

<SPECIFICATION>

SPEC.No. ASDIQ-SPE-182(00)

Date: Oct.13,2022

To :

CUSTOMER'S PRODUCT NAME

ASDI PRODUCT NAME:

ASCM3216-2-SERIES

RECEIPT CONFIRMATION

UNCONDITIONAL CONSENT

CONDITIONAL CONSENT

APPROVED	CHECKED

ASDI SIGNATURE

APPROVED	CHECKED	PREPARED
Xianglong Li	Liang Wang	Jiayin Cai



Xiamen ASDI Electronics Co.,Ltd.

CAUTION WHEN HANDLING

Before use the products, please read this specification.

CAUTION FOR SAFETY USING

When use the products, be careful to mentioned below for safety using.

CAUTION

*The product should be used within 12 monthes.

Focus on the storage conditions.

Solderability may become weak if it exceeds the period.

*Do not use and store the product in condition of gas corrosion (Salt,Acid,Alkaline).

*The products must be preheated before soldering.

*Rework by soldering iron;Please keep the mentioned conditions in this specification.

*In case of insert P.C. Board on chassis, do not add mechanical stress to the product.

*Be careful to arrange of non-magnetic field type inductors.

The error may be caused by magnetic field coupling.

*In case handle the products, please use wrist strap for ground static discharge on human body.

The product keeps away from magnet or magnetized things.

*Do not use the product beyond the mentioned conditions in this specification.

*About an application

The products listed on this specification sheet are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

*The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this specification sheet.

- | | |
|--------------------------------|---|
| 1)Aerospace/Aviation equipment | 6)Transportation control equipment |
| 2)Military equipment | 7)Power-generation control equipment |
| 3)Seabed equipment | which directly endanger human life |
| 4)Safety equipment | 8)Atomic energy-related equipment |
| 5)Medical equipment | 9)Other applications that are not |
| | considered general-purpose applications |

If you intend to use the products in the following applications, please contact our sales office.

Transportation equipment (cars, electric trains, ships, etc.), Public information-processing equipment, Electric heating apparatus / burning equipment, Disaster prevention/crime prevention equipment

When using this product in general-purpose applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc., to ensure higher safety.

Xiamen ASDI Electronics Co.,Ltd.

DWG.No.
ASDIQ-SPE-182(00)

ISSUE

CUSTOMER

ASDI PART No.
ASCM3216-2-SERIES

CUSTOMER'S DWG NO.

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2.Manufacturing Location

China

DWG.NO.

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Xiamen ASDI Electronics Co.,Ltd.

(1) Features

- High common mode impedance at high frequency effects excellent noise suppression performance.
- ASCM3216 series realizes small size and low profile 3.2*1.6*1.8 mm.
- 100% Lead (Pb) & Halogen-Free and RoHS compliant.



(2) Applications

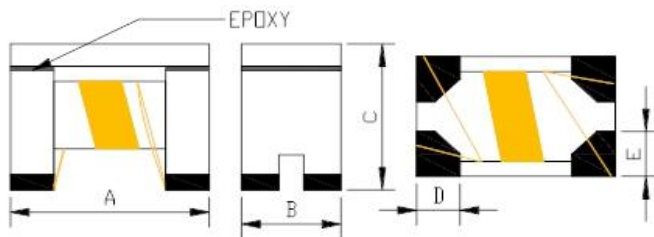
- Power switch and servers.
- Telecommunication applications.
- Countering common mode noise affecting signals in high-speed lines.
- USB communication.
- Panel link for LCD panels.

(3) Product Identification

ASCM **3216** **-2** **-500** **T** **F**
 ① ② ③ ④ ⑤ ⑥

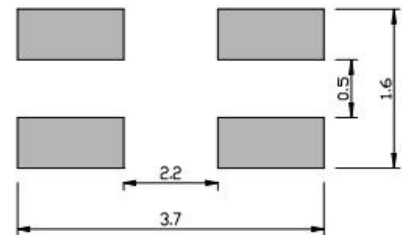
- ①ASCM Series name
- ②3216 Dimension
- ③2 2 lines
- ④500 Common Mode Impedance (Ω)
- ⑤T Packing (Tape & Reel)
- ⑥F HSF Products (Hazardous Substance Free Products)

(4) Dimensions



Unit:mm

A	B	C	D	E
3.20±0.20	1.60±0.20	1.80±0.20	0.6TYP	0.6TYP

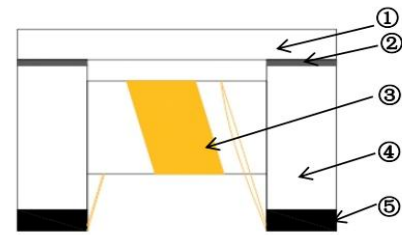


Recommend Land Pattern

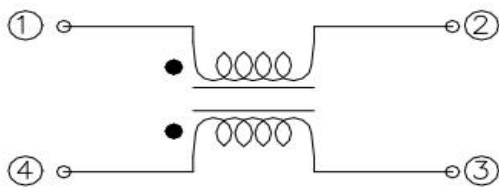
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(5) Structure and Components

