# **Cautions and Warnings**

Please be noted that this spec is only for reference if you have projects designed with the product number listed in. If you are looking for new project design-in, please find BWCU\_03 Series specification/datasheet on Chilisin website. Or you may find our sales contact for more information on old part number at your convenience. Appreciated your attention and understanding.

## **CUWI Series** For HDMI, USB 3.0



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

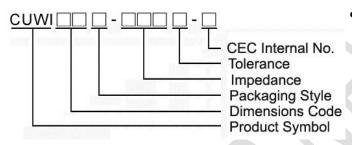
#### **Features**

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- Excellent solderability

## **Product Identification**

## **Applications**

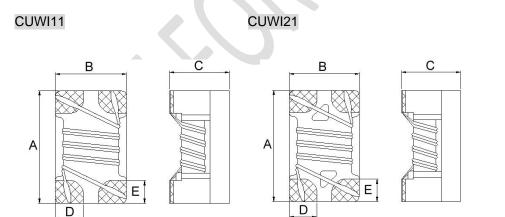
- HDMI
- USB lines (for personal computers and peripheral), DVC, STB, LVDS, panel line for liquid display panels, etc.

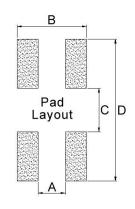


Packaging: T: Tape and Reel

#### **Shape and Dimensions**

#### **Recommended Pattern**





#### Dimensions in mm

Dimensions in mm

TYPE	Α	В	С	D	E	TYPE	Α	В	С	D
CUWI11	1.25±0.2	1.00±0.2	0.80±0.1	0.32	0.33	CUWI11	0.36	1.00	0.59	1.75
CUWI21	2.05±0.2	1.25±0.2	1.20±0.2	0.50	0.40	CUWI21	0.50	1.27	0.80	2.60



## **SMD Common Mode Choke - CUWI Series**

## **Electrical Characteristics**

Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Withstamd Voltage (Vdc)	Insulation Resistance (M $\Omega$ ) Min	
CUWI11T-220Y-N	22	25	100	0.20	400	50	125	100	
CUWI11T-600Y-N	60	25	100	0.40	250	50	125	100	
CUWI11T-900Y-N	90	25	100	0.30	250	50	125	100	

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

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

Z: HP4286A/HP4287A/Agilent E4991A+Agilent16197A

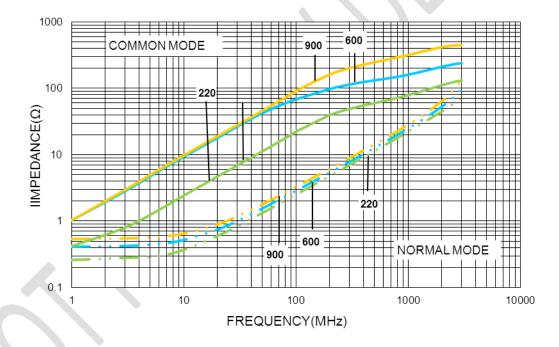
RDC: Chroma 16502 (Single Wire Test Value)

IDC: HP4284A+HP42841A/HP4285A+HP42841A

Insulation Resistance: Agilent HP4339B

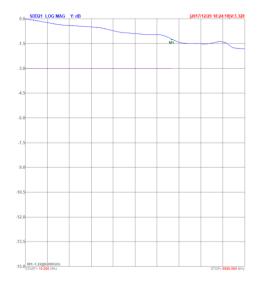
Test Instruments: HP4291A Material/Impedance Analyzer

## Typical Impedance vs. Frequency

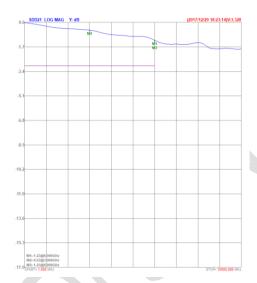


## **CUWI11T-220Y-N**

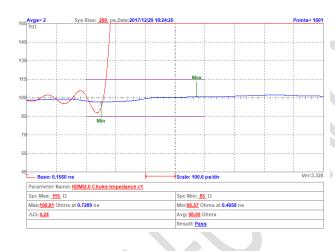
## **Insertion Loss For HDMI2.0 Testing:**



