

## Application Notes for Surge Absorber

### 1. Circuit Design

Type KVA Surge Absorber is a part for protection from static electricity and cannot be used for protection from lightning surge. Before using Type KVA Surge Absorber, sufficiently examine its electrical characteristics and the circuit conditions to be mounted.

- (1) Type KVA should always be operated below the rated voltage.
- (2) Please use Type KVA under the condition of category temperature.

Type KVA should be selected by determining the operating conditions that will occur after final assembly, or estimating potential abnormalities through cycle testing.

### 2. Assembly and Mounting

During the entire assembly process, observe Type KVA body temperature and the heating time specified in the performance table. In addition, observe the following items :

- (1) Mounting and adjusting with soldering irons are not recommendable since temperature and time control is difficult.  
In case of emergency for using soldering irons, be sure to observe the conditions specified in the performance table.
- (2) Type KVA body should not have direct contact with a soldering iron.
- (3) Once Type KVA mounted on the board, they should never be remounted on boards or substrates.
- (4) During mounting, be careful not to apply any excessive mechanical stresses to Type KVA.
- (5) Should not rub the protective coat surface with a cotton swab or abrush, it might cause the lack for marking and protective coat.

### 3. Solvents

For cleaning of Type KVA, immersion in isopropyl alcohol for 90 seconds (at 20 ~ 30°C liquid temp.) will not be damaged.

If organic solvents (Pine Alpha™, Techno Care™, Clean Through™, etc.) will be applied to Type KVA, be sure to preliminarily check that the solvent will not damage Type KVA.

### 4. Caution During Usage

Type KVA should never be touched in use.

### 5. Environmental Conditions

- (1) Type KVA should not be operated in acid or alkali corrosive atmosphere.
- (2) Type KVA should not be vibrated, shocked, or pressed excessively.

(3) Type KVA should not be operated in a flammable or explosive atmosphere.

(4) Please do not use Type KVA in the environment where dew condensation occurs.

In case Type KVA has to be used under the dew condensation condition, please apply moisture-proof coating over Type KVA . Covering Type KVA with moisture-proof coating may affect electrical characteristics, please evaluate the effects sufficiently before use.

### 6. Emergency

In case of fire, smoking, or offensive odor during operation, please cut off the power in the circuit or pull the plug out.

### 7. Storage

(1) Type KVA should be stored at room temperature (-10°C ~ +40°C) without direct sunlight but not in corrosive atmosphere such as H<sub>2</sub>S (hydrogen sulfide) or SO<sub>2</sub>(sulfur dioxide).

Direct sunlight may cause decolorization and deformation of the exterior and taping.

Also, there is a fear that solderability will be remarkably lower in high humidity.

(2) If the products are stored for an extended period of time, please contact us for recommendation.

The longer storage term causes packages and tapings to worsen. If the products are stored for longer term, please contact us for advice.

(3) The products in taping, package, or box should not be given any kind of physical pressure. Deformation of taping or package may affect automatic mounting.

### 8. Disposal

When Type KVA are disposed of as waste or "scrap", they should be treated as "industrial waste". Type KVA contain various kinds of metals and resins.

### 9. Samples

Type KVA received as samples should not be used in any products or devices in the market. Samples are provided for a particular purpose such as configuration, confirmation of electrical characteristics, etc.



**MATSUO ELECTRIC CO., LTD.**

Please feel free to ask our sales department for more information on the Surge Absorber.

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The specifications on this catalog are subject to change without prior notice. Please inquire of our Sales Department to confirm the specifications prior to use.