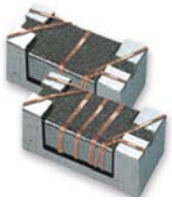
CMM Series **For USB 2.0, IEEE1394b, LVDS Applications**



A full series of common mode choke is designed for excellent noise attenuation with compact sizing for use in wide range of applications. Both standard series and custom designs are available.

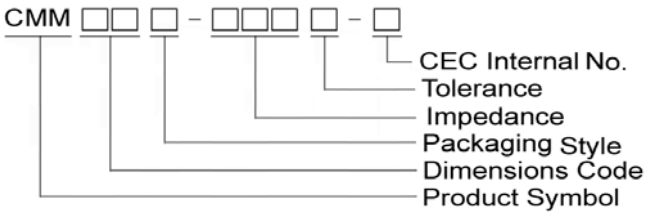
Features

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- Wide impedance range (30Ω ~ 2200Ω) for noise suppression
- Excellent solderability

Applications

- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card,etc.

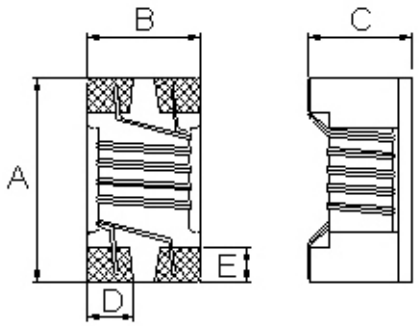
Product Identification



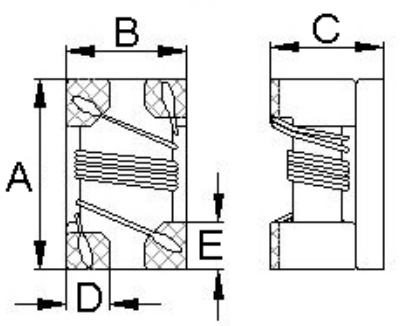
- Packaging: T：Tape and Reel

Shape and Dimensions

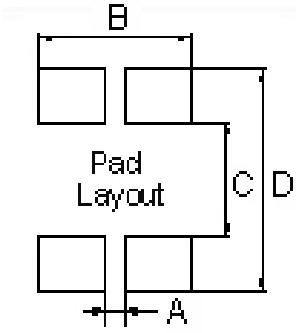
CMM10/ 11



CMM21/31



Recommended Pattern



Dimensions in mm

TYPE	A	B	C	D	E
CMM10	1.60±0.2	0.80±0.2	1.10±0.2	0.25	0.33
CMM11	1.25±0.2	1.00±0.2	0.8±0.1	0.32	0.33
CMM21	2.05±0.2	1.25±0.2	1.20±0.2	0.50	0.58
CMM31	3.20±0.2	1.60±0.2	1.90±0.2	0.50	0.60

Dimensions in mm

TYPE	A	B	C	D
CMM10	0.25	0.75	0.61	2.29
CMM11	0.36	1.00	0.59	1.75
CMM21	0.50	1.27	0.80	2.60
CMM31	0.40	1.60	1.60	3.70

Electrical Characteristics

Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	Irms (mA) Max	Rated Voltage (Vdc)	Insulation Resistance (MΩ) Min
CMM10T-250M-N	25	20,25	100	0.077	500	50	10
CMM10T-600M-N	60	20,25	100	0.109	500	50	10
CMM10T-900M-N	90	20,25	100	0.142	500	50	10
CMM10T-121M-N	120	20,25	100	0.160	500	50	10
CMM10T-141M-N	140	20,25	100	0.174	500	50	10
CMM10T-221M-N	220	20,25	100	0.209	500	50	10

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , Y=±25%

- Operating temperature range - 40℃~105℃(Including self - temperature rise)
- rms for 20℃ rise from 25℃ ambient
- Measure Equipment：

