

ACFT4A2G900E

Common Mode Filter



Overview

ACF series is multi-layer chip Common Mode Filter for high speed differential transmission line. This product shows excellent noise reduction without signal loss by high coupled Inductor pair. It is suitable for Mobile phone, DSC, DVD, PC, Note Book and Digital TV

Features

- Excellent noise reduction without signal loss
- Small size & low profile(0.85 X 0.65 X 0.40mm)
- Ceramic multilayer type SMD component
- High reliability
- RoHS compliance

Applications

- Common Mode Noise reduction at high-speed differential transmission lines

1. Model Description

<u>ACF</u>	<u>T</u>	<u>4A</u>	<u>2</u>	<u>G</u>	<u>900</u>	<u>E</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)

- (1) Series name
- (2) Material code
- (3) Chip size : "4A" – 0.85 X 0.65 X 0.40mm
- (4) Number of lines : "2" – 2 lines
- (5) Characteristics : "G" – High speed differential transmission(for Gbps)
- (6) Impedance : "900" – 90Ω, "650" – 65Ω, "350" – 35Ω, "120" – 12Ω
- (7) Internal code

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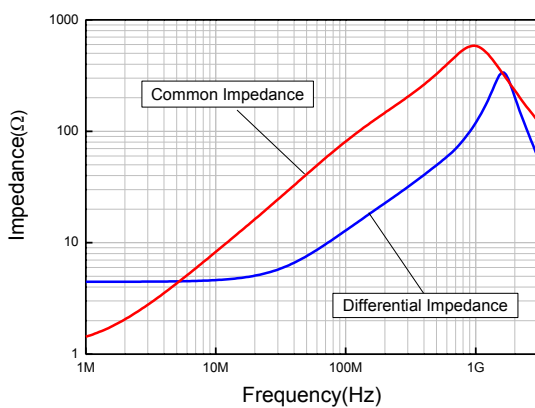


2. Electrical Specification

Part Number	Common Mode Impedance at 100 MHz	DC Resistance	Rated Voltage	Rated Current	Insulation Resistance
	(Ω)	(Ω)	(V DC)	(mA DC)	(M Ω)
ACFT4A2G900E	90 \pm 20%	3.5 max	10 max.	100 max.	10 min.

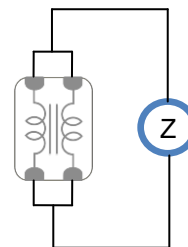
※ Operation Temperature : -40 ~ +85 °C, Storage Temperature : -40 ~ +85 °C

■ Impedance vs. Frequency characteristics

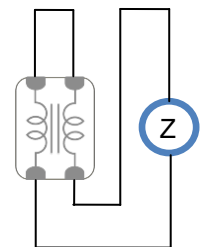


■ Measurement circuit

a) Common Mode

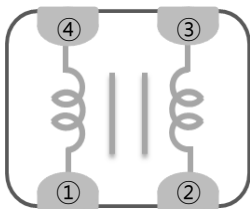


b) Differential Mode



※ Measurement equipment : Agilent E4991A

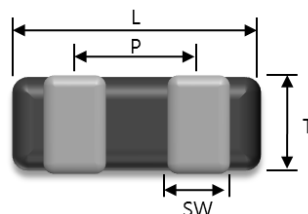
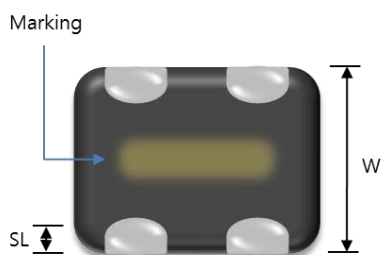
3. Equivalent Circuit



Number	Pin description
1	Input/ Output
2	Input/ Output
3	Input/ Output
4	Input/ Output

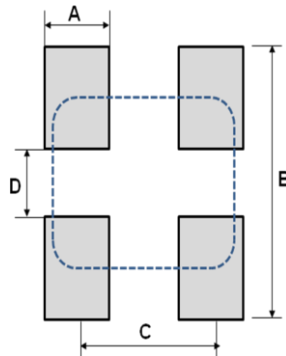
※ No Polarity & Directionality

4. Dimension Specification



Item	Size (mm)
L	0.85 \pm 0.05
W	0.65 \pm 0.05
T	0.40 \pm 0.05
SL	0.20 + 0.5/-0.10
SW	0.27 \pm 0.10
P	0.50 \pm 0.05