No.	Part Name	Material Name
①	Lid	Ni-Zn Ferrite
②	Epoxy	Epoxy resin
③	Wire	Enameled copper wire
④	Core	Ni-Zn Ferrite
⑤	Electrode structure	Ag+Ni+Sn plating

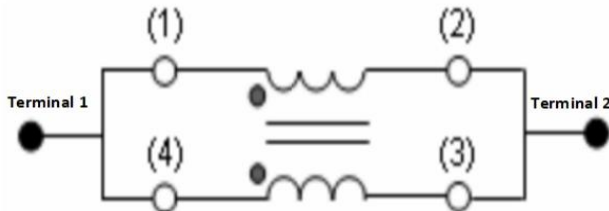


(6) Schematic Diagram

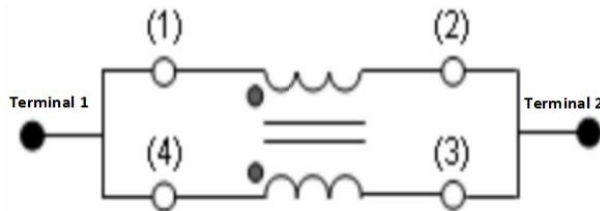


(7) MEASURING CIRCUITS 2LINE

7-1, Common mode:



7-2, Differential mode:



(8) Electrical Characteristics

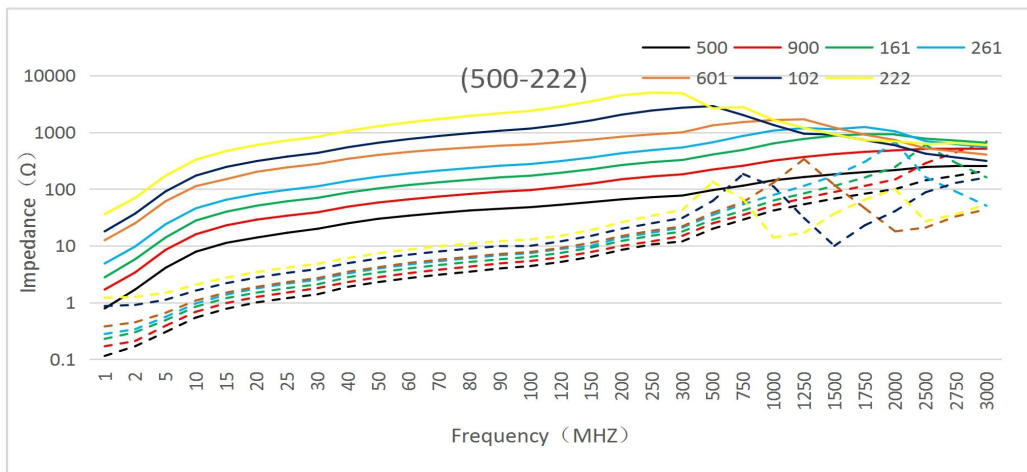
Part No.	Z (共模阻抗) @100MHZ	DCR	IR	Rated Voltage (Vdc)	Irms
	Ω	mΩ	MΩ	V	mA
	±25%	MAX	MIN	/	MAX
ASCM3216-2-500TF	50	250	10	50	400
ASCM3216-2-900TF	90	300	10	50	370
ASCM3216-2-161TF	160	400	10	50	340
ASCM3216-2-261TF	260	500	10	50	310
ASCM3216-2-601TF	600	800	10	50	260
ASCM3216-2-102TF	1000	1000	10	50	230
ASCM3216-2-222TF	2200	1200	10	50	200

Notes

1. All test data is referenced to 25 °C ambient.
2. Operating temperature range -40 °C to + 125°C (Including self - temperature rise) .
3. I_{rms} (A):DC current (A) that will cause an approximate ΔT of 40 °C(reference ambient temperature is 25 °C).
4. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions. all affect the part temperature. Part temperature should be verified in the end application.

