

CDBC450C54

Ceramic Discriminator

1. APPLICATION

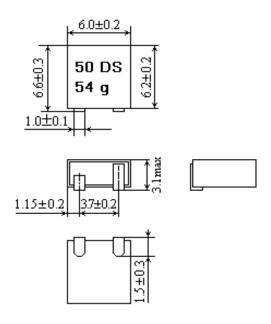
This specification is applied to ceramic discriminator: CDBC450C54 used for quadrature detection with IC: TA31142F (TOSHIBA)

2. SPECIFICATION No.: QJ/A5•25•0512

MODEL NAME

Part Name	Customer's Part No.	Customer's Draving No.
CDBC450C54		

3. DIMENSIONS: (mm)



Material List

Case	Polybutenetelephthalate (mixture of glass fiber)	
Terminal	Phosphor bronze Ag Clad	
Base Sealing	Epoxy resin	

4. MAXIMUM RATINGS

4.1 Withstanding Voltage : D.C. 5OV. 1 minute

(Between each terminal)

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

(Between each terminal)

4.3 Input signal level : $5dB (50 \Omega)$ Termination)

4.4 Operating Temperature Range : -20°C to $+80^{\circ}\text{C}$

4.5 Storage Temperature Range : $-40\,^{\circ}\text{C}$ to $+85\,^{\circ}\text{C}$



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

	Item	Requirements
5-1	Receiver Audio 3dB Bandwitdth (from 450KHz)	± 4.0 KHz min.
5-2	Receiver Audio Output Voltage (at 450KHz)	$40 \pm 20 \mathrm{mV}$
5-3	Distortion (at 450 KHz)	3.0% max.
5-4	Withstanding Voltage	50V D.C. for 1 minute

5-5 Test Method

Input signal Condition Input level : 80dB

Frequency Deviation : $\pm 4.0 \text{KHz}$ Modulation Frequency : 1 KHz

1) Recoverd Audio Input the above signal and sweep the carrier frequency 3dB Bandwidth around 450 KHz and find out the maximum audio

output frequency. Then sweep the carrier frequency again and find two frequencies which are observed -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 lower 3 dB bandwidth.

2) Receiver Audio Receiver audio output voltage shall be measured Output Voltage when carrier frequency is adjusted to 450KHz.

3) Distortion Carrier frequency is adjusted to 450Khz. And

then ,distortion shall be measured with 1 kHz

modulation frequency.

6. PRYSICAL AND ENVIRONMENTAL CHARACTERISTICS

	Test Item	Condition of Test	Requirements
6-1	Lead Strength	After force 1.0Kg is applied to each lead in axial	
	Lead Pulling	direction. filter shall be measured.	No mechanical damage
	Lead Bending	When force of 0.5Kg is applied to each lead in axial	and the measured values
			shall meet item 5.
		direction the lead shall be folded up to 90° from the	
		axial direction and folded back to the axial direction.	
6-2	Vibration	Filter shall be measured after being applied vibration of	



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		amplitude of 1.5mm with 600 to 3,300 r.p.m. band of vibration frequency to each of 3 perpendicular directions for 2 hour .	
6-3	Random Drop	Filter shall be measured after 3 times random dropping from the height of 30cm on concrete floor	
6-4	Temperature Characteristics	Filter shall be measured within $-20^{\circ}\mathrm{C}$ to $+80^{\circ}\mathrm{C}$ temperature range.	
6-5	Humidity	Filter shall be measured after being placed in a chamber with 90 to 95% R. H. at 40±2°C for 100 hours and then being placed in natural condition for 2 hour.	The measured values shall meet Table 1.
6-6	Resistance to Soldering Heat	Lead terminals are immersed up to 1.5mm from filter's body in soldering bath of 260±5°C for 5±0.5 seconds and then filter shall be measured after being placed in natural condition for 2 hour.	
6-7	Life Test (High Temperature)	Filter shall be measured after being placed in chamber with 80°C for 100 hours and then being placed in natural condition for 2 hour.	
6-8	Life Test (Low Temperature)	Filter shall be measured after being placed in a chamber with -20° C for 100 hours and then being placed in natural condition for 2 hours.	
6-9	Thermal Shock	After temperature cycling of -20°C (30 minutes) to +80°C (30 minutes) was performed 5 times. Filter shall be returned to room temperature. And filter shall be measured after being placed in natural condition for 2 hours.	

Item	Requrements
Receiver Audio 3dB Bandwidth (from 450KHz)	± 4.0 KHz min.
Receiver Audio Output Voltage (at 450KHz)	40±20 mV
Distortion (at 450KHz)	4.0 % max.
Withstanding Voltage	50V D. C. for 1 minute.

Table 1.