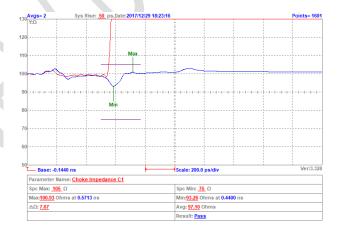
#### **Insertion Loss For USB3.0 Testing:**



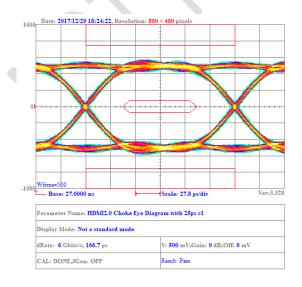
## **TDR For HDMI2.0 Testing:**

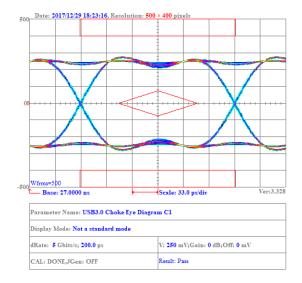


## **TDR For USB3.0 Testing:**



## **Eye Diagram For HDMI2.0 Testing:**

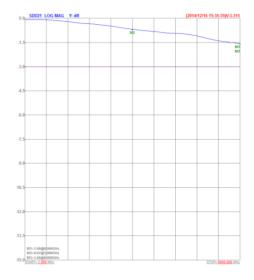




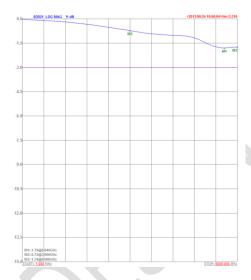


## **CUWI11T-600Y-N**

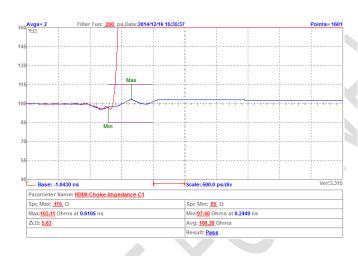
## **Insertion Loss For HDMI2.0 Testing:**



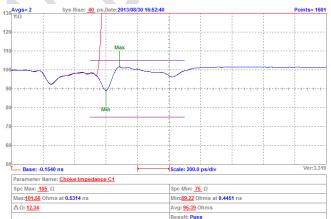
## **Insertion Loss For USB3.0 Testing:**



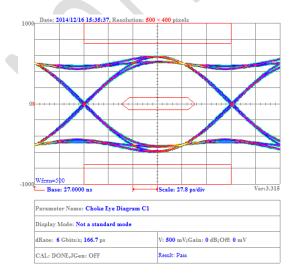
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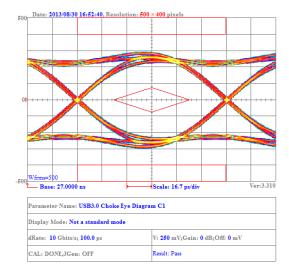


## **TDR For USB3.0 Testing:**



## Eye Diagram For HDMI2.0 Testing:

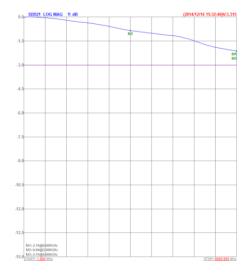




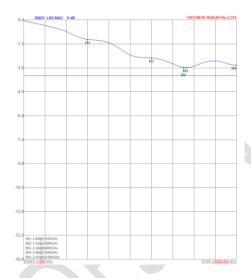


## **CUWI11T-900Y-N**

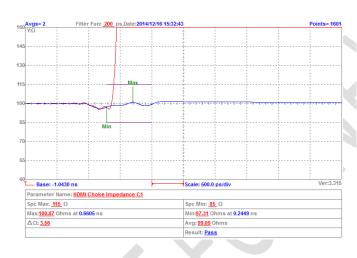
## **Insertion Loss For HDMI2.0 Testing:**



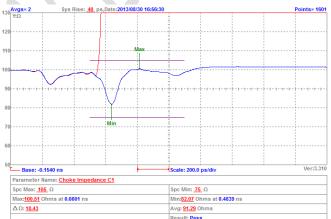
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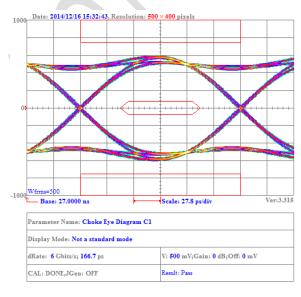
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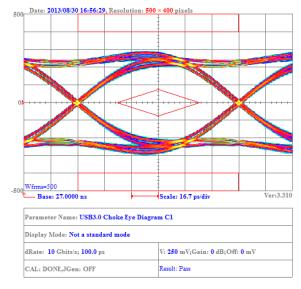
## **TDR For USB3.0 Testing:**