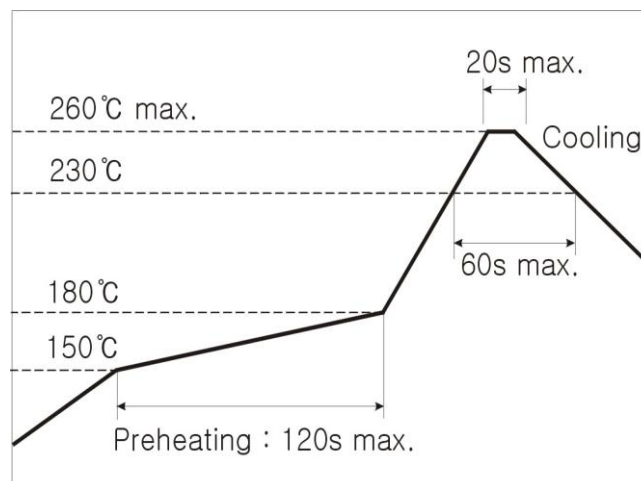
5. Recommended Land pattern (Typical Dimensions)



Item	Size (mm)
A	0.3
B	0.9
C	0.5
D	0.3

6. Recommended Soldering Profile

- Pb Free Solder Paste : Sn/ Ag//Cu (96.5 / 3.0 / 0.5)



Follow the recommended soldering conditions to avoid degradation of performance .

- This product is designed for reflow soldering only. Do not use flow soldering.
- Use non-activated flux. (Max. Cl content less than 0.2%)
- Reflow cycle times should be done less than 3 times.

7. Caution

- 1) Storage environment : -5~40°C temperature, 20~70% humidity (MSL Level 1)
- 2) Do not use in high temperature/high humidity and a corrosive atmosphere like sulfide, chloride gas which could damage the solderability.
- 3) Do not expose to mechanical shock to avoid crack.
- 4) Use chips within 6 months. If over 6 months, check solderability before use.

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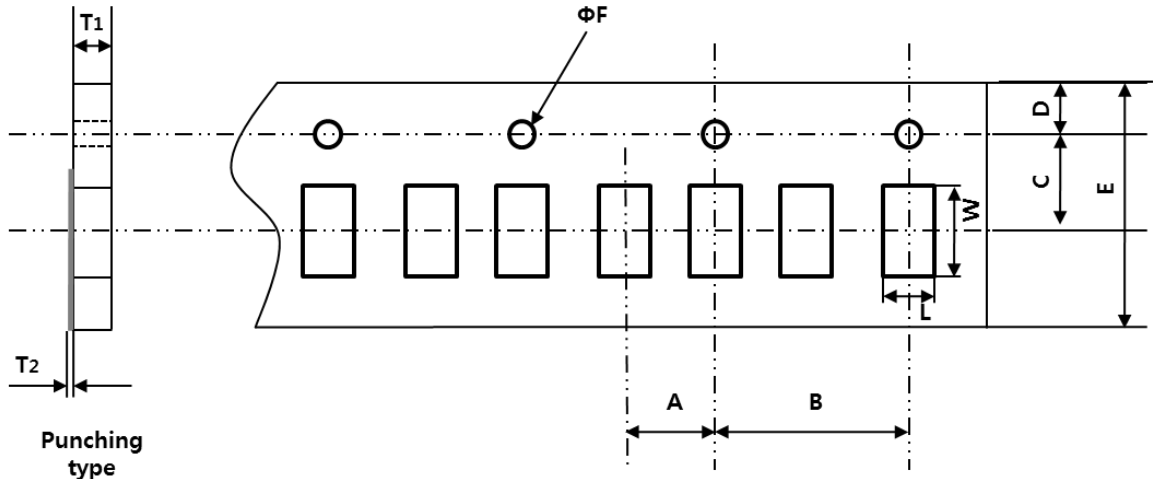
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Appendix

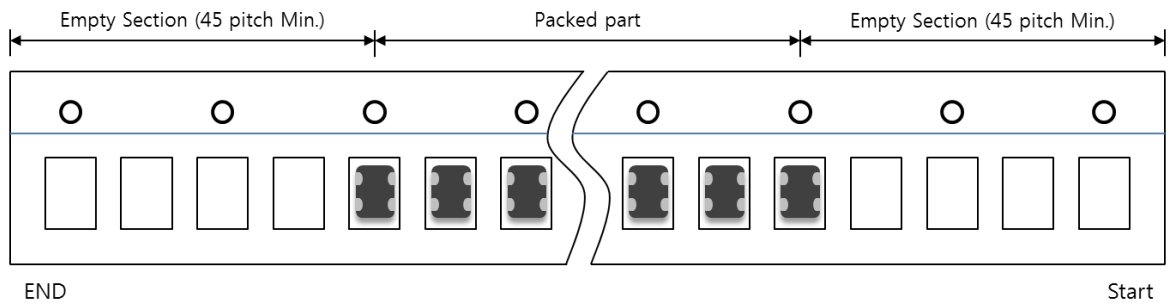
1) Carrier tape specification

▪ Size



	L	W	A	B	C	D	E	ΦF	T_1	T_2
Tolerance	± 0.10	± 0.10	± 0.10	± 0.10	± 0.10	± 0.10	± 0.10	$+0.10$	± 0.10	Max.
spec(mm)	0.77	0.97	2.00	4.00	3.50	1.75	8.00	1.55	0.60	0.10