  Z：Agilent HP4287A+Agilent 16197A

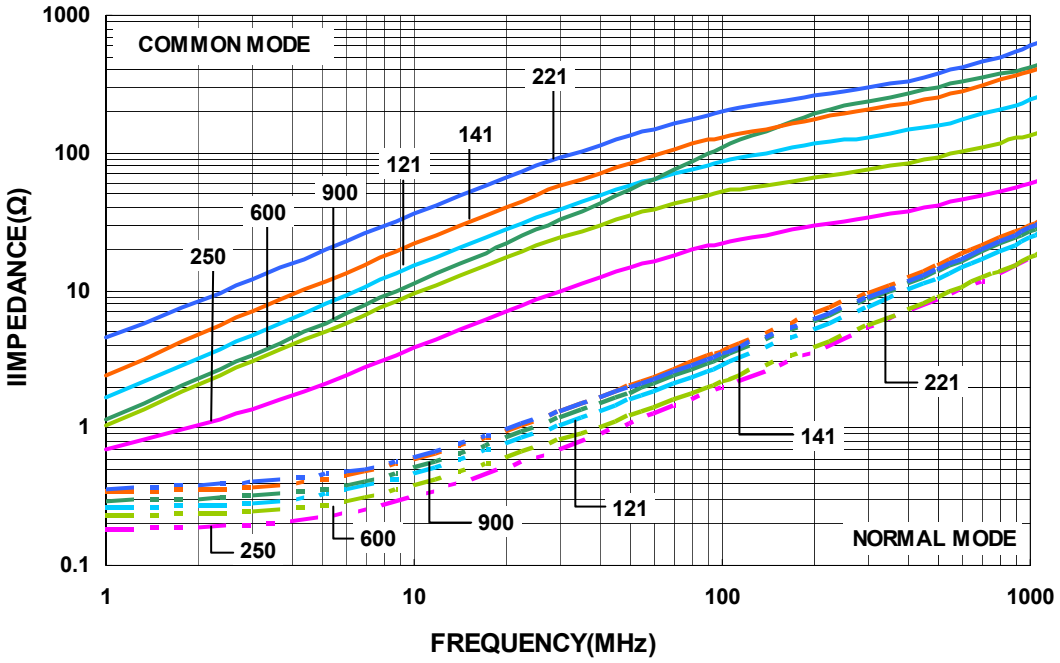
  RDC：HP4338B or CHEN HWA 502(Single Wire Test Value)

  Irms：HP4284A+HP42841A/HP4285A+HP42841A

  Insulation Resistance：Agilent HP4339B

Test Instruments：HP4287A Material/Impedance Analyzer

Typical Impedance vs. Frequency



Electrical Characteristics

Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Insulation Resistance (MΩ) Min
CMM11T-250T-N	25	30	100	0.30	400	20	10
CMM11T-600M-N	60	20	100	0.40	300	20	10
CMM11T-670M-N	67	20	100	0.25	300	50	10
CMM11T-900M-N	90	20	100	0.30	250	50	10
CMM11T-121M-N	120	20	100	0.40	200	50	10
CMM11T-161M-N	160	20	100	0.43	160	50	10
CMM11T-201M-N	200	20	100	0.80	120	50	10
CMM11T-331Y-N	330	25	100	1.30	100	50	10

Note: When ordering, please specify tolerance code. Tolerance: M=±20% , Y=±25% , T=±30%

- Operating temperature range - 40℃ ~ 105℃(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment：

  Z：Agilent HP4287A+Agilent 16197A

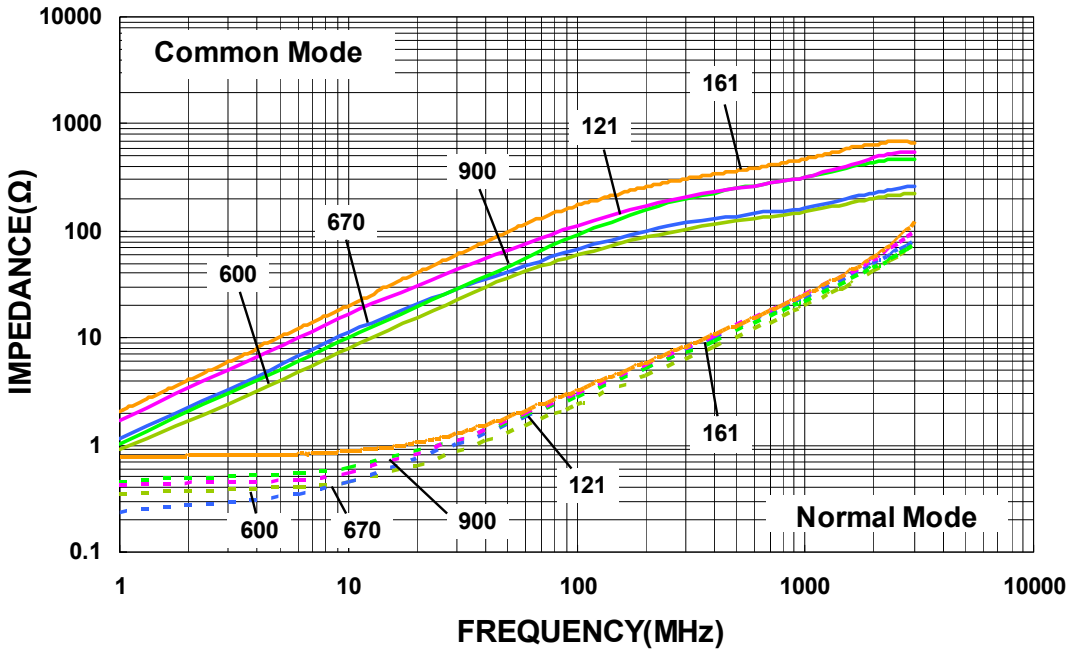
  RDC：CHEN HWA 502 (Single Wire Test Value)