## Eye Diagram For HDMI2.0 Testing:



#### **Eye Diagram For USB3.0 Testing:**





## **SMD Common Mode Choke - CUWI Series**

## **Electrical Characteristics**

Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Withstamd Voltage (Vdc)	Insulation Resistance (M $\Omega$ ) Min
CUWI21T-500Y-N	50	25	100	0.20	500	50	125	10
CUWI21T-670Y-N	67	25	100	0.30	500	50	125	10
CUWI21T-900Y-N	90	25	100	0.30	500	50	125	10
CUWI21T-121Y-N	120	25	100	0.35	330	50	125	10
CUWI21T-131Y-N	130	25	100	0.40	300	50	125	10

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

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

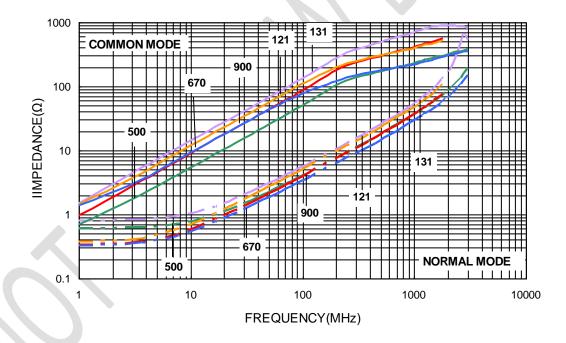
Z: HP4286A/HP4287A/Agilent E4991A+Agilent16197A

RDC : Chroma 16502 (Single Wire Test Value) IDC : HP4284A+HP42841A/HP4285A+HP42841A

Insulation Resistance : Agilent HP4339B

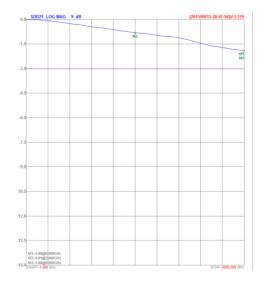
Test Instruments: HP4291A Material/Impedance Analyzer

## Typical Impedance vs. Frequency

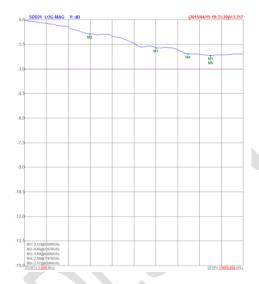


## **CUWI21T-500Y-N**

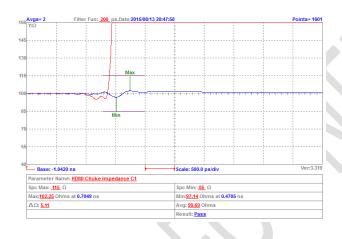
## **Insertion Loss For HDMI2.0 Testing:**



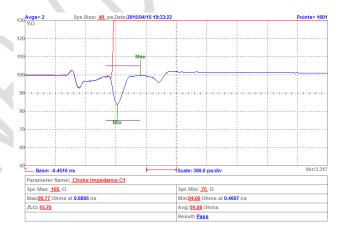
## **Insertion Loss For USB3.0 Testing:**



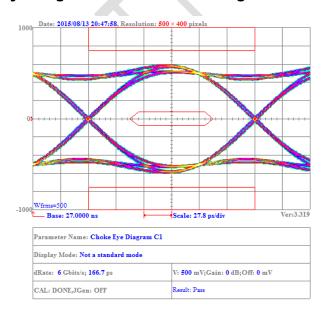
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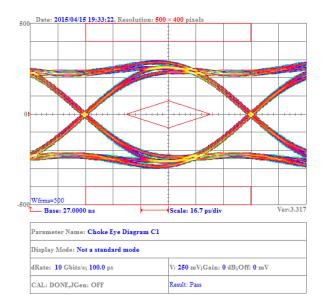
## **TDR For USB3.0 Testing:**



