

### 1. SCOPE

This specification is applied to the ceramics discriminator used with the type JT10.7MG48 for FM receiver. Please contact us before using any of the products in the applications not described above.

### 2. PART NO.:

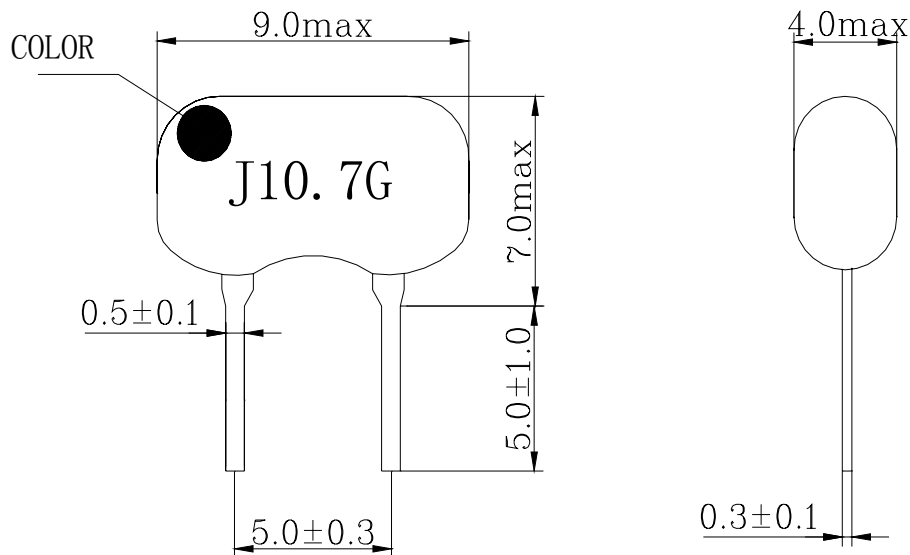
PART NUMBER	CUSTOMER PART NO	SPECIFICATION NO
JT10.7MG48		

### 3 OUTLINE DRAWING AND DIMENSIONS:

3.1 Appearance: No visible damage and dirt.

3.2 Construction: Leads are soldered on electrode and body is molded by resin.

3.3 Dimensions:



UNIT: mm

#### 4 RATING AND ELECTRICAL SPECIFICATIONS:

##### 4.1 RATING

Items	Content
Withstanding Voltage (V)	50 (DC, 1min)
Insulation Resistance $R_i$ (M $\Omega$ ) min.	100
Temp. Coefficient of Frequency (ppm/ $^{\circ}$ C) max	$\pm 100$ (Center Frequency drift, $-20^{\circ}$ C $\sim$ $80^{\circ}$ C)
Operating Temperature Range ( $^{\circ}$ C)	$-20\sim+80$
Storage Temperature Range ( $^{\circ}$ C)	$-40\sim+85$

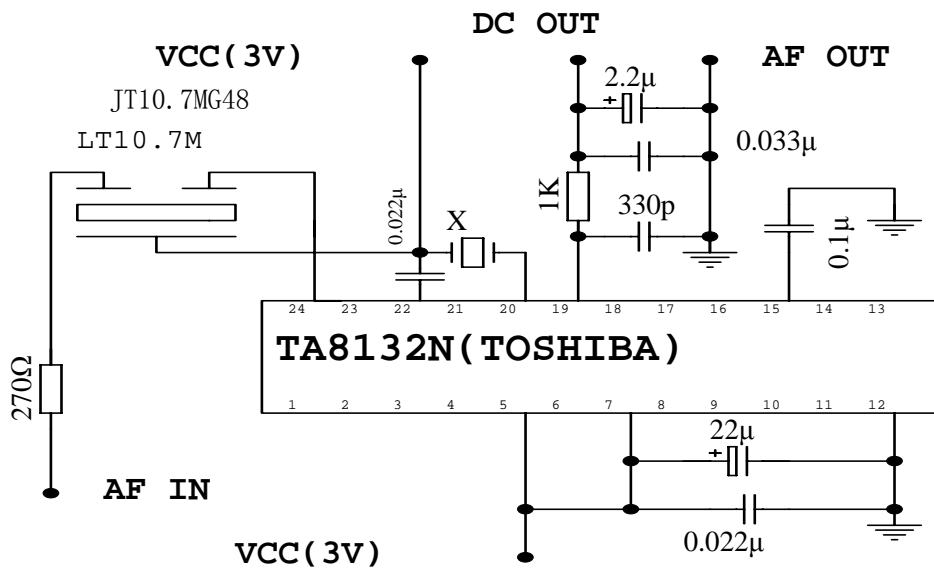
##### 4.2 ELECTRICAL SPECIFICATIONS

Items	Content
Center Frequency $f_o$ (MHz)	A: $10.700\text{MHz} \pm 30\text{KHz}$ (Red)
Recovered Audio Voltage (at $f_o$ ) (mV) min	700
Distortion (at $f_o$ ) (%) max	1.0
Recovered Audio 3dB Bandwidth (kHz) min	400KHz

