

Data Sheet

- ITEM : COMMON MODE FILTER

- PART NO : ICMF052P900MFR

- CONDITION : 1. _____
2. _____
3. _____
4. _____

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1. Generals

- This specification covers the engineering requirements for the ICMF052P900MFR (Common Mode Filter)

2. Features

- Effective for suppressing common mode noise and almost no effect for high speed differential data line
- Ultra low profile (0.64 x 0.57 x 0.35mm)
- Ceramic multilayer type SMD component
- Non-polarized product
- It is a product conforming to RoHS directive.

3. Applications

- HDMI lines in PDP, LCD TV, DVD Player, PC, Audio player, DSC
- MDDI, MIPI, MHL in mobile phone.

4. Product specifications

4. 1 PART NUMBER CODE

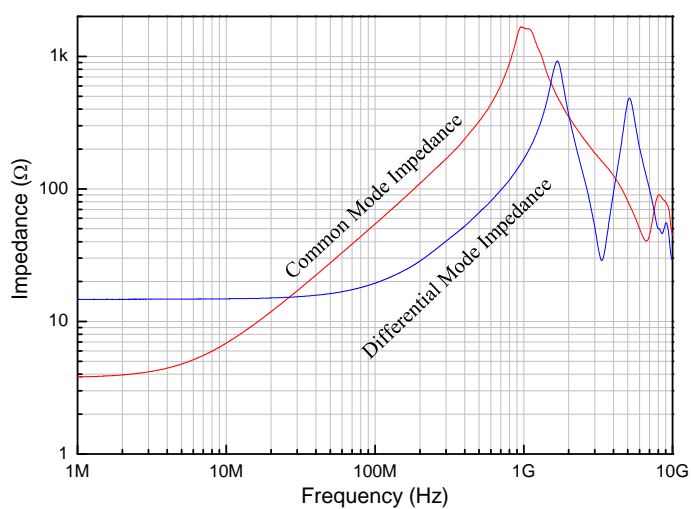
ICMF 05 2P 900 M F R
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Series name of ICT's Common Mode Filter
- ② Dimensions, 0.64mm (L) x 0.57mm (W)
- ③ Number of lines, 2P= 2 lines
- ④ Common Mode Impedance (at 160MHz), 900= 90Ω
- ⑤ Tolerance of common mode impedance, M= ±25%
- ⑥ Type of electrode plating: F= Lead Free
- ⑦ Packing Type, R= Reel

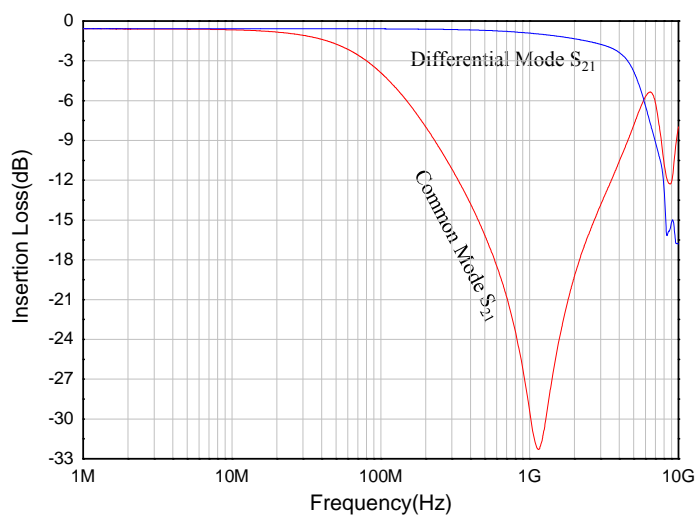
4. 2 Specification of electrical characteristics

Characteristics	Common Mode Impedance	Resistance	Insulation Resistance (Max)	Rated Current
Symbol	Z_{CM}	R_{DC}	IR_{CR}	I_R
Units	Ω	Ω	$M\Omega$	mA
Test Condition	@160MHz	$25^\circ C \pm 2^\circ C$	5V	$25^\circ C \pm 2^\circ C$
Value	90($\pm 25\%$)	Max 10	Min 10	Max 50

- Impedance Curves



-Transmission characteristics (S-parameter)



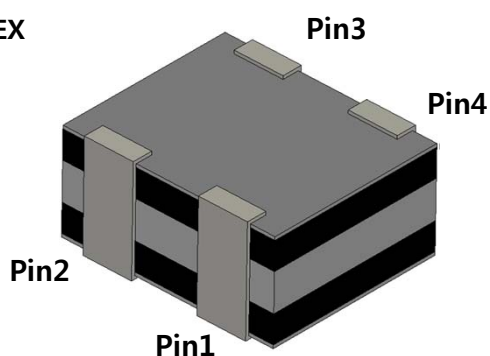
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4.3 Operating Temperature

