muRata

Messrs.: Specification No. JEEA243-0080

QUADREP MARKETING (S) PTE LTD

Product Specification for Approval

Issued Date: Oct . 02 . 2015

Part Description : Microwave Absorbers

Customer Part No. :

MURATA Part No. : EA1026A type

RoHS regulation conformity parts.

Acknowledgement of approval

We have approved the attached specification.
Date: Company: Dept.:
Approved by (Signature) (Type Writing)

Sales office

(Signature)
(Type)

(Company name/Dept.)

Technical Dept.

Prepared by

J. Takaoka (Signature)

T.Takaoka (Type)

Representative

H. Yamada (Signature)

H.Yamada (Type)

Product Engineering Sec.4
Product Engineering Dept.
EMI Filter Division
Murata Mfg. Co., Ltd.

(Company name/Dept.)

EMC Absorber EA1026A type Specification

1.Scope

This specification applies to EMC Absorber EA1026A type.

2.Part Numbering

(ex.) EA1026 A 100 M070060 S

Type	Tape type	Sheet Thickness (100:1.00mm)	Product Dimensions (M:mm/070060 M:mm/ 7.0mm×6.0mm)	individual specification

3. Part Number and Rating

· Operating Temperature : -40°C to +80°C

· Storage Temperature : -40°C to +80°C

Customer Part Number	Part Number	Applicable Center Frequency (Typ.) (GHz)	Sheet Thickness (mm)	Adhesive tape Thickness (Typ.) (mm)
	EA1026A100M070060S	20.0	1.0±0.1	0.17
	EA1026A100M100050S			
	EA1026A160M060040S	11.5	1.6±0.1	
	EA1026A160M080028S			
	EA1026A160M080035S			
	EA1026A160M080045S			
	EA1026A160M080060S			
	EA1026A160M095065S			

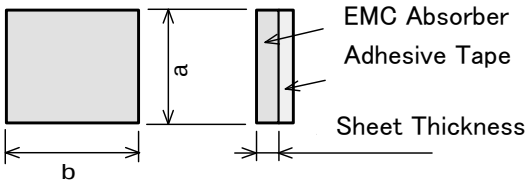
4.Standard Testing Conditions

《The standard condition (JIS K6250)》

Temperature : 23°C ± 2°C

Humidity : 45%RH～ 55%RH

5.Style and Dimensions



(in:mm)

Part Number	a	b
EA1026A100M070060S	7.0	6.0
EA1026A100M100050S	10.0	5.0
EA1026A160M060040S	6.0	4.0
EA1026A160M080028S	8.0	2.8
EA1026A160M080035S	8.0	3.5
EA1026A160M080045S	8.0	4.5
EA1026A160M080060S	8.0	6.0
EA1026A160M095065S	9.5	6.5

Construction	Material	Mtl Dsg	Flame Class	UL fileNo.	Maker	Remark
EMC Absorber	Composite magnetic material (Silicone rubber+ Soft magnetic material)	IS-□□	UL94V-0	E62753	TAKECHI Co.,LTD.	Non-halogene
Adhesive tape	Double-sided adhesive tape (Nonwoven + Adhesive)	No.500	—	—	NITTO DENKO CORPORATION	Non-halogene

6.Electrical Performance

No.	Item		Specification EA1026	Test Method
6.1	Magnetic Permeability - Reluctance	3GHz	0.5 min.	S-Parameter Method (Fig.1)
		6GHz	0.5 min.	
		12GHz	0.5 min.	
6.2	Volume resistivity(Ω·cm)		1.0×10^{10}min.	Fig.2
6.3	Surface resistivity(Ω)		1.0×10^{10}min.	Fig.2

7.Mecanical Performance

No.	Item	Specification EA1026	Test Method
7.1	Tensile Strength(MPa)	2 min.	JIS K6251
7.2	Elongation(%)	120 min.	JIS K6251
7.3	Hardness(DUROMETER type A)	60±10	JIS K6253
7.4	Specific Gravity	2.9±0.2	JIS Z8807
7.5	Tape Adhesive Strength(N/cm)	4.0 min.	JIS Z1528(Fig.3)

8.Environmental Performance

No.	Item	Specification	Test Method
8.1	Heat Resistance	Meet Table 1.	Temperature : 100°C±1°C Time : 96h(+2h,-0h)
8.2	Cold Resistance		Temperature :-40°C±1°C Time : 96h(+2h,-0h)
8.3	Humidity		Temperature : 60°C±1°C Humidity : 90%RH to 95%RH Time : 96h(+2h,-0h)
8.4	Temperature Cycle		1 cycle: 1 step:-40°C±1 °C/ 60min(+6min,-0min) 2 step: +80°C±1 °C/ 60min(+6min,-0min) Total of 20 cycles

Table 1

Item		Specification EA1026
Magnetic Permeability - Reluctance	3GHz	0.5 min.
	6GHz	0.5 min.
	12GHz	0.5 min.
Volume resistivity(Ω·cm)		1.0×10^{9} min.
Surface resistivity(Ω)		1.0×10^{9}min.
Tensile Strength(MPa)		1.5 min.
Elongation(%)		75 min.
Hardness(DUROMETER type A)		60±10
Specific Gravity		2.9±0.2
Tape Adhesive Strength(N/cm)		2.0 min.

