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Agent



## Conductive/Shielding Adhesive Tapes

teraoka

► CONDUCTING

► SHIELD ► ADHESIVE TAPE



# An adhesive tape supports the evolution of digital devices.

Continuing to respond to the needs of the times. This is the mission pursued by TERAOKA. Conductive and shielding tapes protect information equipment of the IT age from static electricity and electromagnetic wave disturbance.

The countermeasure against static electricity and electromagnetic wave disturbance in a limited space is increasingly needed due to the downsizing and functional diversification of digital devices.

The versatile lineup of TERAOKA's products can respond to these needs.



## Why Not Achieve Ultimate Efficiency and Enhanced Productivity Using TERAOKA's Versatile Products and State-of-the-Art Technology?

### **■** Tape List

## Single side coated conductive adhesive tapes

Conductive cloth adhesive tape	No.1825 No.1829
Copper foil conductive adhesive tape	No.8313 No.8315 No.8323
Aluminum foil conductive adhesive tape	No.8303 No.8304

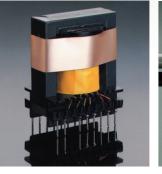
## Double-coated conductive adhesive tapes

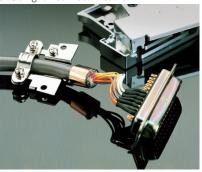
Copper foil	No.792 No.795 No.796
Aluminum foir	No.791
Baseless	No.7025
Non-woven fabric	No.7741

Select the type that suits your requirements most from the following types: Type that uses an adhesive which achieves a high vertical electric conductivity just by adhering it. Type that uses a metal foil excellent in reliability. Cloth type that is light in weight and excels in flexibility. Flame retardant type (approved by UL 510 Flame retardant). Has safety Double-coated adhesive type.

hielding for Switching Transformer Shi







### NDUCTING/SHIELD/ADHESIVE TAPE CONDUCTING/SHIELD/ADHESIVE TAPE

### Flame retardant conductive cloth adhesive tape — No.1825

## Low VOC Halogen free flame retardant conductive cloth adhesive tape

No.1829

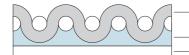
#### **Features**

- ■Excellent shielding performance
- ■Extermely flexible-can be fitted closely to projections and indentations
- Superior mechanical strength
- Able to withstand bending-endured over 10,000 flexes without damage in JIS P8115 breakage test (tensile force:9.8N), compared with 14 times for electrolytic copper foil and 20 times for
- compared with 14 times for electrolytic copper foil and 20 times for rolled copper foil
- Low resistance electrical conductivity only apply
- Light and easy to work with
- ■UL510 flame retardant (file No.E56086)
- No.1829 is a halogen and antimony free flame retardant agent No.1829 is a low VOC product (Toluene xylene free adhesive)

#### Uses

- ■Shielding for cables, connectors,etc
- ■Auxiliary materials for shielded rooms
- ■EMI/RFI shielding
- ■Static charge draining, grouding

#### Structure



Metallic woven fabric coatingAcrylic adhesive conductive

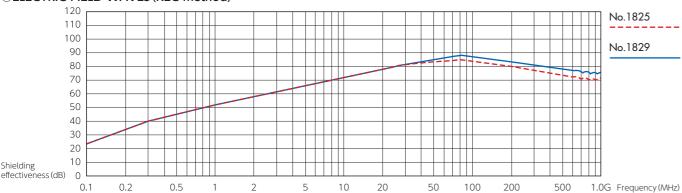
— Release liner

#### **General Characteristics**

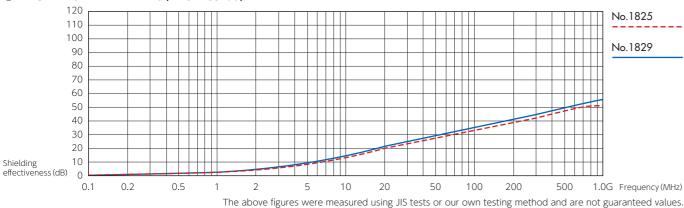
Item	No.1825 No.1829	
Coated metal	Nickel/copper	Nickel/copper
Fabric/weave method	Polyester/ripstop	Polyester/ripstop
Tape thickness mm	0.120	0.095
Standard length m	20	20
Peel adhesion N/W.25mm	11.0	11.8
Tensile strength N/W.25mm	265	195
Electrical resistance Ω/cm <sup>2</sup>	0.03	0.01