#### **Eye Diagram For HDMI2.0 Testing:**



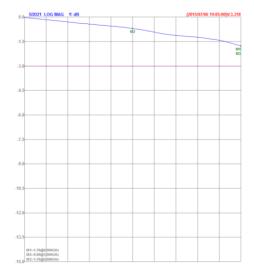
## **Eye Diagram For USB3.0 Testing:**



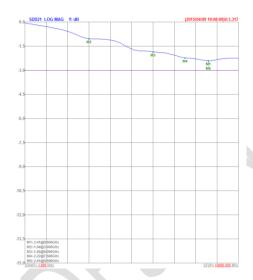


## **CUWI21T-670Y-N**

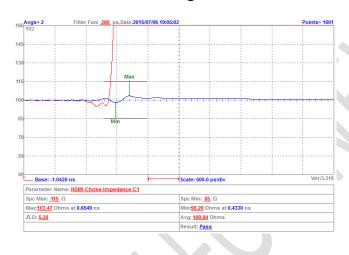
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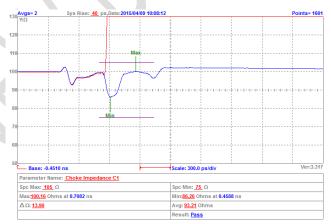
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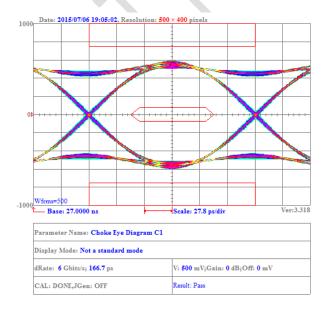
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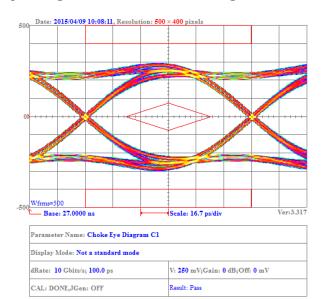
## **TDR For USB3.0 Testing:**



## **Eye Diagram For HDMI2.0 Testing:**



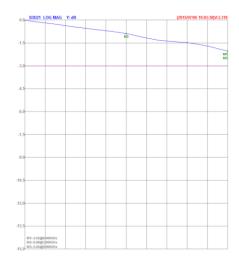
#### **Eye Diagram For USB3.0 Testing:**



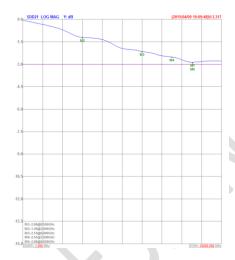


## **CUWI21T-900Y-N**

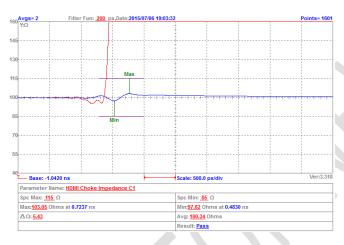
## **Insertion Loss For HDMI2.0 Testing:**



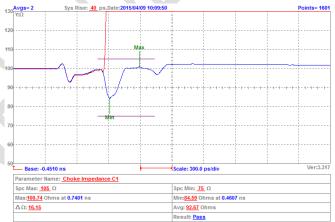
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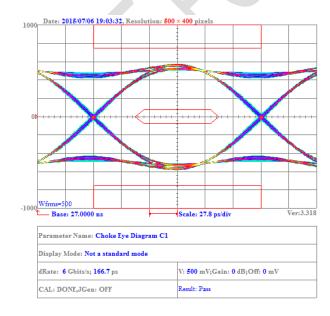
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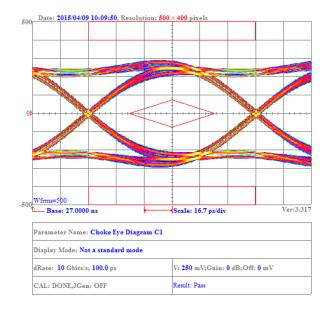