#### 5 MEASUREMENT:

5.1 Measurement Conditions: Parts shall be measured under a condition (Temp.:  $20\pm 15^{\circ}$ C, Humidity :  $65\pm 20\%$  R.H.) unless the standard condition (Temp.:  $25\pm 2^{\circ}$ C, Humidity :  $65\pm 5\%$  R.H.) is regulated to measure.

##### 5.2 Test Circuit:





5.2.1 Input Signal: Input Level: 112dB  $\mu$  V

Modulation Frequency: 1000Hz

Frequency Deviation:  $\pm$ 75kHz

5.2.2 Center Frequency ( $f_0$ ) : Center frequency is defined as the frequency at that D.C.output voltage shall correspond to 0.6V.

5.2.3 Recovered Audio Voltage: It is defined as the recovered audio voltage at center frequency ( $f_0$ ) .

5.2.4 Distortion: It is defined as the distortion at center frequency( $f_0$ ).

5.2.5 Recovered Audio 3dB Bandwidth: It is defined as the difference between the two frequencies where the recovered audio voltage 3dB from the level of center frequency ( $f_0$ ) .

## 6 PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No	Item	Condition of Test	Performance Requirements
6.1	Humidity	Subject the resonator at $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 90%~95% R.H. for 100h, resonator shall be measured after being placed in natural conditions for 1h.	It shall fulfill the specifications in Table 1.
6.2	High Temperature Exposure	Subject the resonator to $+85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 100h, resonator shall be measured after being placed in natural conditions for 1h.	It shall fulfill the specifications in Table 1.
6.3	Low Temperature Exposure	Subject the resonator to $-25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 100h, resonator shall be measured after being placed in natural conditions for 1h.	It shall fulfill the specifications in Table 1.
6.4	Temperature Cycling	Subject the resonator to $-25^{\circ}\text{C}$ for 30min. followed by a high temperature of $+85^{\circ}\text{C}$ for 30min. Cycling shall be repeated 5 times. Resonator shall be measured after being placed in natural conditions for 1h.	It shall fulfill the specifications in Table 1.
6.5	Vibration	Subject the resonator to vibration for 2h each in x y and z axis with the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10Hz~55Hz and then resonator shall be measured.	It shall fulfill the specifications in Table 1.
6.6	Mechanical Shock	Resonator shall be measured after 3 times' random dropping from the height of 100cm on concrete floor.	No visible: damage and it shall fulfill the specifications in Table 1.



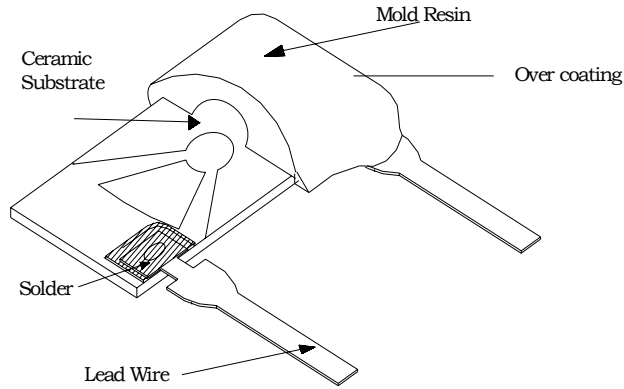
Table Continue

6.7	Resistance to Soldering Heat	Lead terminals are immersed up to 2mm from resonator's body in soldering bath of +260°C ±5°C for 5s ± 1s and then resonator shall be measured after being placed in natural conditions for 1h.	It shall fulfill the specifications in Table 1.
6.8	Solderability	Lead terminals are immersed up to 2mm from resonator's body in soldering bath of +250°C ±5°C for 2s ± 0.5s.	More than 95% of the terminal surface of the resonator shall be covered with fresh solder.
6.9	Terminal Strength	Force of 5N is applied to each lead in axial direction for 10s ± 1s.	No any visible damage and it shall fulfill the specifications in Table1.
	Terminal Pulling	When force of 5N is applied to each lead in axial direction,the lead shall folded up 90°	
	Terminal Bending	from the axial direction and folded back to the axial direction. The speed of folding shall be each 3s	

Table 1

Item	Specification after test
Center Frequency drift	± 30kHz max
Recovered Audio Voltage drift	± 2dB max
Note : The limits in the above table are referenced to the initial measurements.	