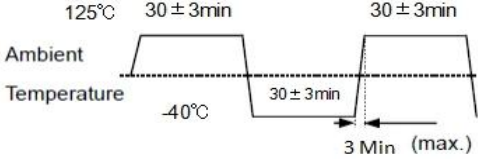
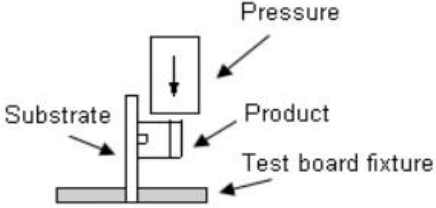
(9) Typical impedance vs. frequency

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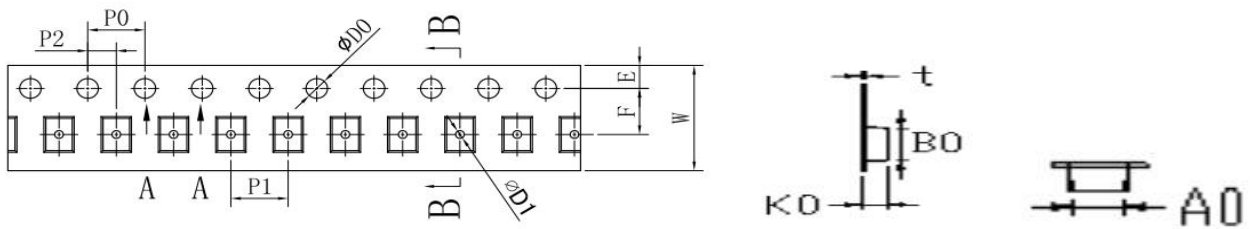


(10)Reliability Test

Test item	Performance	Test details
Operating temperature	1. No visible mechanical damage 2. Impedance change: Within±20% 3. Insulation resistance: 10MΩ min	1. Reflow 2 times 2. temperature: 155± 2 °C
Resistance to Soldering Heat	1. No visible mechanical damage 2. Impedance change: Within±20%	1. Solder on PCB to Reflow test Peak Temp. 260±5°C 5~10 secs ,Cycles :2 times..Re-flowing Profile: Please refer to Fig-1 2. Test board thickness: 1.5mm 3. Test board material: glass epoxy resin 4. The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.product showed no damage under microscope.
<p>Fig-1</p>		
High Temperature	1. No visible mechanical damage 2. Impedance change: Within±20% 3. Insulation resistance: 10MΩ min	1. Temperature: 125±2°C 2. Duration: 1000 hours The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.
Steady damp-heat	1. No visible mechanical damage 2. Impedance change: Within±20% 3. Insulation resistance: 10MΩ min	1. Temperature:85°C 2. Humidity: 85% RH 3. Duration:1000 hours 4. The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.
Mechanical Vibration	1. No visible mechanical damage 2. Impedance change: Within±20%	1. Frequency: 10HZ~55HZ~10HZ/Min Cycles 2. Amplitude: 1.5 mm 3. Directions: X,Y,Z 4. Time: 2 hours in each directions (total of 6 hours)

Test item	Performance	Test details
Thermal Shock	1. No visible mechanical damage 2. Impedance change: Within±20% 3. Insulation resistance: 10MΩ min	1. Temperature and time: -40℃ for 30±3 min→125℃ for 30±3min, please refer to Fig-2 2. Transforming interval: Max. 3 Min 3. Tested cycle: 1000 cycles 4. The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made. 
Salt Spray	1. No visible mechanical damage 2. Impedance change: Within±20%	1. Salt concentration: (5 ± 1)% (mass percent) 2. pH value:6.5 - 7.2 3. temperature: 35 ± 2 ℃ 4. humidity: 85% 5. time: 24 hours 6. in normal temperature and humidity for 1 ~ 2 hours, testing inductance, the inductance value change can not be more than before test ± 10%.
Terminal strength	No visible mechanical damage	1. The electrode of the inductor is soldered to the PCB, to Fig-3 Then apply a force in the direction of the arrow. 2. 5N force. 3. Keep time: 10(±1)s The first three tests were OK, and the force was applied until the peak value of the product peeling. The test speed was set in the range of 3 ~ 8mm/min. 

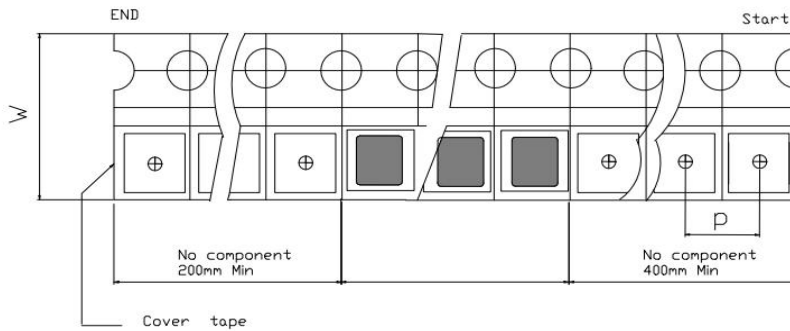
(11)Packaging Information
 11-1, Tape Packaging Dimensions



