

### Description

- ◆ The common mode filter is mainly used to reduce radiation and high frequency common mode noise.
- ◆ Reduce asymmetric interference on data lines and other interfaces.
- ◆ Impedance characteristics match the impedance of most differential interface Settings, controlling unnecessary reflection formation
- ◆ Low leakage, no effect on differential mode current

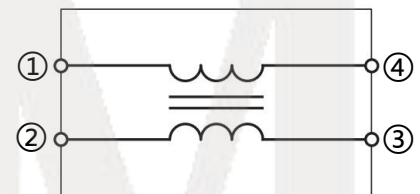


### Features

- ◆ Size: 1.27mm\*1.0mm\*0.5mm
- ◆ Halogen free ,Lead free ,Reach and RoHs
- ◆ USB2.0,LCD,MIPI

### Application

- ◆ Cellular phones
- ◆ Portable devices
- ◆ Digital cameras
- ◆ Player
- ◆ Smart home
- ◆ Robot



**Circuit Diagram**

| PIN NUMBER | DESCRIPTION |
|------------|-------------|
| ① ~ ④      | DATE LINE   |
| ② ~ ③      | DATE LINE   |

### Order information

| Model           | Marking | Package | shipping       |
|-----------------|---------|---------|----------------|
| CMF1210DH900MFR |         | 1210    | 4000/Tape&Reel |

### Part Numbering

|            |             |           |            |          |          |          |
|------------|-------------|-----------|------------|----------|----------|----------|
| <b>CMF</b> | <b>1210</b> | <b>DH</b> | <b>900</b> | <b>M</b> | <b>F</b> | <b>R</b> |
| A          | B           | C         | D          | E        | F        | G        |