#### Shielding Characteristics

#### **CELECTRIC FIELD WAVES (KEC method)**



#### OMAGNETIC FIELD WAVES (KEC method)



## Copper foil conductive adhesive tapes

No.8313 No.8315 No.8323

Aluminum foil conductive adhesive tape — No.8303 No.8304

#### Features

- ■Excellent depthwise and lengthwise conductivity possible simply by applying tape
- ■Those 5 tapes are Flame retardant.
- No.8323 8303:UL510 flame retardant (file No.E56086)
- No.8313 is a low VOC product (Toluene xylene free adhesive)

#### Uses

- ■EMI/RFI shielding
- ■Shielding for cables, connectors,etc
- ■Static charge draining, grounding
- ■Shielding for housing
- ■Attachment, fixing, temporary positioning of parts
- Fixing of electrodes, etc.

#### Structure

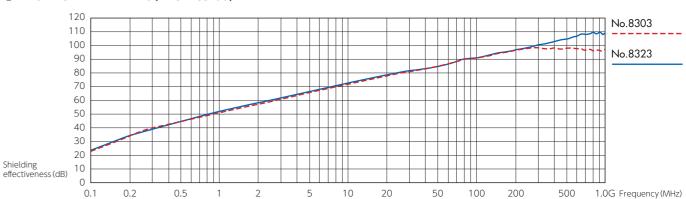
Copper or aluminum
———— Conductive adhesive
Release liner

#### **General Characteristics**

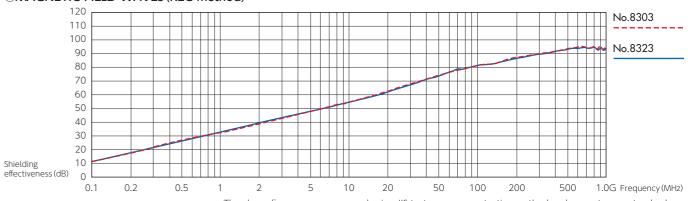
Item	No.8313	No.8315	No.8323	No.8303	No.8304
Backing	Electrolytic copper foil	Electrolytic copper foil	Rolled copper foil	Aluminum foil	Aluminum foil
Backing thickness mm	0.009	0.018	0.035	0.050	0.020
Tape thickness mm	0.030	0.050	0.070	0.085	0.050
Standard length m	20	20	20	20	20
Peel adhesion N/W.25mm	13.5	14.8	8.58	9.81	12.7
Tensile strength N/W.25mm	114.3	197.5	98.1	80.9	29.4
Electrical resistance Ω/cm <sup>2</sup>	0.02	0.02	0.04	0.08	0.06

#### Shielding Characteristics

#### OELECTRIC FIELD WAVES (KEC method)



#### OMAGNETIC FIELD WAVES (KEC method)



### NDUCTING/SHIELD/ADHESIVE TAPE

### CONDUCTING/SHIELD/ADHESIVE TAPE

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#### Features

- ■Excellent depthwise and lengthwise conductivity possible simply by applying tape
- ■Thermal conductivity only apply
- ■No.795、No.796 have tape roll up by release liner inside and out side adhesive form.
- ■No.796 is a low VOC product (Toluene xylene free adhesive)

#### Uses

- ■Stratic charge draining,grouding
- ■To fix static eliminators
- ■Attachment,fixing,temporary positioning of parts
- ■For thermal conduction

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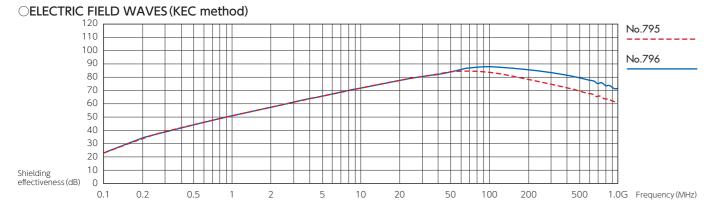
#### **General Characteristics**

