



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 recommended 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 contact a soldering iron directly.
- (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 the 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 will be used 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 stored or operated in the presence of acids, or alkalis, or 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 not be stored in an environment with high temperature, low temperature, high humidity, condensation and dust and avoid direct sunlight or corrosive atmosphere such as H₂S(hydrogen sulfide) or SO₂(sulfur dioxide).
Direct sunlight may cause decolorization and deformation of the exterior and taping.
Also, solderability will be remarkably lower in high humidity.
- (2) If the products are stored for an extended period of time, please contact Matsuo Sales Department for recommendation. The longer storage term causes packages and tapings to worsen. If the products will be 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.
- (4) The plastic reel (made of PS) used for packaging the product is intended for use in ambient temperatures (5-35°C). To prevent issues during automated insertion due to reel deformation or other factors, please keep the reel away from direct sunlight and heat sources, and ensure it does not reach high temperatures (above 60°C), including during transportation.

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.



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Please feel free to ask our Sales Department for more information on Surge Absorber.

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