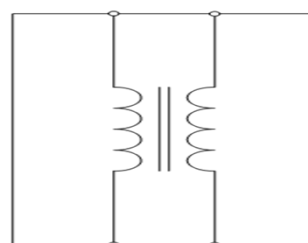
DESCRIPTION	REQUIREMENTS
Operating Temperature	-40°C ~ + 85°C

5. Equivalent Circuit & Pin Description

- PIN INDEX

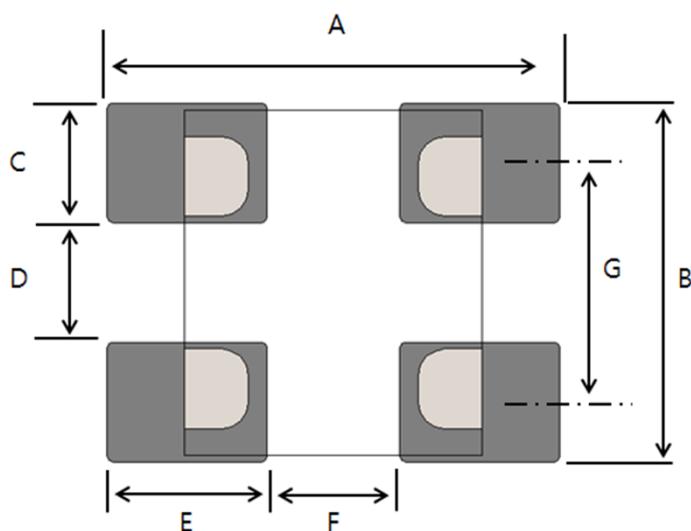


- Equivalent circuit



ITEM	DESCRIPTION	SOURCE	EQUIPMENT
Rdc	Pin 1 to 4, 2 to 3	10mA DC Source	Source Meter
CM Impedance	Pin 1-2(Short) to Pin 3-4(Short)		LCR Meter (3GHz)

6. Recommended Foot Print & Stencil Mask



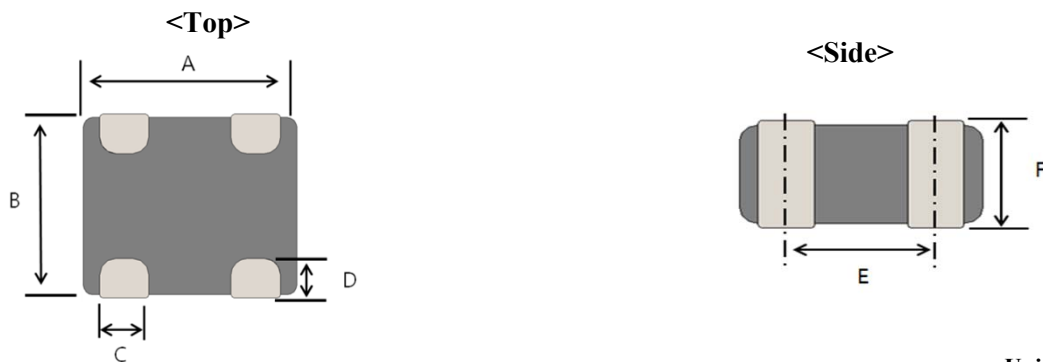
Unit : mm

Item	Size
A	0.85±0.05
B	0.68±0.08
C	0.23±0.03
D	0.23±0.03
E	0.30
F	0.25±0.05
G	0.45±0.05

[Foot print : Stencil Mask = 1 : 1]

7. Mechanical Property

7.1 Appearance and Dimension



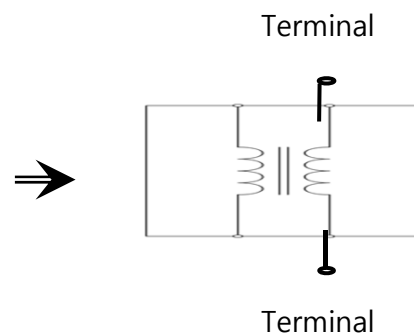
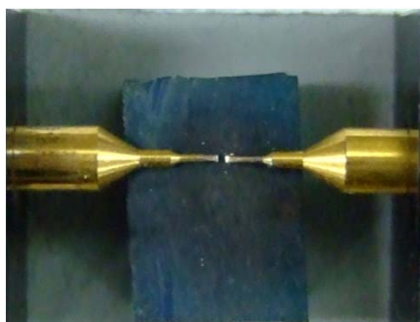
Unit : mm

Item	A	B	C	D	E	F
Size(mm)	0.64±0.05	0.57±0.05	0.15±0.05	0.15±0.05	0.4±0.1	0.35±0.03