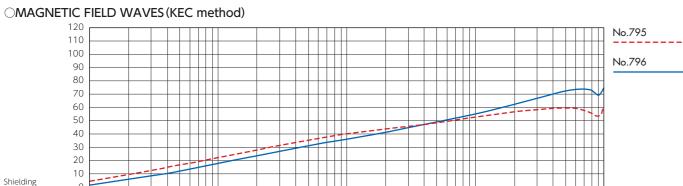
Item	No.791	No.792	No.795	No.796
Backing	Aluminum foil	Rolled copper foil	Electrolytic copper foil	Electrolytic copper foil
Backing thickness mm	0.020	0.035	0.018	0.009
Tape thickness mm	0.130	0.090	0.060	0.050
Standard length m	20/50	20/50	30	20
Peel adhesion N/W.25mm	14.7	8.58	7.50	7.50
Shear adhesive strength N/4cm <sup>2</sup>	441	490	_	_
Electrical resistance Ω/cm²	0.50	0.02	0.05	0.03
Thermal conductivity W/m·K	≧5.0	≧5.0	≧5.0	≧5.0

The above figures were measured using JIS tests or our own testing method and are not guaranteed values.

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#### **Shielding Characteristics**





## Conductive baseless adhesive tape No.7025

# Non- woven fabric double-coated conductive adhesive tape No.7741

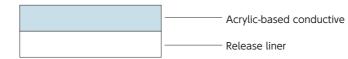
#### Features

- ■thin and light. (for baseless)
- ■Excellent depthwise conductivity possible simply by applying tape

#### Uses

■To fix static eliminators

#### Structure



#### **General Characteristics**

Item	No.7025
Backing	Non-backing
Tape thickness mm	0.035
Standard length m	20
Peel adhesion N/W.25mm	12.5
Electrical resistance Ω/cm²	0.01

The above figures were measured using JIS tests or our own testing methods and are not guaranteed values.

#### **Features**

- Flexible conductive non- woven fabric backing for using in sharp bending part.
- Extermely flexible-can be fitted closely to projections and indentations.
- ■Low VOC product (Toluene xylene free adhesive)

#### Uses

- ■EMI/RFI shielding
- Fixing of FPC and bezel.

#### Structure

———— Acrylic-based conductive
——— Non- woven fabric
———— Acrylic-based conductive
Release liner

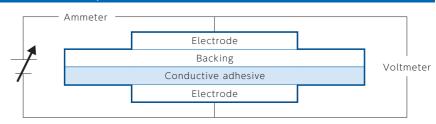
#### **General Characteristics**

Item	No.7741
Backing	Non- woven fabric
Tape thickness mm	0.050
Standard length m	20
Peel adhesion N/W.25mm	10.6
Tensile strength N/W.25mm	0.02

The above figures were measured using JIS tests or our own testing methods and are not guaranteed values.

#### Electrical Resistance Measurement Method (Equivalent to MIL Standard 202C Method 303)

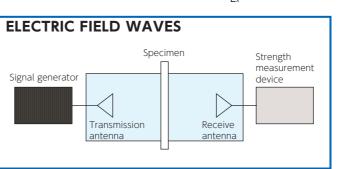
A load of 3.43N per 1cm<sup>2</sup> is applied to the electrode, and electrical resistance under a 0.1 ampere current calculated using R=V/I.



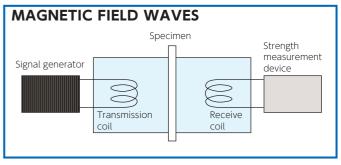
#### Shielding Characteristic Measurement Method (KEC Method)

Where  $E_0$  represents electric field strength (or  $H_0$ : magnetic field strength) in a space without shielding, and where Ex represents electric field strength (or  $H_x$ : magnetic field strength) in a space with shielding, the shielding effectiveness is calculated as follows:

SE (shielding effectiveness) = 
$$20 \log_{10} \frac{E_0}{E_x}$$
 [dB]



SE(shielding effectiveness) = 20  $log_{10} \frac{H_0}{H_x}$  [dB]



effectiveness (dB)

0.1