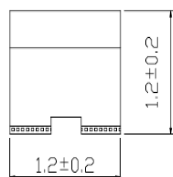
Impedance(Ω)

● SHAPE AND DIMENSION

CMW 3216 (1206)

● SCHEMATICS AND LAND PATTERNS(mm)

CMW 2012 (0805)





●SPECIFICATION

Dimension in mm

PART NUMBER	Common Mode Impedance (ohm) (tolerance $\pm$ 20%) (Typ.) at 100MHz	Rated Current (mA)	Rated Voltage (Vdc)	Insulation Resistance (M ohm)	Withstand Voltage (Vdc)	DCR (max.) (ohm)
CMW3216-900	90	370	50	10 min	125	0.30
CMW3216-161	160	340	50	10 min	125	0.40
CMW3216-261	260	310	50	10 min	125	0.50
CMW3216-601	600	260	50	10 min	125	0.80
CMW3216-102	1000	230	50	10 min	125	1.00
CMW3216-222	2200	200	50	10 min	125	1.20
CMW2012-670	67	400	50	10 min	125	0.25
CMW2012-900	90	330	50	10 min	125	0.35
CMW2012-101	100 $\pm$ 25%	330	50	10 min	125	0.35
CMW2012-121	120	370	50	10 min	125	0.30
CMW2012-161	160	330	50	10 min	125	0.33
CMW2012-181	180	330	50	10 min	125	0.35
CMW2012-221	220	310	50	10 min	125	0.35
CMW2012-261	260	300	50	10 min	125	0.40
CMW2012-371	370	280	50	10 min	125	0.40