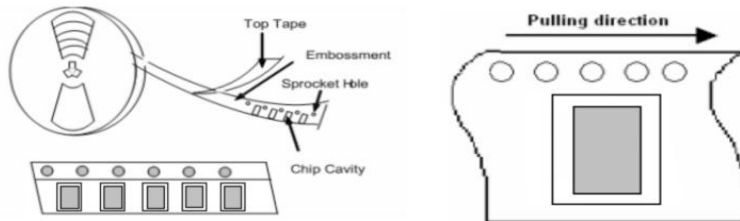
(Unit: mm)

Type	W	P1	A0	B0	K0	t	E	F	P2	D0	D1	P0
ASCM3216	8.00 ±0.10	4.00 ±0.10	1.90 ±0.10	3.60 ±0.10	1.95 ±0.10	0.25 ±0.05	1.75 ±0.10	3.50 ±0.10	2.00 ±0.10	1.55 ±0.05	1.00 ±0.05	4.00 ±0.10

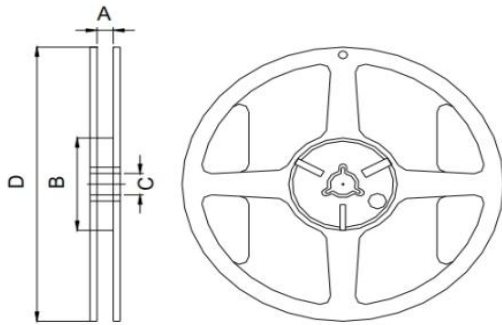
11-2, Leader and blank portion



11-3, Taping Drawings



11-4, Reel Dimensions (Unit: mm)



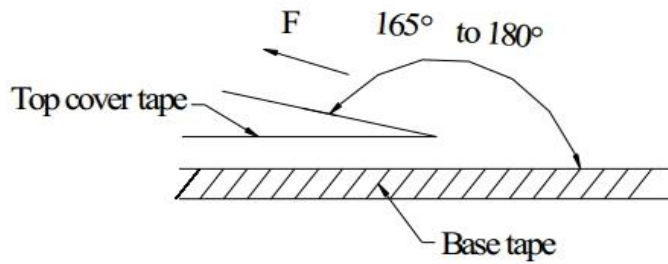
A (mm)	9.50 ± 1.0
B (mm)	60.0 ± 1.0
C (mm)	13.0 ± 0.2
D (mm)	178.0 ± 1.0

11-5, Packaging Quantity

Type	Standard Quantity		
	Reel	Inner box	Carton box
ASCM3216	2000 pcs / reel	5 Reel / box (10000 pcs)	10 Middle boxes, (100000 pcs)

11-6, Peel force of top cover tape

The peel speed shall be about 300mm/minute.
 The peel force of top cover tape shall be between 10 to 100gf.



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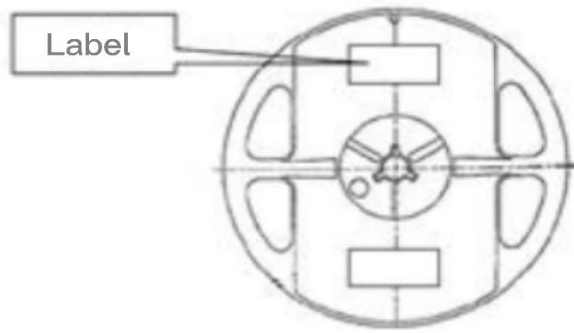
11-7, Reel Label

Label on the reel

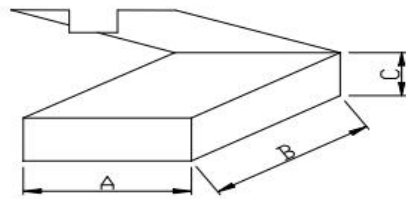
- Customer's part Number
- Lot Number
- Quantity
- Date code

Shipping Label

- Customer's part Number
- Manufacturer's part Number
- Quantity
- Date code

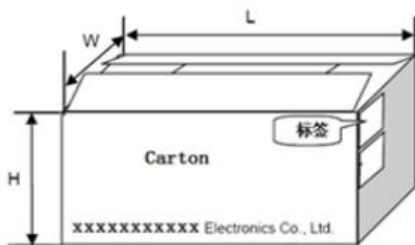


11-8, Inner Box



Packaging Type	A (mm)	B (mm)	C (mm)
Inner box	188	195	67

11-9, Carton



Packaging Type	L (mm)	W (mm)	H (mm)
Carton	390	350	215

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单击下面可查看定价，库存，交付和生命周期等信息

[>>ASDI](#)