### **TDR For USB3.0 Testing:**



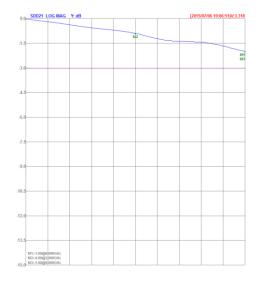
## **Eye Diagram For HDMI2.0 Testing:**



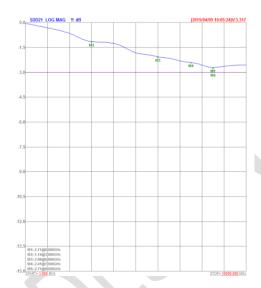


## **CUWI21T-121Y-N**

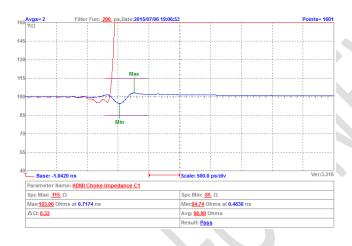
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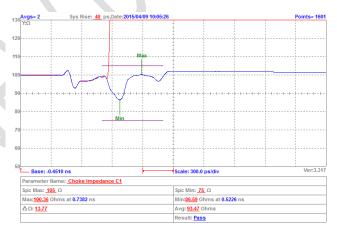
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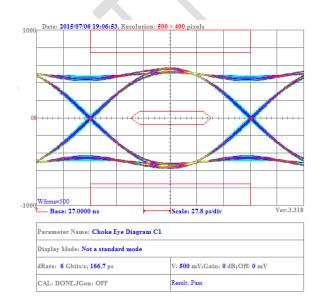
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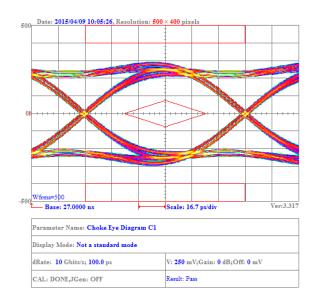


## **TDR For USB3.0 Testing:**



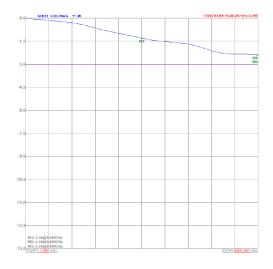
#### **Eye Diagram For HDMI2.0 Testing:**



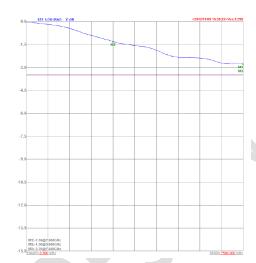


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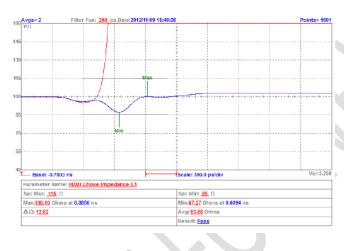
## **Insertion Loss For HDMI Testing:**



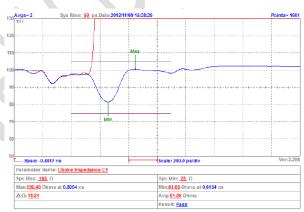
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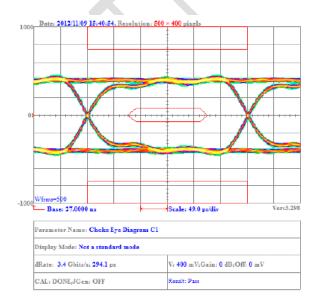
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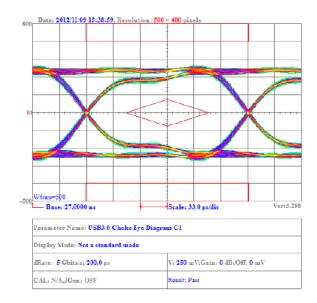
## **TDR For USB3.0 Testing:**



## **Eye Diagram For HDMI Testing:**



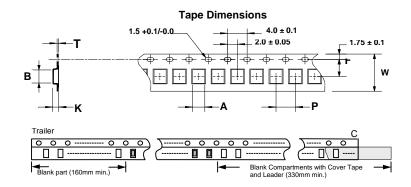
## **Eye Diagram For USB3.0 Testing:**

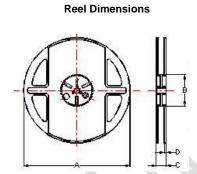




## **SMD Common Mode Choke - CUWI Series**

## **Packaging Specifications**





#### Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity
1112	Α	В	Т	W	Р	F	K	Α	В	С	D	PCS / Reel
CUWI11	1.15	1.45	0.25	8	4	3.5	1.00	178	60	12	1.5	2000
CUWI21	1.50	2.25	0.24	8	4	3.5	1.35	178	60	12	1.5	2000