9.Packaging Style

(1)Packaging Style

Plastic bag(include products) is packed in the box.

(2)Marking for Plastic Bag

The following items shall be marked on a label and the label is sticked on the plastic bag.

(Customer part number, MURATA part number, Inspection number(∗1), RoHS marking(∗2), Quantity, etc)

∗1) « Expression of Inspection No. » □□ (1) OOOO (2) ××× (3)

(1) Factory Code

(2) Date First digit : Year / Last digit of year
Second digit : Month / Jan. to Sep. → 1 to 9, Oct. to Dec. → O,N,D
Third, Fourth digit : Day

(3) Serial No.

∗2) « Expression of RoHS marking » ROHS – Y (△)
(1) (2)

(1) RoHS regulation conformity parts.

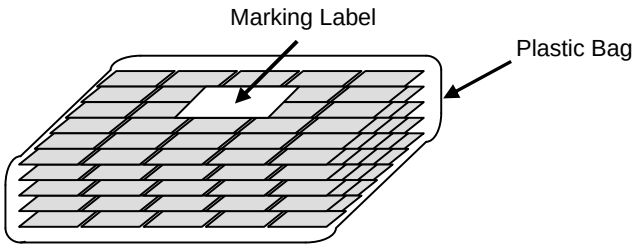
(2) MURATA classification number

(3)Marking for Outer package

The following items shall be marked on a label and the label is sticked on the box.

(Customer name, Purchasing Order Number, Customer Part Number, MURATA part number, RoHS marking(∗2) , Quantity , etc)

(4) Plastic Bag / Outer Package



Part Number	Pcs / sheet	Sheet / Plastic Bag	Product./ Plastic Bag	Outer Package (230×230×60mm)
EA1026A100M070060S	1050 pcs	20 sheet	21000 pcs	Max.2 bags Gross weight (including carton box) : Approximately 6 kg
EA1026A100M100050S	882 pcs		17640 pcs	
EA1026A160M060040S	1820 pcs		36400 pcs	Max.1 bags Gross weight (including carton box) : Approximately 5 kg
EA1026A160M080028S	1950 pcs		39000 pcs	
EA1026A160M080035S	1560 pcs		31200 pcs	
EA1026A160M080045S	1196 pcs		23920 pcs	
EA1026A160M080060S	910 pcs		18200 pcs	
EA1026A160M095065S	704 pcs		14080 pcs	

*Above Box size is typical. It is depend on a quantity of an order.

10. ⚠ Caution

10.1 Limitation of Applications

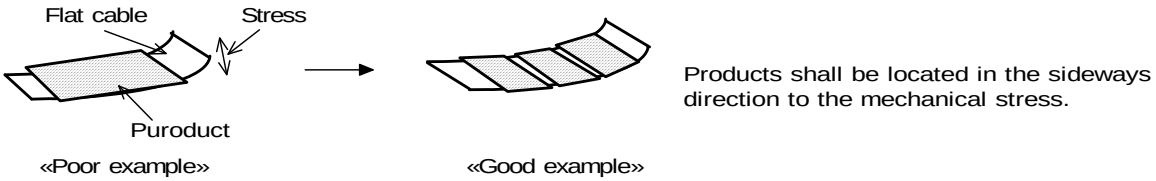
Please contact us before using our products for the applications listed below which require especially high Reliability for the prevention of defects which might directly cause damage to the third party's life, body or property.

(1)Aircraft equipment
(2)Aerospace equipment
(3)Undersea equipment
(4)Power plant control equipment
(5) Medical equipment
(6)Disaster prevention / crime prevention equipment
(7)Traffic signal equipment
(8)Transportation equipment (vehicles,trains,ships,etc.)
(9)Data-processing equipment
(10)Applications of similar complexity and /or reliability requirements to the applications listed in the above

11. Notice

11.1 Adhesive Tape Stress

This product is designed for using the adhesive tape to hold itself to the object.
And please avoid suffering any mechanical stress cause by the bending or variation of the object.



11.2 Cleaning

Avoid cleaning product.

