### ■ Notice (Storage and Operating Condition)

- Do not use the trimmer capacitor under atmosphere of RTV silicone rubber (Room Temperature Vulcanizing Silicone Rubber) except Acetone liberating silicone sealant.
- 2. Before using trimmer capacitors, please store under the conditions of -10 to +40°C and 30 to 85%RH.
- 3. Do not store in or near corrosive gasses.
- 4. Use within 6 months of delivery.
- 5. Do not store under direct sunlight.

## Notice (Soldering and Mounting)

- 1. Soldering
  - (1) Can be soldered by reflow soldering method, flow soldering method, and soldering iron.
  - (2) Soldering conditions
     Refer to the temperature profile.
     If the soldering conditions are not suitable, e.g., excessive time and/or excessive temperature, the trimmer capacitor may deviate from the specified characteristics.
  - (3) The amount of solder is critical.
  - (4) The thickness of solder paste should be printed from 150 micro m to 200 micro m and the dimension of land pattern should be Murata's standard land pattern used at reflow soldering. Insufficient amounts of solder can lead to insufficient soldering strength on PCB. Excessive amounts of solder may cause bridging between the terminals or contact failure due to flux wicking up.
  - (5) When using soldering iron, the string solder shall be applied to the lower part of the terminal only. Do not apply flux except to the terminals. Excessive amounts of solder and/or applying solder to the upper part of the terminal may cause fixed rotor or contact failure due to flux invasion into the movable part and/or the contact point. The soldering iron should not come in contact with the plastic case of the trimmer capacitor. If such contact does occur, the trimmer capacitor may be damaged.
  - (6) Our recommended chlorine content of solder is as follows.
    - (a) Solder paste: 0.2wt% max.
    - (b) String solder: 0.5wt% max.

- 6. Do not use the trimmer capacitor under the conditions listed below.
  - (1) Corrosive gasses atmosphere
  - (ex. Chlorine gas, Hydrogen sulfide gas, Ammonia gas, Sulfuric acid gas, Nitric oxide gas,etc.)
  - (2) In liquid (ex. water, oil, medical liquid, organic solvent, etc.)
  - (3) Dusty / dirty atmosphere
  - (4) Direct sunlight
  - (5) Static voltage or electric/magnetic fields
  - (6) Direct sea breeze
  - (7) Other variations of the above
  - (7) Do not use water-soluble flux (for water cleaning). To prevent the deterioration of trimmer capacitor characteristics, apply flux only to terminals.
- 2. Mounting
  - Do not apply excessive force (preferably 5.0N [Ref: 500gf] max.), when the trimmer capacitor is mounted on the PCB.
  - (2) Do not warp and/or bend PCB to protect trimmer capacitor from breakage.
  - (3) When bending the terminals, do not apply excessive force to the body of the product to protect the terminal fixing part from damage.
  - (4) Use a pick-up nozzle of a suitable dimension.
    - > Without cover film type
      - External dimensions of 4.5x4.0mm and 2.5mm bore diameter.
    - > With cover film type
      - 4.0mm external diameter and 2.0mm bore diameter.
- 3. Cleaning [with cover film type]

Isopropyl alcohol and ethyl alcohol are available material for cleaning. If you use any other type of solvent, please evaluate performance in your application. Moreover, please confirm that no damage has occurred to the trimmer capacitor after cleaning in your conditions.

4. Other

Note the polarity of the trimmer capacitor to minimize influence by stray capacitance.

(Refer to the dimensions concerning the polarity.)

Continued on the following page.  $\square$ 

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## **∴**Caution · Notice

#### Continued from the preceding page.

### Notice (Handling)

Use suitable screwdrivers that fit comfortably in driver slot.
 Recommended screwdriver for manual adjustment

## MURATA: KMDR010

(2) Recommended screwdriver bit for automatic adjustment

## MURATA: KMBT010

- When adjusting with a screwdriver, do not apply excessive force (preferably 1.0 N [Ref: 100gf] max.) to minimize capacitance drift. Excessive force applied to the screwdriver slot may cause deformation of the products.
- Do not apply adhesive, lock paints, or any other substances to the trimmer capacitor to secure the rotor position. They may cause corrosion or electrical contact problems.

## ■ Notice (Other)

Before using trimmer capacitors, please test after assembly in your particular mass production system.

- 4. Do not break the cover film before the completion of PCB mounting, soldering, and cleaning.
- 5. Do not clean the trimmer capacitor after the cover film has been broken.
- To break the cover film, first turn the screwdriver more than 360°, and set the capacitance value. (Inserting the screwdriver only will not break the cover film.)

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