CDBM455C28

Ceramic Discriminator

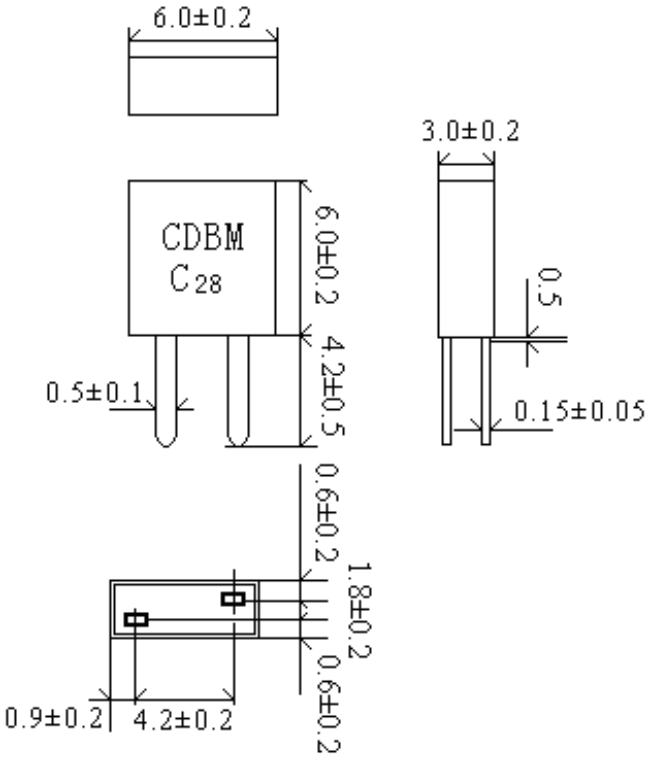
1. APPLICATION

This specification is applied to ceramic discirminator: CDBM455C28
Used for quadrature detection with IC: TA31142F(TOSHIBA)

2. MODEL NAME

Part Name	Customer's Part NO.,	Customer's Draving NO.,
CDBM455C28		

3. DIMENSIONS: (mm)



Material List

Case	Polybutcnetelephthalate (mixture of glass fiber)
Terminal	Phosphor bronze Ag Clad

4. PACKAGING

The products should be packaged for [roducting from the accident which could be caused during transportation or preservation. And part name. quantity and inspection lot No. shall be given to the each minimun packaging unit

5. MAXIMUM RATINGS

5.1 Withstanding Voltage (Betwccn cach terminal) D.C. 5OV. 1 minute

5.2 Insulation Resistance (Between each terminal) 100 MΩ min. at D.C.100V

5.3 Input signal level 5dB (50Ω Termination)

5.4 Operating Temperature Range -20 ℃ to +80 ℃

5.5 Storage Temperature Range -40 ℃ to +80 ℃

6. ELECTRICAL CHARACTERISTICS (0℃ to + 40 ℃)

	Item	Requirements
6-1	Recoverd Audio 3dB Bandwitdth (from 455KHz)	±4.0 KHz min
6-2	Recoverd Audio Output Voltage (at 455KHz)	40 ± 20 mV
6-3	Distortion(at 455KHz)	3.0% max
6-4	Withstanding Voltage	50V D.C. for 1 inute

6-5 Test Method

Input signal Condition Input level : 80dBμ
Frequency Deviation : ±4.0KHz
Modulation Frequency : 1 KHz

1) Recoverd Audio 3dB Bandwidth: Input the above signal and sweep the carrier frequcncy around 455KHz and find out the maximum audio output frequcncy. Then sweep the carrier frequency again and find two frequencies which are obscrvcd -3dB attenuation points from the maximum point. Higher frequency point is called (f1) and lowcr called (f2), (f1-455KHZ)is defined as upper 3dB bandwidth and (455KHz-f2) defined as upper 3dB bandwidth.

2) Recoverd Audio Output Voltage: Recoverd audio output voltage shall be measured when carrier frequency is adjusted to 455KHz.

3) Distortion: Carrier frequency is adjusted to 455KHz. And then, distorion shall be measured with 1 KHz modulation frequency.

6-6 Test Circuit

It is shown in fig 1

7. PRYSICAL AND ENVIRONMENTAL CHARACTERISTICS

	Test Item	Condition of Test	Requirements
7-1	Lead Strength Lead Pulling Lead Bending	After force 1.0Kg is applied to each lead in axial Direction. Filter shall be measured. When force of 0.5Kg is applied to each lead in axial direction the lead shall be folded up to 90° from the axial direction and folded back to the axial direction.	No mechanical damage and the measured values shall meet item 6.
7-2	Vibration	Filter shall be measured after being applied vibration of amplitude of 1.5mm with 600 to 3,300 r.p.m. band of vibration frequency to each of 3 perpendicular directions for 1 hour.	The measured values shall meet Table 1.
7-3	Random Drop	Filter shall be measured after 3 times random dropping from the height of 30cm on concrete floor	
7-4	Temperaturc characteristics	Filter shall be measured within -20 ℃ to +80 ℃ temperature range.	
7-5	Humidity	Filter shall be measured after being placed in a chamber with 90 to 95%R.H.at 40±2℃ for 100 hours and then being placed in natural condition for 1 hour.	
7-6	Resiatance to Soldering Hoat	Lead terminals are immersed up to 1.5mm from filter's body in soldering bath of 260±5℃ for 5±0.5 seconds and then filter shall be measured after being placed in natural condition for 1 hour.	
7-7	Life Test (High Temperature)	Filter shall be measured after being placed in chamber with 80℃ for 100 hours and then being placed in natural condition for 1 hour.	
7-8	Life Test (Low Temperature)	Filter shall be measured after being placed in a chamber with -30℃ for 100 hours and then being placed in natural condition for 1 hours.	
7-9	Thermal Shock	After temperature cycling of -55℃ (30 minutes) to +85℃ (30 minutes) was performed 5 times Filter shall be returned to room temperature.and filter shall be measured after being placed in natural coudition for 1 hours.	

Table 1.

Item	Requrements
Recoverd Audio 3dB Bandwidth (from 455KHz)	±4.0 KHz min
Recoverd Audio Output Voltage (at 455KHz)	40 ± 20 mV
Distortion (at 455KHz)	3.0 % max
Withstanding Voltage	50V D.C.for 1 minute.

Test circuit for ceramic discriminator