8. TEST METHOD OF ELECTRICAL PROPERTY

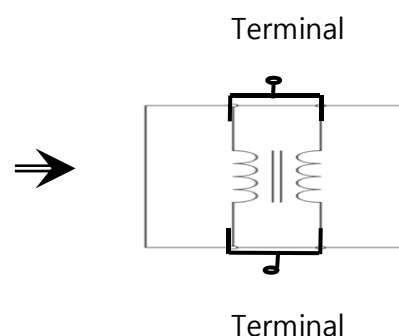
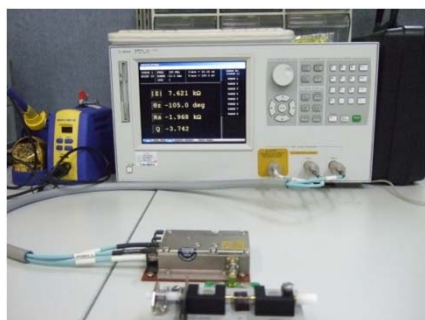
8.1 Rdc (Model: KEITHLEY 2400)

- Off power and On power.
- Press button 'Ω' of MEAS.
- Measure Rdc value using test fixture.



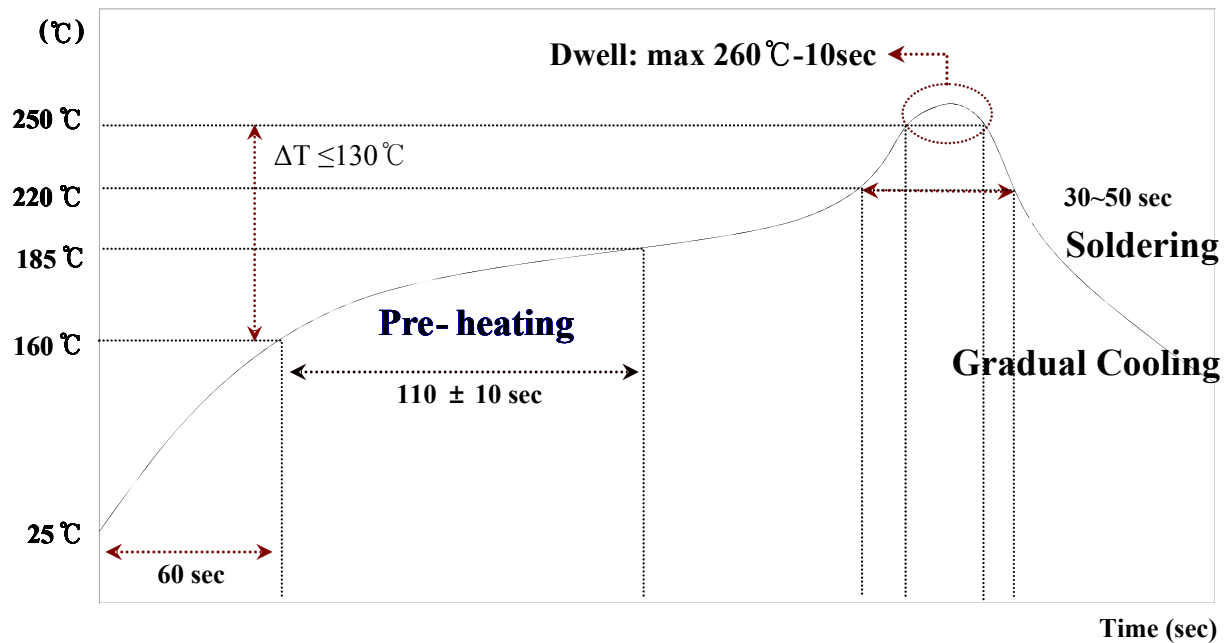
8.2 Common Mode Impedance (Model: Agilent 4287A)

- Calibrate equipment
- Measure CM Impedance (at 160MHz) using test fixture.



