



1. GENERALS

- This specification covers the engineering requirements for the CMF2010DH900MFR (Ultra-high-speed differential lines Common Mode Filter)

2. FEATURES

- Small and thin array type with built-in 2-way filter
(L 2.0 mm x W 1.0 mm x H 0.5 mm)
- Delay in signal transmission through the signal transmission area of not less than 3 GHz
- TDR characteristic is 100 μ typ. to prevent reflection and noise emission of transmitted signals
- Compliance with HDMI waveform eye pattern specifications to improve waveform errors such as cycle error and phase deviation
- Eliminate all kinds of high-speed differential transmission of radiated noise
- Electromagnetic shielding type to prevent leakage magnetic flux
- The RoHS directive has been processed

3. APPLICATIONS

- For AV products (LCD TV, DVD/Blu-ray drive), Consulting equipment (PC, HDD), Communication equipment (Mobile, Smartphone)
- Anti-jamming countermeasures for high-speed differential data lines such as HDMI, SATA, LAN

4. PRODUCT SPECIFICATIONS

4. 1 PART NUMBER CODE

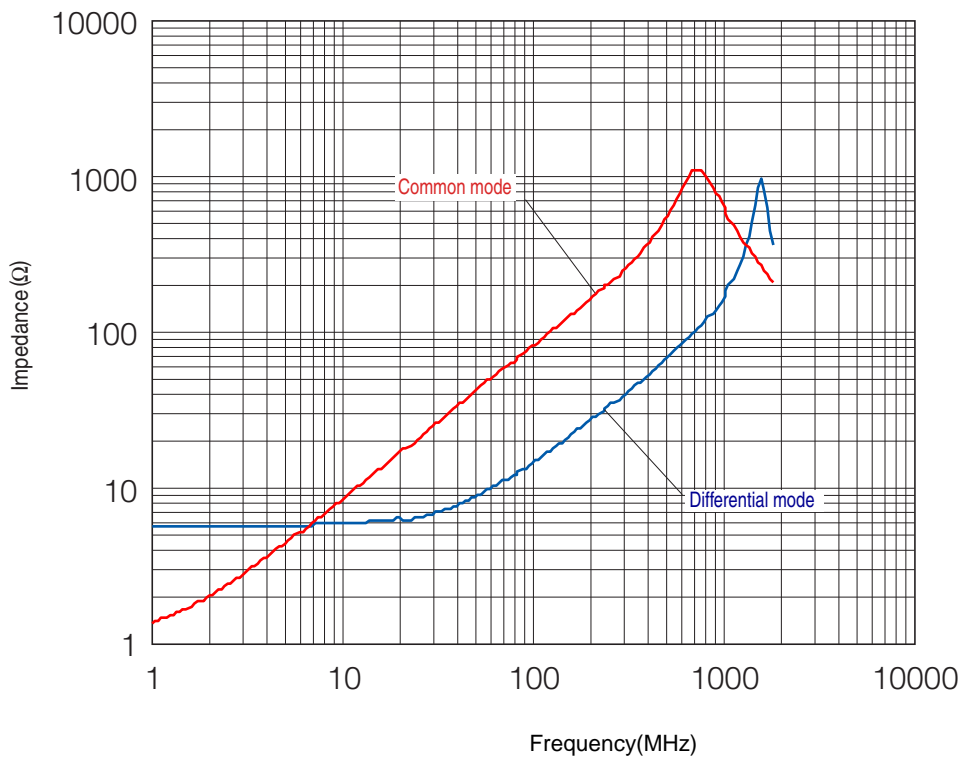
CMF 2010 DH 900 M F R
(1) (2) (3) (4) (5) (6) (7)

- (1) Common Mode Filter
- (2) Dimensions, 2.0mm (L) x 1.0mm (W)
- (3) DH= 4 lines high-speed differential lines
- (4) Common Mode Impedance (at 100MHz), 900= 90 Ω
- (5) Tolerance of common mode impedance, M= \pm 25%
- (6) Type of electrode plating: F= Lead Free
- (7) Packing Type, R= Reel

4. 2 SPECIFICATION OF ELECTRICAL CHARACTERISTICS

Characteristics	Common Mode Impedance @100MHZ	Differential Mode Impedance @100MHZ	Rated Voltage	Resistance R_{DC}	Rated Current
Units	Ω	Ω	V	Ω	mA
Value	90($\pm 25\%$)	Max17	5	Max 3	Max 130

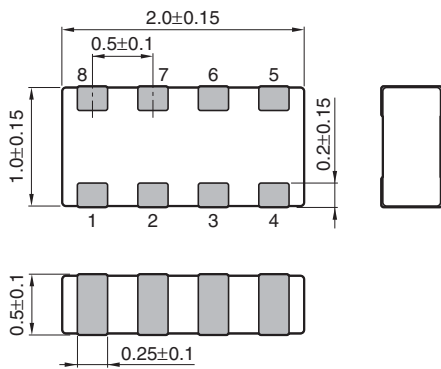
- Impedance Curves



4. 3 OPERATING TEMPERATURE

DESCRIPTION	REQUIREMENTS
Operating Temperature	-40°C ~ + 85°C

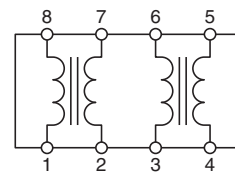
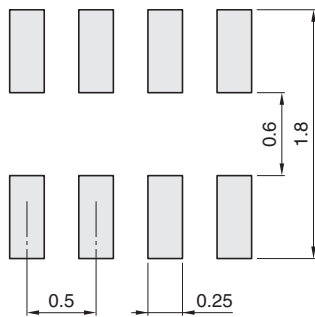
5. EQUIVALENT CIRCUIT



Dimensions in mm

6. MECHANICAL PROPERTY

6. 1 Appearance and Dimension



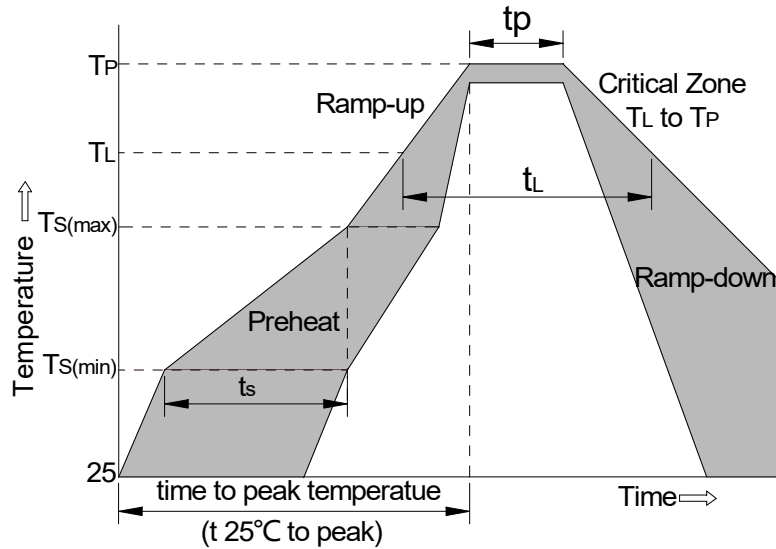
• No polarity

Dimensions in mm

7. Package

Size EIA(EIAJ)	2010
Standard Packing Quantity(pcs / reel)	4,000pcs

8. Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C