A:ASIM common mode filter

B:Dimension

C:Ordinary high speed differential signal

D:Common Mode Impedance (at 100MHz), 900= 90Ω

E:Tolerance of common mode impedance, M= ±20%

F:Type of electrode plating: F= Lead Free

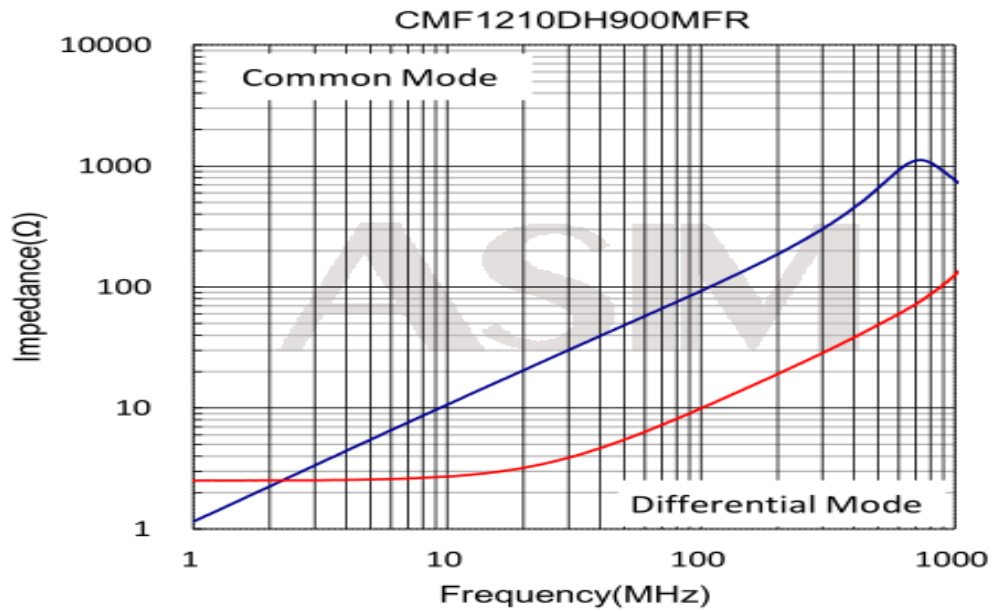
G:Packing Type, R= Reel

### Specification

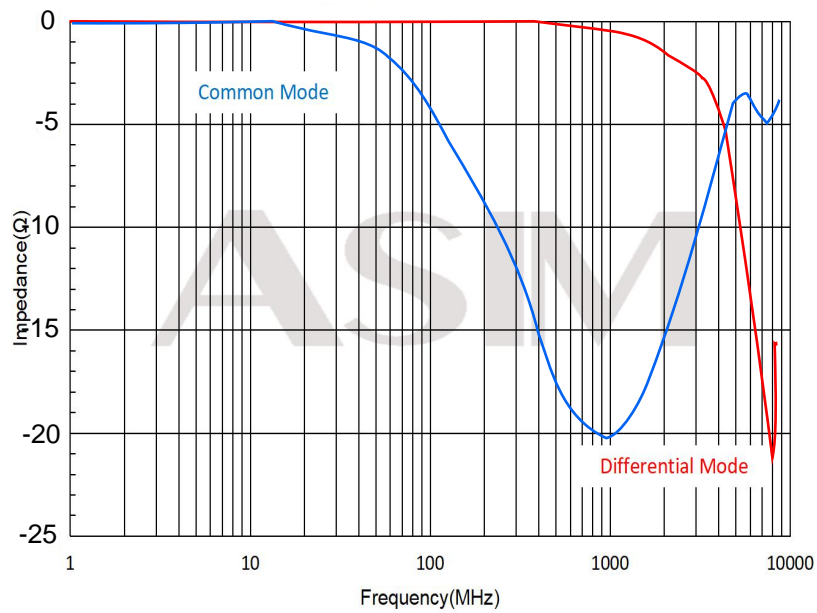
| Part number     | Common mode impedance(Ω) @100MHz | Rated Current (mA)   | DC Resistance (Ω) max |
|-----------------|----------------------------------|----------------------|-----------------------|
| CMF1210DH900MFR | 90±20%                           | 150                  | 2.5                   |
|                 | Rated volt (Vdc)                 | Withstand volt (Vdc) | IR (Ω) min            |
|                 | 5                                | 12.5                 | 10M                   |
|                 | Operation junction temperature   | Lead temperature     | Storage temperature*  |
|                 | -40°C~+85°C                      | 260°C                | -40°C~85°C            |

\*The storage temperature is subject to the fixed substrate

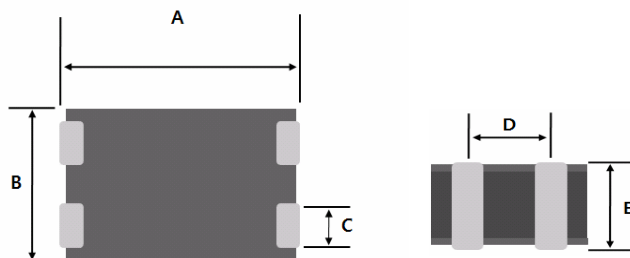
## Performance Curves



## Transmission Characteristics

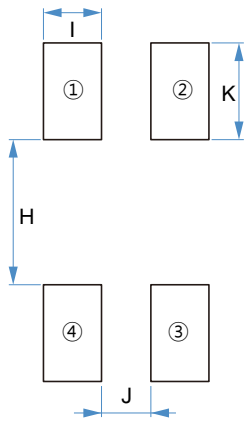


## Dimension (mm)



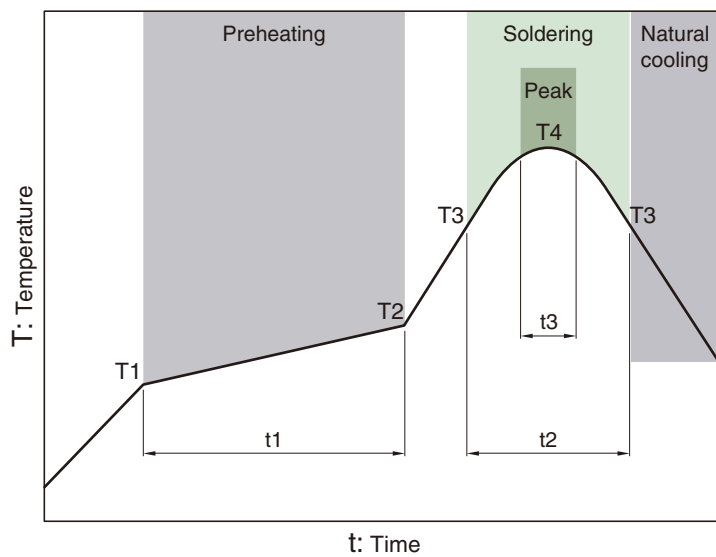
| Symbol    | A         | B         | C         | D         | E        |
|-----------|-----------|-----------|-----------|-----------|----------|
| Dimension | 1.27±0.15 | 1.00±0.15 | 0.30±0.05 | 0.45±0.05 | 0.5±0.10 |