11.3 Handling of the product

Adhesive tape must be clean to keep the quality of tape.
And please wipe off any dirt, dust and any kind of oil from the surface of the object, before use it.

11.4 Storage Requirements

(1) Storage period
Products which inspected in MURATA over 6 months ago should be examined and used, which can be confirmed with inspection No. marked on the container.
Adhesiveness should be checked if this period is exceeded.

(2) Storage conditions
·Products should be storage in the warehouse on the following conditions.
Temperature : -10°C to 40°C
Humidity : 30% to 70% relative humidity
No rapid change on temperature and humidity
·Products should be storaged in the warehouse without heat shock, vibration, direct sunlight and so on.

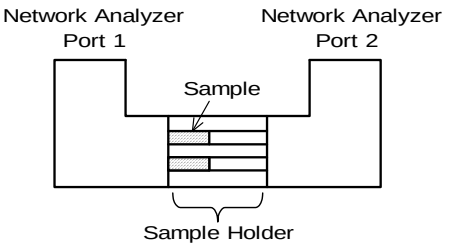
12. Manufacturer

This product is produces by following manufacturer.
Manufacturer : TAKECHI Co.,LTD.

13. ⚠ Note

(1) Please make sure that your product has been evaluated in view of your specifications with our product being mounted to your product.
(2) You are requested not to use our product deviating from the agreed specifications.
(3) Please return one duplicate of this product specification to us with your signature to acknowledge your receipt. If the duplicate is not returned by two month after issued date, the product specification will be deemed to have been received by you.
(4) We consider it not appropriate to include any terms and conditions with regard to the business transaction in the product specifications, drawings or other technical documents. Therefore, if your technical documents as above include such terms and conditions such as warranty clause, product liability clause, or intellectual property infringement liability clause, they will be deemed to be invalid.

Fig.1 S-Parameter Method



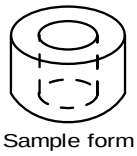


Fig.2 Measuring Method of Resistivity

(1)Set the sample in the test equipment,
and measure the Resistance.
(2)Expression of Resistivity rate
Volume Resistivity(ρ)= $\pi \cdot d^2/(4t) \times Rv$
Surface Resistivity(ρ)= $\pi (d+D)/(D-d) \times Rs$
Rv:Measured Volume Resistance
Rs:Measured Surface Resistance
T:Thickness of Sample

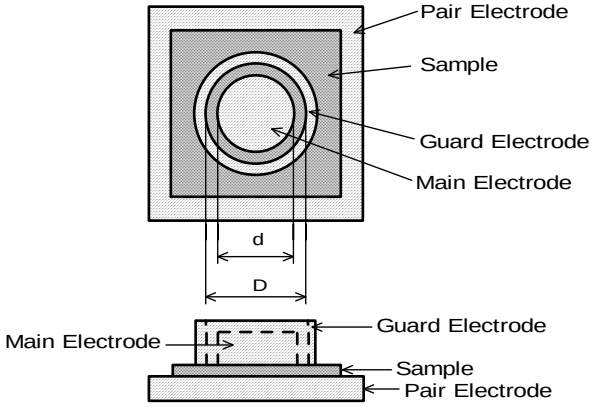


Fig.3 Measurment of Tape Adhesive Strength

(1)Size of sample:10×50mm(10×20mm:Adhesive Tape portion, 10×30mm:Grip portion for test)
(2) Put the PET film to the EMC Absorber in order to reinforce it.
(3)Using Aluminium Plate, Tape Adhesive Strength is measured by following conditions:
Speed:100mm/min Angle:90°
(4)For other detail for the testing, please reffer to the standard JIS Z 0237(for Adhesive Tape and Sheet test method), and JIS Z 1528(90° Tape Adhesive StrengthTape measurrment method).

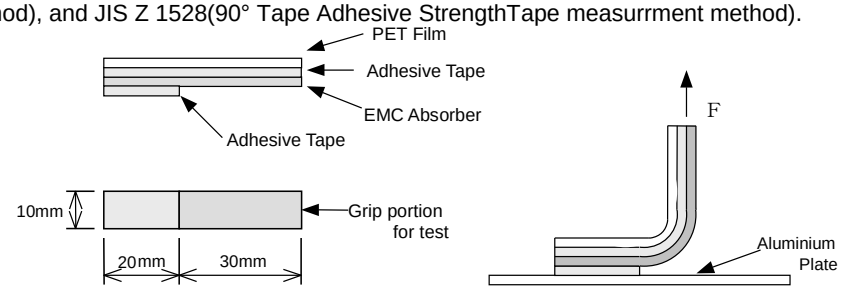


Fig.4 Reflection Loss (Typ.)