

## **FEATURES**

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



# ORDERING CODE(标志示例)

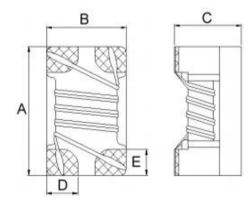
- (1) HMCC 向华料号 Part Number
- (2) 尺寸 Dimensions
- (3) 电感量 Inductance
- (4) 电感量公差 Inductance Tolerance
- (5)尾码Tail code

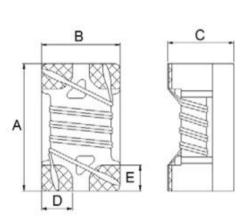
Shape and Dimensions

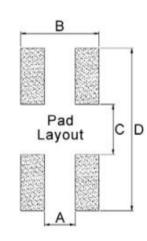
Recommended Pattern

HMCC11-I

HMCC21-I







### Dimensions in mm

| TYPE        | Α        | В        | С        | D    | E    |
|-------------|----------|----------|----------|------|------|
| HMCC11-I-CA | 1.25±0.2 | 1.00±0.2 | 0.80±0.1 | 0.32 | 0.33 |
| HMCC21-I-CA | 2.05±0.2 | 1.25±0.2 | 1.20±0.2 | 0.50 | 0.40 |

| TYPE        | Α    | В    | С    | D    |
|-------------|------|------|------|------|
| HMCC11-I-CA | 0.36 | 1.00 | 0.59 | 1.75 |
| HMCC21-I-CA | 0.50 | 1.27 | 0.80 | 2.60 |

#### **HMCC11-I series Electrical Characteristics**

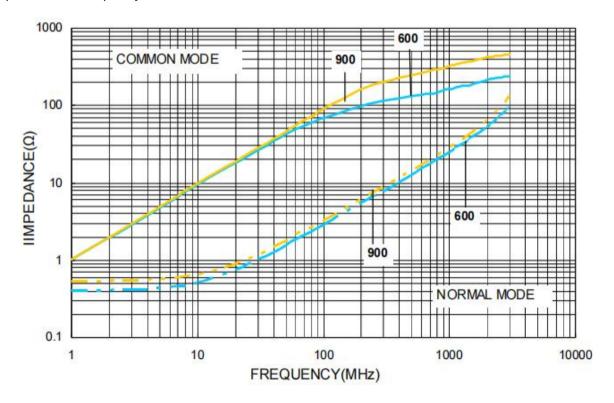
| Part No.          | Impedance | Tolerance | Test Freq. | RDC    | IDC     | Rated<br>Voltage | Withstamd<br>Voltage | Insulation<br>Resistance |  |
|-------------------|-----------|-----------|------------|--------|---------|------------------|----------------------|--------------------------|--|
|                   | (Ω)       | (±%)      | (MHz)      | (Ω)Max | (mA)Max | (Vdc)            | (Vdc)                | (MΩ)Min                  |  |
| HMCC11T-600Y-I-CA | 60        | 25        | 100        | 0.40   | 250     | 50               | 125                  | 100                      |  |
| HMCC11T-900Y-I-CA | 90        | 25        | 100        | 0.30   | 250     | 50               | 125                  | 100                      |  |

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

- Operating temperature range  $-40\,^{\circ}\mathrm{C} \sim 105\,^{\circ}\mathrm{C}$  (Including self temperature rise)
- IDC for Inductance drop 10% from its value without current

Test Instruments: Agilent E4991A Impedance / Material Analyzer

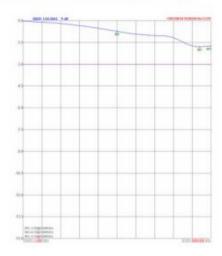
Typical Impedance vs. Frequency



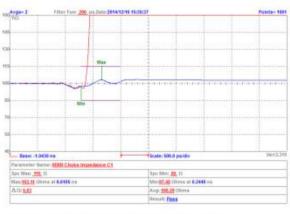
#### HMCC11T-600Y-I

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

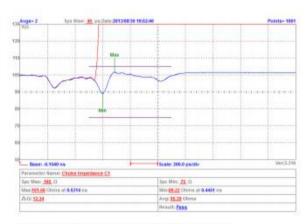
#### Insertion Loss For USB3.0 Testing:



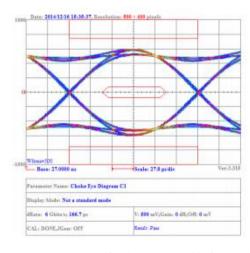
#### **TDR For HDMI2.0 Testing:**



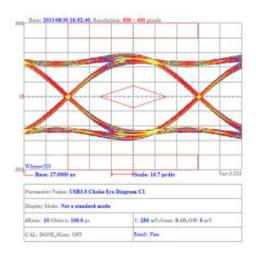
**TDR For USB3.0 Testing:** 



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

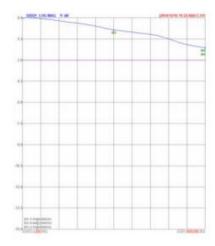


Eye Diagram For USB3.0 Testing:

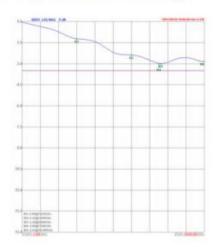


#### HMCC11T-900Y-I

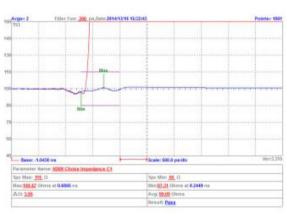
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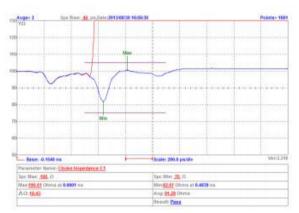
#### Insertion Loss For USB3.0 Testing:



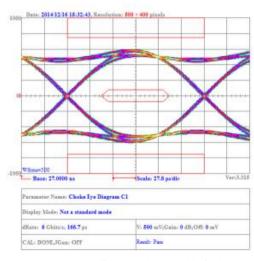
#### TDR For HDMI2.0 Testing:



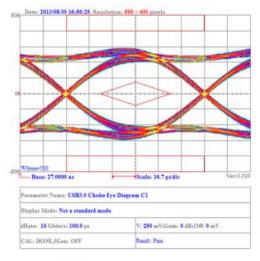
#### TDR For USB3.0 Testing:



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



### Eye Diagram For USB3.0 Testing:





#### **HMCC21-I series Electrical Characteristics**

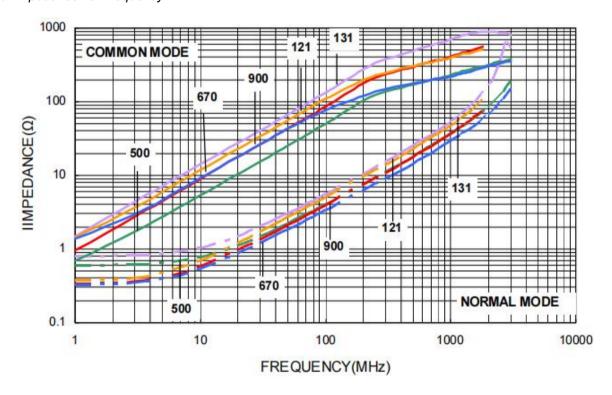
| Part No.          | Impedance | Tolerance | Test Freq. | RDC    | IDC     | Rated<br>Voltage | Withstamd<br>Voltage | Insulation<br>Resistance |
|-------------------|-----------|-----------|------------|--------|---------|------------------|----------------------|--------------------------|
|                   | (Ω)       | (±%)      | (MHz)      | (Ω)Max | (mA)Max | (Vdc)            | (Vdc)                | (MΩ)Min                  |
| HMCC21T-500Y-I-CA | 50        | 25        | 100        | 0.20   | 500     | 50               | 125                  | 10                       |
| HMCC21T-680Y-I-CA | 67        | 25        | 100        | 0.30   | 500     | 50               | 125                  | 10                       |
| HMCC21T-900Y-I-CA | 90        | 25        | 100        | 0.30   | 500     | 50               | 125                  | 10                       |
| HMCC21T-121Y-I-CA | 120       | 25        | 100        | 0.35   | 330     | 50               | 125                  | 10                       |
| HMCC21T-131Y-I-CA | 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

Test Instruments: Agilent E4991A Impedance / Material Analyzer

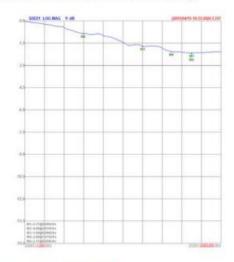
Typical Impedance vs. Frequency



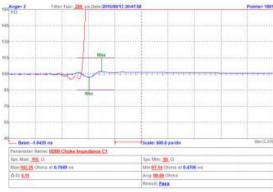
#### HMCC21T-500Y-I

## Insertion Loss For HDMI2.0 Testing:

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



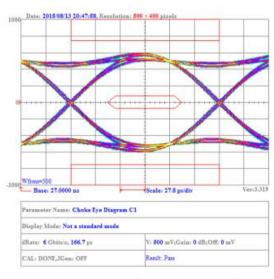
#### TDR For HDMI2.0 Testing:



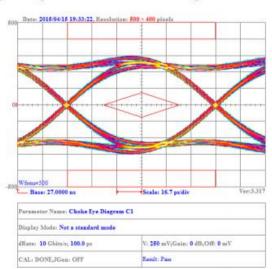
**TDR For USB3.0 Testing:** 



## Eye Diagram For HDMI2.0 Testing:

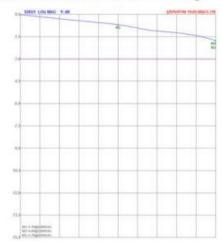


Eye Diagram For USB3.0 Testing:

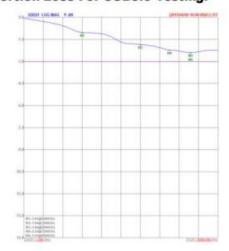


#### HMCC21T-670Y-I

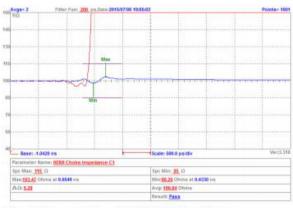
## Insertion Loss For HDMI2.0 Testing:



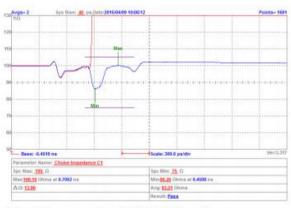
#### Insertion Loss For USB3.0 Testing:



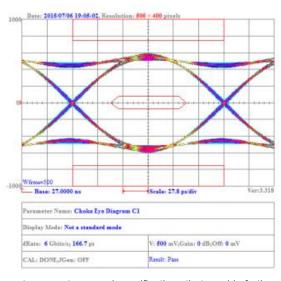
#### TDR For HDMI2.0 Testing:



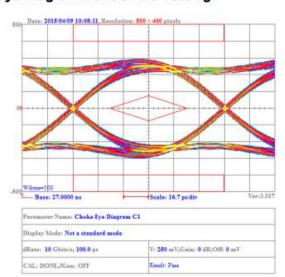
#### **TDR For USB3.0 Testing:**



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

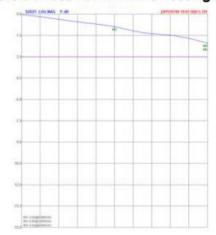


#### Eye Diagram For USB3.0 Testing:

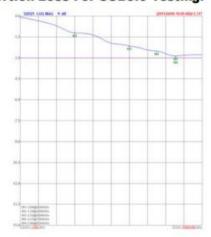


#### HMCC21T-900Y-I

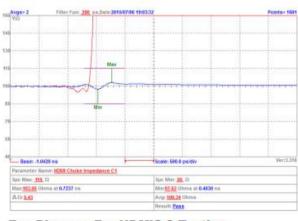
#### Insertion Loss For HDMI2.0 Testing:



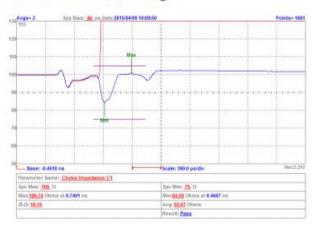
#### Insertion Loss For USB3.0 Testing:



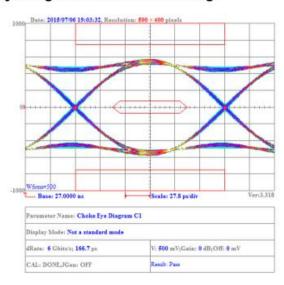
#### **TDR For HDMI2.0 Testing:**



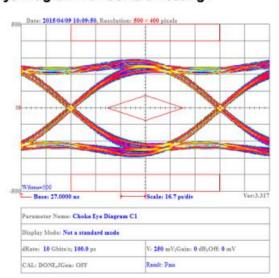
#### TDR For USB3.0 Testing:



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

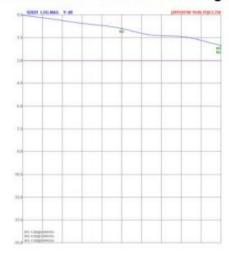


#### Eye Diagram For USB3.0 Testing:

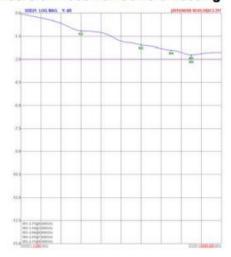


#### HMCC21T-121Y-I

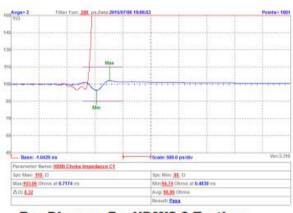
#### Insertion Loss For HDMI2.0 Testing:



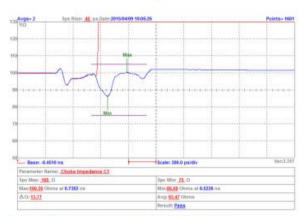
#### Insertion Loss For USB3.0 Testing:



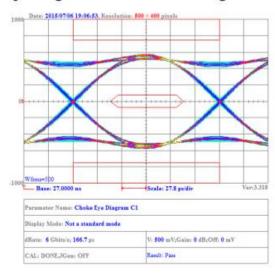
#### **TDR For HDMI2.0 Testing:**



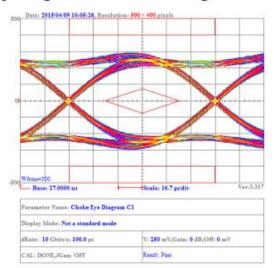
#### **TDR For USB3.0 Testing:**



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

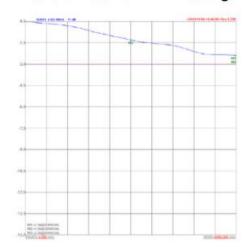


#### Eye Diagram For USB3.0 Testing:

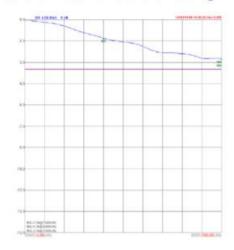


#### HMCC21T-131Y-I

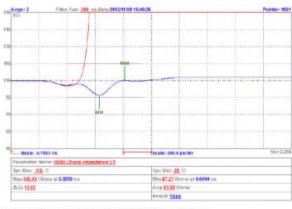
#### **Insertion Loss For HDMI Testing:**



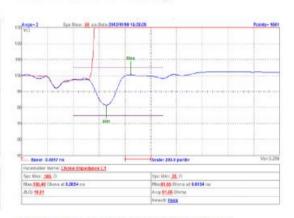
#### Insertion Loss For USB3.0 Testing:



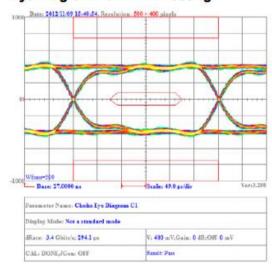
## **TDR For HDMI Testing:**



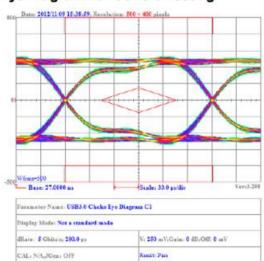
#### **TDR For USB3.0 Testing:**



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



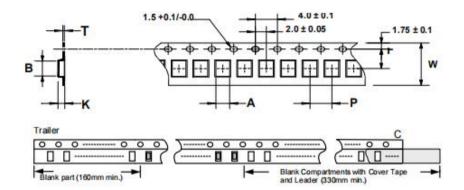
# Eye Diagram For USB3.0 Testing:



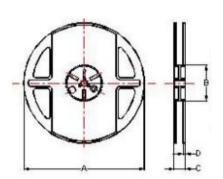


# **Packaging Specifications**

## **Tape Dimensions**



#### **Reel Dimensions**



## **Dimensions in mm**

| TVDE        | Tape Dimensions |      |      |     |     |     |      | Reel Dimensions |    |    |     | Quantity |
|-------------|-----------------|------|------|-----|-----|-----|------|-----------------|----|----|-----|----------|
| TYPE        | А               | В    | Т    | W   | Р   | F   | К    | Α               | В  | С  | D   | PCS/REEL |
| HMCC11-I-CA | 1.15            | 1.45 | 0.25 | 8.0 | 4.0 | 3.5 | 1.00 | 178             | 60 | 12 | 1.5 | 2000     |
| HMCC21-I-CA | 1.50            | 2.25 | 0.24 | 8.0 | 4.0 | 3.5 | 1.35 | 178             | 60 | 12 | 1.5 | 2000     |