▪ Chip Location



▪ Material

- Paper carrier tape : Laminated virgin pulp
- Top tape : Polyester film
- Bottom tape : Adhesive coated paper

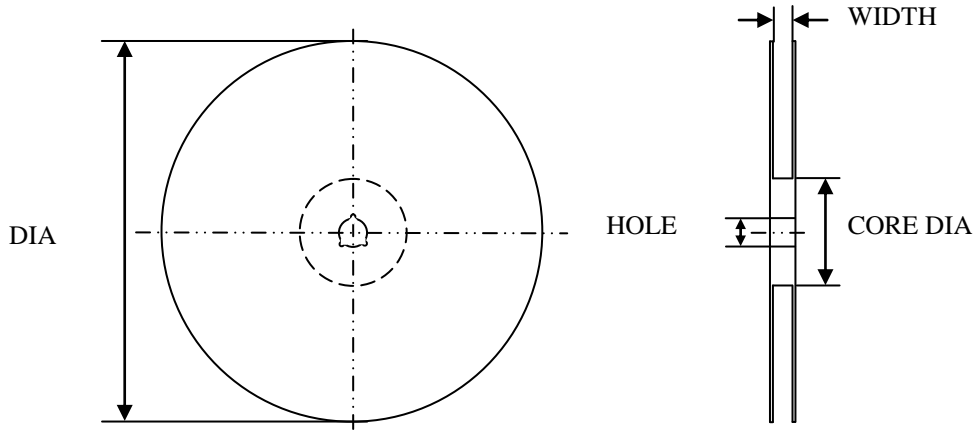
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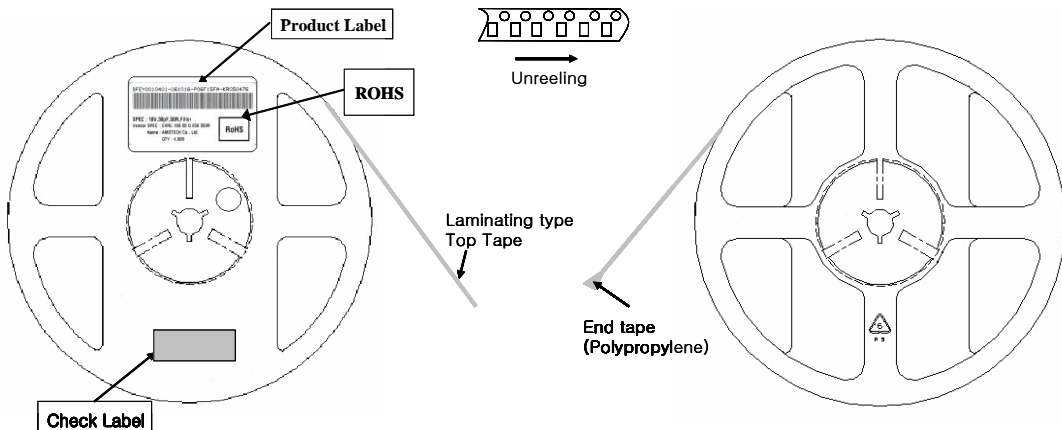
2) Reel specification

- Size



Item	DIA	WIDTH	CORE DIA	HOLE
Size (mm)	178.0±0.5	9.0±0.5	60.0±1.0	13.2±0.3

- Label adherence and winding direction



- Material

- Plastic reel : GPS(General Purpose Styrene)

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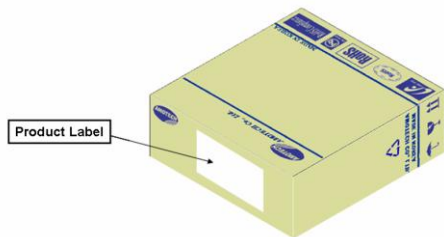
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3) Box packaging Specification

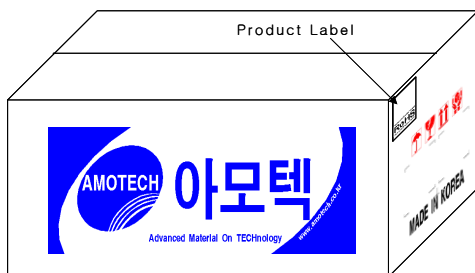
- Small Box

- Size : 183 (W) x 185 (D) x 70 (T) (mm)
- Quantity : 5 reel (10,000 ea/reel x 5 reel = 50,000 ea)



- Medium Box

- Size : 200 (W) x 375 (D) x 205 (T) (mm)
- Quantity : 5 small boxes(50,000 ea/ small boxes x 5 small boxes 250,000 ea)



- Large Box

- Size : 375 (W) x 390 (D) x 205 (T) (mm)
- Quantity : 10 small boxes (50,000 ea/ small boxes x10 small boxes500,000 ea)