9. REFLOW CONDITION

9.1 RECOMMENDED SOLDERING PROFILE (Lead-free condition)



9.2 RECOMMENDED LEAD-FREE SOLDER PASTE

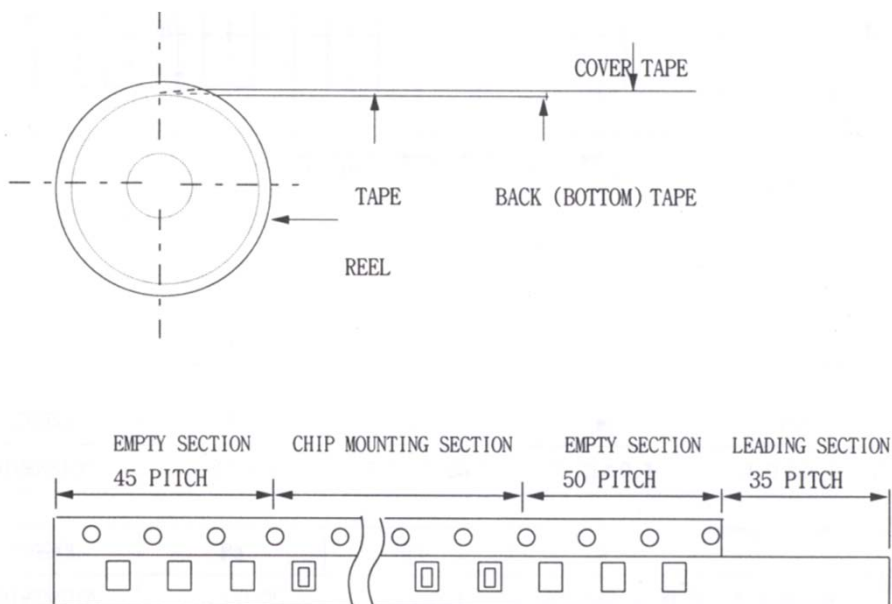
- Supplier : Tamura Donghwa
- Main composition : Sn-Ag-Cu
- Ratio of composition : 96.5%-3.0%-0.5%

9.3 RECOMMENDED HAND SOLDER

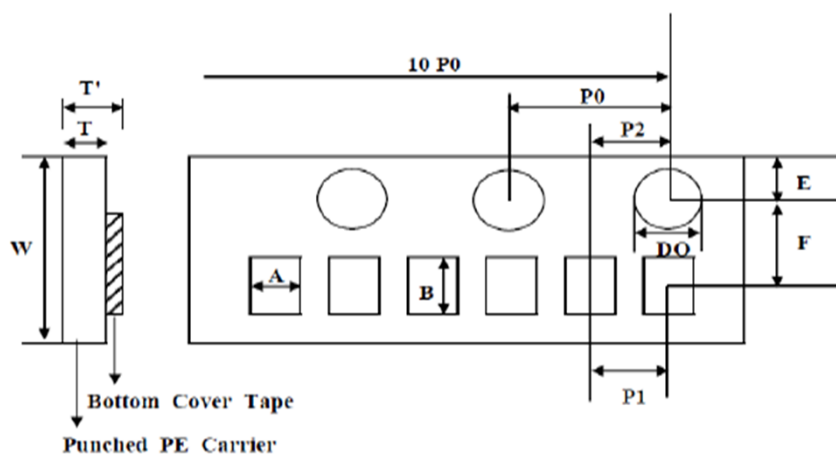
- Max Temperature: Max 380 °C (Max 5sec)

10. PACKING SPECIFICATION

10.1 TAPING FIGURE



10.2 CARRIER TAPE DIMENSIONS

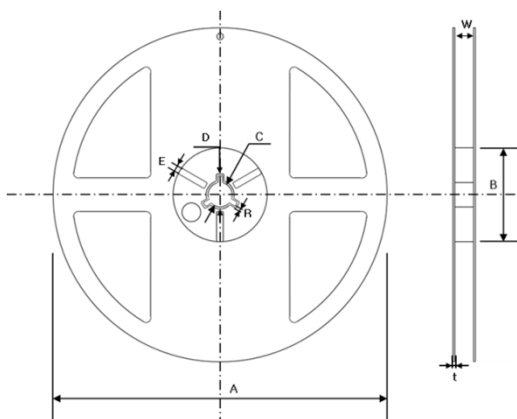


Unit : mm

SYMBOL	A	B	E	F	D ₀	P ₁	P ₂	P ₀	10P ₀	w	T	T'
DIMENSION	0.62	0.78	1.75	3.50	1.55	2.00	2.00	4.00	40.00	8.00	0.40	0.43
TOLERANCE	±0.03	±0.03	±0.05	±0.05	±0.03	±0.05	±0.05	±0.05	±0.10	±0.10	±0.02	±0.05

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10. 3 REEL DIMENSIONS

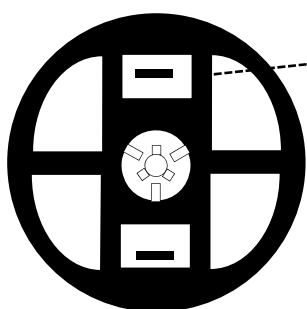


- (1) Reel Materials: Polystyrene
- (2) Label
- (3) Taping
 - Standard Packing Quantity per Reel ($\phi 178$)
 - PE type : 10,000pcs

Unit : mm

CODE	A	B	C	D	E	W	t	R
DIMENSION	$\phi 178 \pm 2$	Min. $\phi 50$	$\phi 13 \pm 0.5$	$\phi 20 \pm 0.8$	3.0 ± 0.5	10 ± 1.5	1.3 ± 0.2	1.0 ± 0.2

10. 4 LABEL CODE



- P/N : Part Number
- L/N : Lot Number
- C/N : Customer Number
- SPEC : Size, Line numbers & CM Impedance
- DATE : Date code
- Q'TY : Quantity

