

Ceramic Discriminator

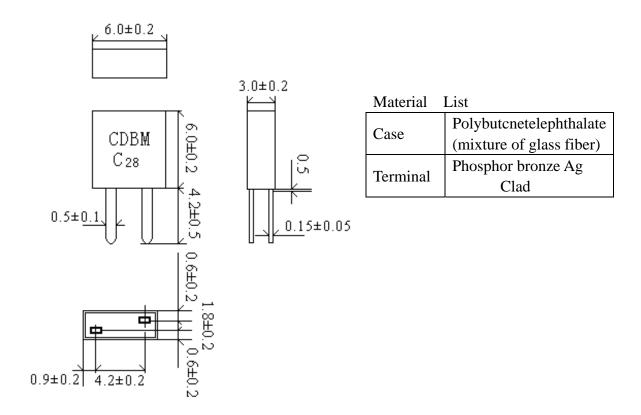
1. APPLICATION

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)



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 minimum packaging unit

SHENZHEN LUGUANG ELECTRONIC TECHNOLOGY CO.,LTD.



Ceramic Discriminator

5. MAXIMUM RATINGS

5.1 Withstanding Voltage D.C. 5OV. 1 minute

(Between each terminal)

5.2 Insulation Resistance $100 \text{ M}\Omega$ min. at D.C.100V

(Between each terminal)

5.3 Input signal level 5dB (50Ω Termination)

5.4 Operating Temperature Range $-20 \degree \text{C}$ to $+80 \degree \text{C}$

5.5 Storage Temperature Range $-40 \degree \text{C}$ to $+80 \degree \text{C}$

6. ELECTRICAL CHARACTERISTICS (0° C to + 40 $^{\circ}$ C)

	Item	Requirements	
6-1	Recoverd Audio 3dB Bandwitdth	±4.0 KHz min	
	(from 455KHz)		
6-2	Recoverd Audio Output Voltage 40 ± 20		
	(at 455KHz)	40 ± 20 m v	
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 frequency around 455KHz and find out the maximum audio output frequency. 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 lower 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

SHENZHEN LUGUANG ELECTRONIC TECHNOLOGY CO.,LTD.



Ceramic Discriminator

7. PRYSICAL AND ENVIRONMENTAL CHARACTERISTICS

	Test Item	Condition of Test	Requirements
	1000 100111	After force 1.0Kg is applied to each lead in axial	requirements
7-1	Lead Strength Lead Pulling	Direction. Filter shall be measured.	No mechanical
		When force of 0.5Kg is applied to each lead in	damage and the
, ,	Lead Bending	axial direction the lead shall be folded up to 90°	measured values
	Lead Bending	from the axial direction and folded back to the	shall meet item 6.
		axial direction.	
	Vibration	Filter shall be measured after being applied	
7-2		vibration of amplitude of 1.5mm with 600 to	
7-2		3,300 r.p.m. band of vibration frequency to each	
		of 3 perpendicular directions for 1 hour.	
		Filter shall be measured after 3 times random	
7-3	Random Drop	dropping from the height of 30cm on concrete	
		floor	
7-4	Temperaturc	Filter shall be measured within -20 $^{\circ}$ C to +80 $^{\circ}$ C	
/-4	characteristics	temperature range.	
		Filter shall be measured after being placed in a	
7-5	Humidity	chamber with 90 to 95% R.H.at 40±2℃ for	
1-3		100 hours and then being placed in natural	
		condition for 1 hour.	The measured
		Lead terminals are immersed up to 1.5mm from	values shall meet
7-6	Resiatance to Soldering Hoat	filter's body in soldering bath of 260±5°C for	Table 1.
7-0		5±0.5 seconds and then filter shall be measured	Table 1.
		after being placed in natural condition for 1 hour.	
	Life Test (High	Filter shall be measured after being placed in	
7-7		chamber with 80°C for 100 hours and then being	
	Temperature)	placed in natural condition for 1 hour.	
	Life Test	Filter shall be measured after being placed in a	
7-8	(Low	chamber with -30°C for 100 hours and then being	
	Temperature)	placed in natural condition for 1 hours.	
7-9		After temperature cycling of -55°C (30 minutes)	
		to +85°C (30 minutes) was performed 5	
	Thermal Shock	times Filter shall be returned to room	
		temperature.and filter shall be measured after	
		being placed in natural coudition for 1 hours.	



Ceramic Discriminator

Table 1.

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

Test circuit for ceramic discriminator

