# CDBM450C24



Ceramic Discriminator

## 1. Application

This specification is applicable to ceramic discriminator CDBM450C24 use for communication equipment.

#### 2. Electrical Characteristics

This discriminator must need following performance.

2-1) Anti-resonate frequency (Fa) :  $450 \pm 1.5$  KHz.

2-2) Resonant Impedance (Ri): 70 ohms Max.

2-3)  $\triangle$  F(Fa-Fr) :  $48 \pm 5.0$  KHz.

Fr: resonant frequency

2-4) Capacitance (at 1 kHz) :  $550 \text{ pF} \pm 20\%$ .

#### 3. Environmental Test

## 3-1) Temperature Characteristics

At the temperature range of  $25\pm5^{\circ}$ C, the discriminators shall meet the electrical properties in item 2-1~2-4, and at -20~+80°C the Anti-resonant frequency shall not very more than  $\pm 2.0$  kHz.

## 3-2) Vibration

The discriminators shall suffer no mechanical damage and meet the  $2-1\sim2-4$  electrical Characteristics after being vibrated with a sine wave motion having an amplitude of 1.0 mm from 10 to 55KHz per 1 minute, applied for 30 minutes in three different directions (x,y,z).

## 3-3) Humidity

The discriminators shall be place in a humidity chamber at  $90\sim95\%$  relative humidity and  $40\sim45$  °C for a period of minimum 8 hours. The discriminators shall be left for the period of more than 24 hours at the room temperature after its removal from the humidity chamber. The discriminators shall meet the  $2-1\sim2-4$  electrical characteristics and the appearance of discriminators is to be normal.

#### 3-4) Dropped Shock

The discriminators shall suffer no mechanical damage and meet the 2-1~2-4 electrical characteristics outlined on this specification after being dropped 3 times to concrete floor from the 30 cm height.

## 3-5) Solder ability

The terminal surface shall be covered over 3/4 by the solder after dipped the leads into  $230\pm5\,^{\circ}\text{C}$  solder pot containing (Sn 63% Pb 37%) molten alloy for  $3\pm1$  seconds.

## 3-6) Soldering Heat-Resistance

The discriminators shall be assembled to the 1 mm "through-hole" P.C. bored and placed in solder solution (Sn63% Pb37%) at  $250\pm10^{\circ}$ C for duration of  $3\pm1$  seconds. After removal from the solder solution chamber, the discriminators may be cleaned with chlorothene and left for more then 24 hours at the room



temperature. The discriminators shall meet the 2-1~2-4 electrical characteristics are to be normal.

## 3-7) Lead Strength

The discriminators shall suffer no mechanical damage and meet the 2-1~2-4 electrical characteristics outlined on this specification after static load of 1.0 kg for 1 minute is applied in the direction of the insertion side.

## 3-8) Temperature

The discriminators shall be held at each cycle consist of three temperature levels(-20,+25,+80°C) for a period of each 30 minute and repeated 3 cycles. After the test the discriminators may be left for more than 24 hours at the room temperature. The discriminators shall meet the 2-1~2-4 electrical characteristics outlined on this specification and the appearance of discriminators is to be normal.

## 4. Appearance

- 4-1) Appearance and dimension may conform to Fig.1
- 4-2) Identification

The following shall be permanently and legibly marked.

## 5. Dimensions (unit mm)

Fig 1.