  IDC：HP4284A+HP42841A/HP4285A+HP42841A

  Insulation Resistance：Agilent HP4339B

Test Instruments：HP4287A Material/Impedance Analyzer

Typical Impedance vs. Frequency



CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Insulation Resistance (MΩ) Min
CMM21T-300M-N	30	20	100	0.20	450	120	10
CMM21T-670M-N	67	20	100	0.25	400	120	10
CMM21T-750M-N	75	20	100	0.30	360	120	10
CMM21T-900M-N	90	20	100	0.35	330	120	10
CMM21T-121M-N	120	20	100	0.30	400	120	10
CMM21T-161M-N	160	20	100	0.35	350	120	10
CMM21T-181M-N	180	20	100	0.35	330	120	10
CMM21T-201M-N	200	20	100	0.35	330	120	10
CMM21T-221M-N	220	20	100	0.35	310	120	10
CMM21T-261M-N	260	20	100	0.40	300	120	10
CMM21T-301M-N	300	20	100	0.40	290	120	10
CMM21T-361M-N	360	20	100	0.45	280	120	10
CMM21T-371M-N	370	20	100	0.45	280	120	10
CMM21T-501M-N	500	20	100	0.55	170	120	10
CMM21T-671M-N	670	20	100	0.60	140	120	10
CMM21T-901M-N	900	20	100	0.60	80	120	10

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 105℃(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment：

  Z：Agilent HP4287A+Agilent 16197A

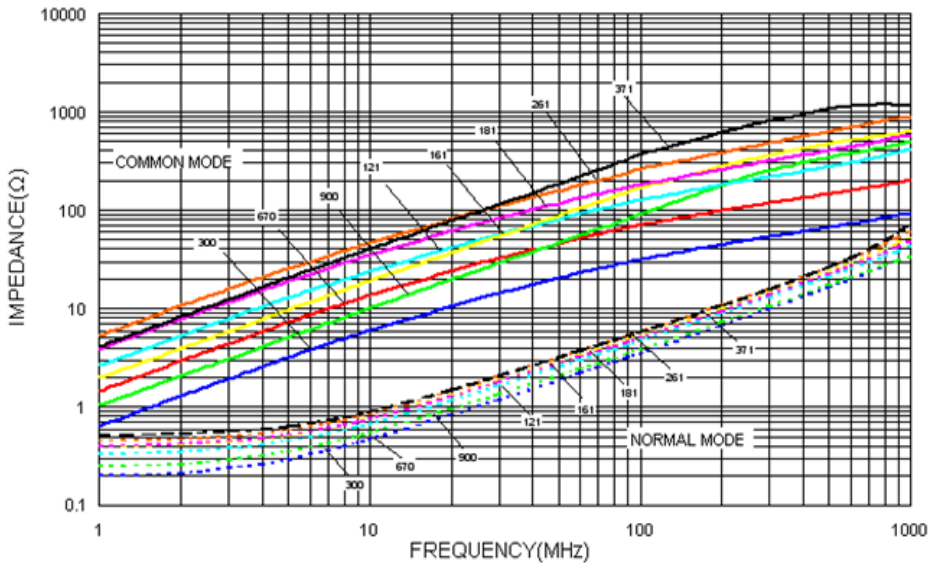
  RDC：CHEN HWA 502(Single Wire Test Value)