## Recommended Land Pattern (mm)



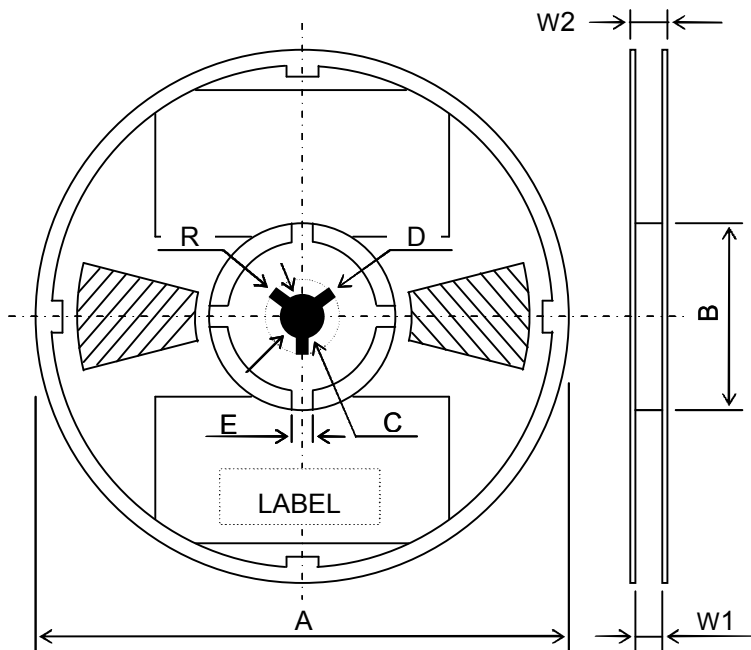
| Symbol    | <b>H</b> | <b>I</b> | <b>J</b> | <b>K</b> |
|-----------|----------|----------|----------|----------|
| Dimension | 0.7      | 0.3      | 0.25     | 0.5      |

## Recommended Reflow Profile

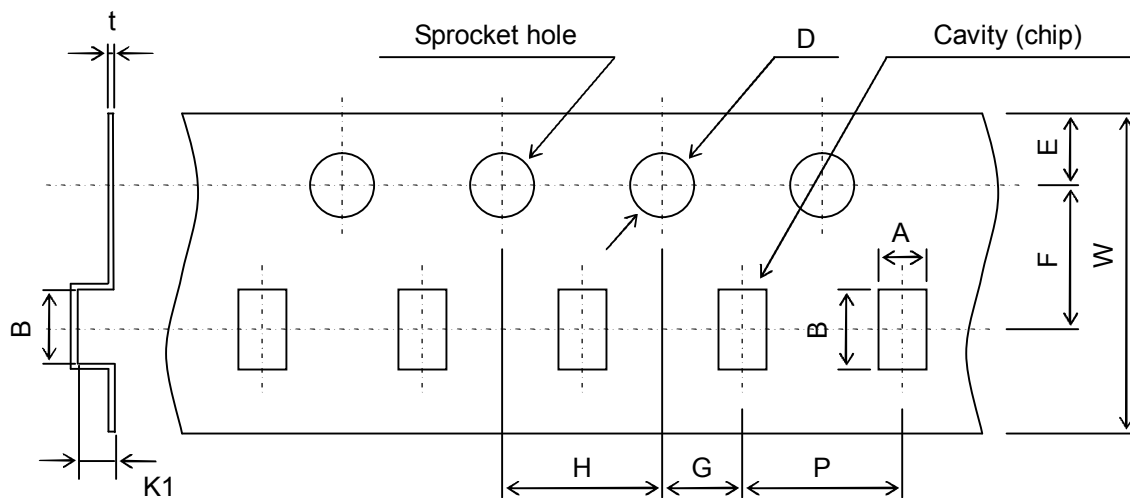


| Preheating |       |            | Soldering |           | Peak  |      |
|------------|-------|------------|-----------|-----------|-------|------|
| Temp.      | Temp. | Time       | Temp.     | Time      | Temp. | Time |
| T1         | T2    | t1         | T3        | t2        | T4    | t3   |
| 150°C      | 180°C | 60 to 120s | 230°C     | 25 to 35s | 260°C | 5s   |

### Reel Dimension&Tape Dimension (mm)



|    |                          |
|----|--------------------------|
| A  | $\phi 180.0 \pm 2.0$     |
| B  | $\phi 60.0 \text{ Min.}$ |
| C  | $\phi 13.0 \pm 0.2$      |
| D  | $\phi 21.0 \pm 0.8$      |
| E  | $2.0 \pm 0.5$            |
| W1 | $8.4 + 2.0 / -0$         |
| W2 | 14.4 Max.                |
| R  | 1.0                      |



|                          |                          |                   |                 |                 |                 |                 |                 |
|--------------------------|--------------------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| A                        | B                        | D                 | E               | F               | G               | H               | K1              |
| $1.15 + 0.10$<br>$-0.07$ | $1.40 + 0.10$<br>$-0.07$ | $1.50 + 0.10 / 0$ | $1.75 \pm 0.10$ | $3.50 \pm 0.05$ | $2.00 \pm 0.05$ | $4.00 \pm 0.10$ | $0.65 \pm 0.05$ |
| P                        | t                        | W                 | (Unit : mm)     |                 |                 |                 |                 |
| $4.00 \pm 0.10$          | $0.25 \pm 0.05$          | $8.00 \pm 0.20$   |                 |                 |                 |                 |                 |