Note1. Measurement ambient temperature of electrical : at 20°C

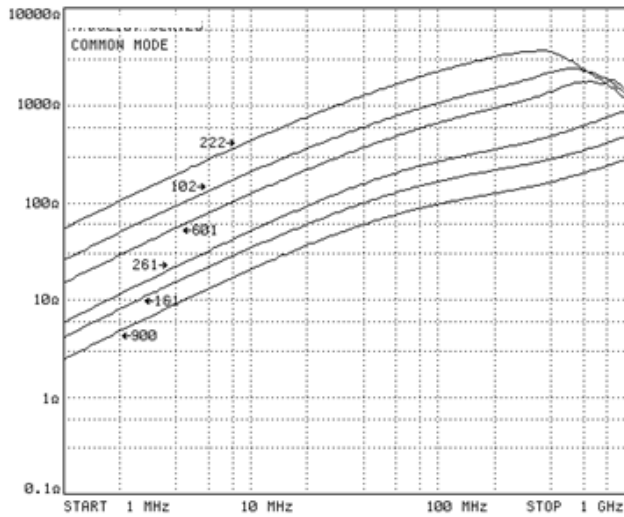
Note2. Test equipment: HP4291A



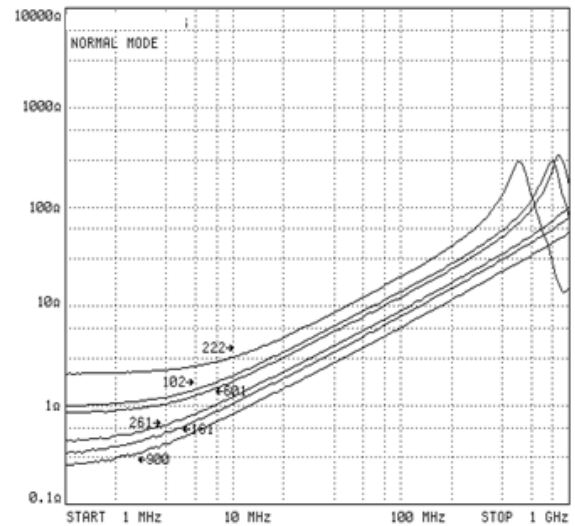
●ELECTRICAL CURVE

CMW 3216

Common mode curve

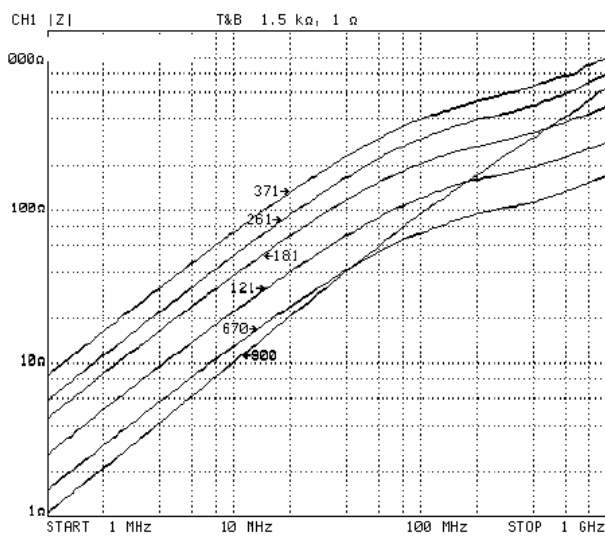


Normal mode curve

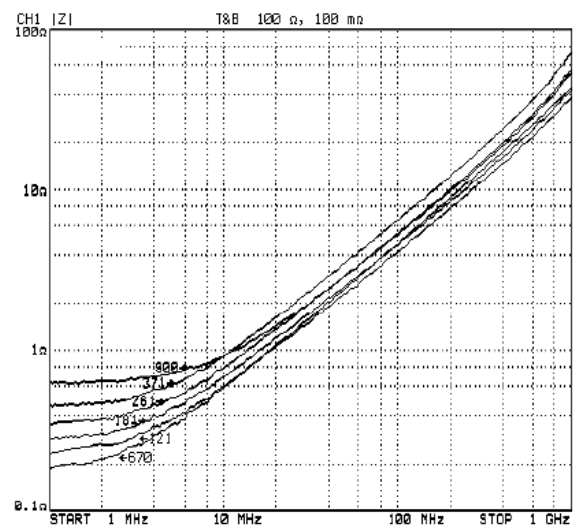


CMW 2012

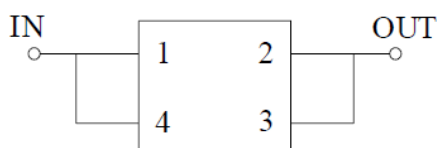
Common mode curve



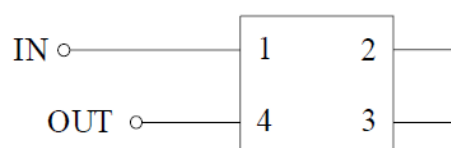
Normal mode curve



●TEST CIRCUIT



COMMON MODE

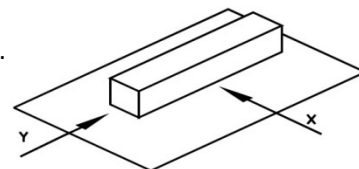


NORMAL MODE

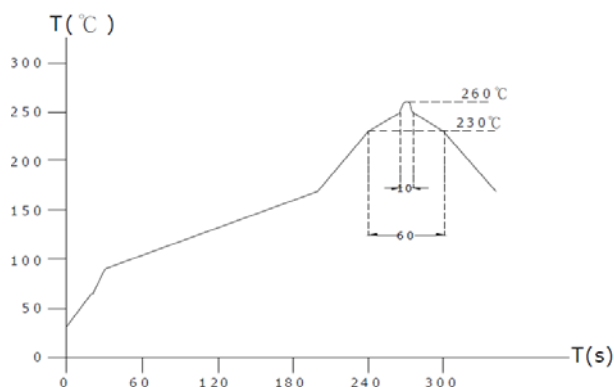


●GENERAL CHARACTERISTICS

1. Operating temperature range: -40°C TO $+85^{\circ}\text{C}$ (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil.
Push in two directions of X.Y withstanding at below conditions.
Terminal should not peel off. (refer to figure at right) 0.5kg
4. Insulating resistance: Over $100\text{M}\Omega$ 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 $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$ ($-25\sim +80^{\circ}\text{C}$).
7. Humidity characteristics(Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in $90\sim 95\%$ relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration ($10\sim 55\sim 10\text{ Hz}$) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s^2 (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C , 10 seconds.
11. Storage environment
Storage condition:
Temperature Range: $10^{\circ}\text{C} \sim 35^{\circ}\text{C}$ (Generally: $21^{\circ}\text{C} \sim 31^{\circ}\text{C}$)
Humidity Range: $50\% \sim 80\% \text{ RH}$ (Generally: $65\% \sim 75\%$)
Transportation condition:
Temperature Range: $-35^{\circ}\text{C} \sim 85^{\circ}\text{C}$, Humidity Range: $50\% \sim 95\% \text{ RH}$
12. Use components within 6 months. If 6 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:



Lead - free heat endurance test



Lead-free the recommended reflow condition