  IDC：HP4284A+HP42841A/HP4285A+HP42841A

  Insulation Resistance：Agilent HP4339B

Test Instruments：HP4291A Material/Impedance Analyzer

Typical Impedance vs. Frequency



CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Insulation Resistance (MΩ) Min
CMM31T-900M-N	90	20	100	0.3	370	50	10
CMM31T-121M-N	120	20	100	0.3	370	50	10
CMM31T-161M-N	160	20	100	0.4	340	50	10
CMM31T-221M-N	220	20	100	0.4	320	50	10
CMM31T-261M-N	260	20	100	0.5	310	50	10
CMM31T-601M-N	600	20	100	0.8	260	50	10
CMM31T-102M-N	1000	20	100	1.0	230	50	10
CMM31T-222M-N	2200	20	100	1.2	200	50	10

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 105℃(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment：

  Z：Agilent HP4287A+Agilent 16197A

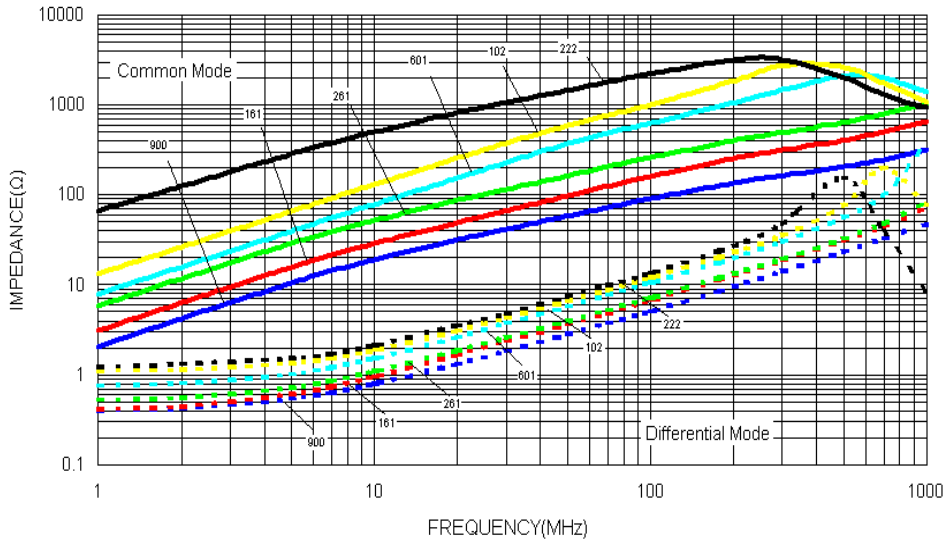
  RDC：CHEN HWA 502(Single Wire Test Value)

  IDC：HP4284A+HP42841A/HP4285A+HP42841A

  Insulation Resistance：Agilent HP4339B

Test Instruments：HP4291A Material/Impedance Analyzer

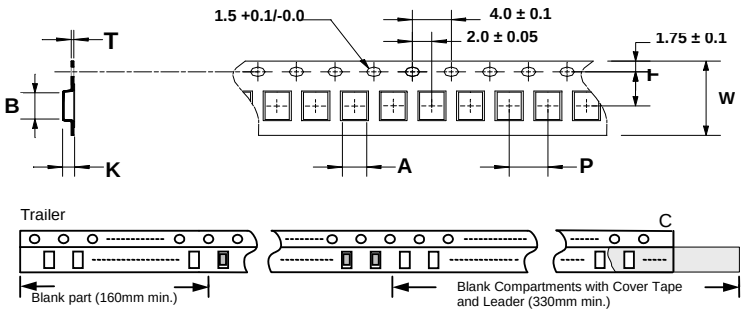
Typical Impedance vs. Frequency



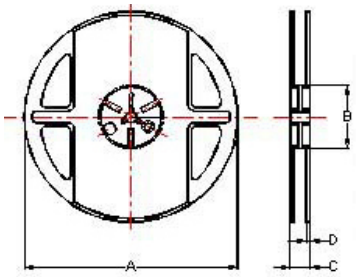
CHILISIN ELECTRONICS CORP.

Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity
	A	B	T	W	P	F	K	A	B	C	D	PCS / Reel
CMM10	0.95	1.70	0.24	8	4	3.5	1.15	178	60	12	1.5	2000
CMM11	1.15	1.45	0.24	8	4	3.5	1.00	178	60	12	1.5	2000
CMM21	1.50	2.25	0.24	8	4	3.5	1.35	178	60	12	1.5	2000
CMM31	1.76	3.47	0.22	8	4	3.5	2.05	178	60	12	1.5	2000