## 7. STRUCTURAL CHARACTERISTIC



Component	Material
Lead Wire	Solder plating copper wire
Mold Resin	epoxy resin
Solder	High-melting solder (Sn98-Ag2)
Ceramic Substrate	Lead titanate-zirconate
Over coating	Clear Epoxy Resin

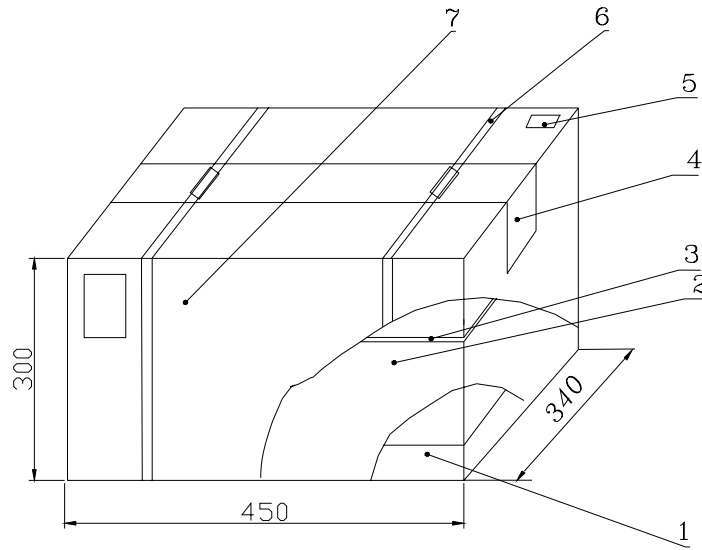
## 8. PACKAGE

To protect the products in storage and transportation, it is necessary to pack them (outer and inner package). On paper pack, the following requirements are requested.

### 8.1 Dimensions and Mark

At the end of package, the warning (moisture proof, upward put) should be stick to it.

Dimensions and Mark (see below)



NO.	Name	Quantity	Notes
1	Inner Box	40	
2	Box	2	
3	Package	1	
4	Adhesive tape	1.2m	
5	Label	1	
6	Belt	2.9m	
7	Certificate of approval	1	

### 8.2 Section of package

Package is made of corrugated paper with thickness of 0.8cm. Package has 2 inner boxes, each has 20 inner boxes (each box for plastic bag).

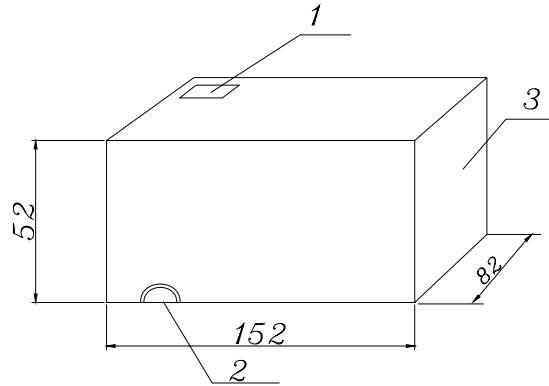
### 8.3 Quantity of package

Per plastic bag                      500 pieces

Per inner box                        3 plastic bag

Per package                        40 inner boxes ( 60000 pieces of piezoelectric ceramic part )

#### 8.4 Inner box Dimensions



UNIT: mm

1	Label
2	QC Label
3	Inner Box

Pars shall be packaged in box with hold down tape upside. Part No., quantity and lot No.

### 9 OTHER

#### 9.1 Caution of use

9.1.1 Do not use this product with bend. Please don't apply excess mechanical stress to the component and terminals at soldering.

9.1.2 The component may be damaged when an excess stress will be applied.

9.1.3 This specification mentions the quality of the component as a single unit. Please insure the component is thoroughly evaluated in your application circuit.

#### 9.2 Notice

9.2.1 Please return one of this specification after your signature of acceptance.

9.2.2 When something gets doubtful with this specifications, we shall jointly work to get an agreement.