




**SPECIFICATION SHEET**

<b>SPECIFICATION SHEET NO.</b>	Q0707-DC450K0000S028
<b>DATE</b>	July 07, 2023
<b>REVISION</b>	A0
<b>DESCRIPTION</b>	<p>KHz SMD Discriminators 6260 Type L6.2*W6.0*H3.1mm 2 Pads CDBC Series            450.0KHz, Demodulated Bandwidth (3dB) : ±4.0 kHz Min. From 450kHz            Operating Temp. Range -20°C ~+80°C            Reflow Profile Condition 260 °C Max.            In Tape/Reel, 2000pcs/Reel            RoHS III Complaint</p>
<b>CUSTOMER</b>	
<b>CUSTOMER PART NUMBER</b>	
<b>CROSS REF. PART NUMBER</b>	
<b>ORIGINAL PART NUMBER</b>	TGS CDBC 450C28 TLF
<b>PART CODE</b>	DC450K0000S028

<b>VENDOR APPROVE</b>			
Issued/Checked/Approved			
DATE: July 07, 2023			

<b>CUSTOMER APPROVE</b>	
DATE:	

7/10/2023

**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**MAIN FEATURE**

- KHz SMD Ceramic Discriminator 6260 Type 2 pads
- White case, L6.2\*W6.0\*H3.1mm
- Low cost and short shipment
- Reflow Profile Condition 260 °C Max.
- Cross main competitors parts CDBC and JTC series
- RoHS/RoHS III compliant
- For quadrature detection with IC: TA31142F(TOSHIBA).



**APPLICATION**

- Communication Electronics

**RFQ**

[Request For Quotation](#)

**PART CODE GUIDE**

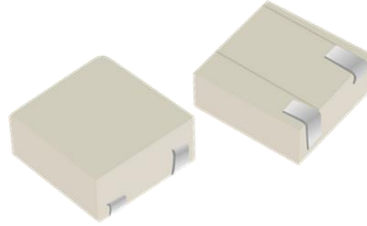
DC	450K0000	S	028
1	2	3	4

- 1) DC: Part family Code for KHz SMD Ceramic Discriminator 6260 Type L6.2\*W6.0\*H3.1mm 2 Pads
- 2) 450K0000: Frequency range code for 450.0000KHz
- 3) S: SMD type, Package Tape/Reel, 2000pcs/Reel
- 4) 028: Specification code or Blank

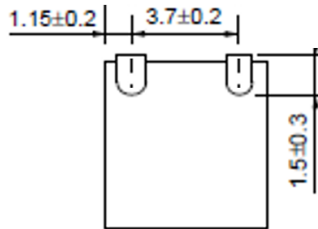
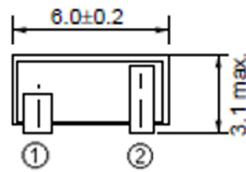
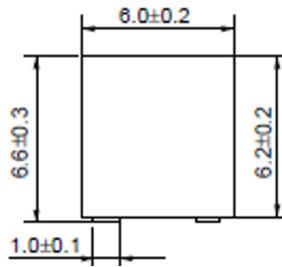
**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**DIMENSION (Unit: mm)**

Image for reference



CDBC



**Marking**

Line 1: Series Code  
Line 2: Internal Code

**Connection**

Pin 1: Input  
Pin 2: Output

No.	Item	Material
1	Case	Polybutene Terephthalate (Mixture Of Glass Fiber)
2	Terminal	Phosphor Bronze Ag Clad
3	Base Sealing	Epoxy Resin

**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**
**ELECTRICAL PARAMETERS**

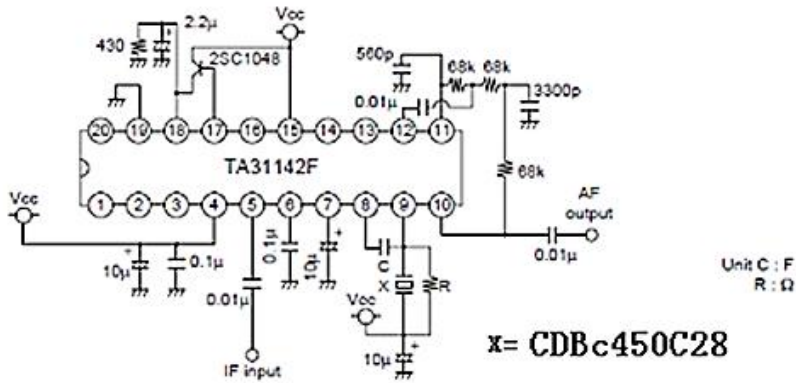
Parameter	Part No. Symbol	Units	Value			Condition	
			Min.	Typical	Max.		
<b>Original Manufacturer</b>	TGS	TGS Crystals					
<b>Holder Type</b>	CDBC	KHz SMD Discriminators 6260 Type L6.2*W6.0*H3.1mm 2 Pads					
<b>Center Frequency Range (f0)</b>	450	KHz	450.00			@ ± 1.0KHz	
<b>Demodulated Bandwidth (3dB)</b>	C28	KHz	±4.0			From 450KHz	
<b>Operation Temperature</b>		°C	-20		+80		
<b>Storage Temperature</b>		°C	-40		+85		
<b>Demodulated Output</b>		mV	20	40	60	@ 450 kHz	
<b>Demodulated Distortion Factor</b>		%			3.0		
<b>Temperature Stability</b>		%			3.0	@-20 ~+80 °C	
<b>IC Model No.</b>				TA31142F(TOSHIBA)			
<b>Withstand Voltage</b>				D.C. 50V for 1 minute			
<b>Other</b>		<b>Package</b>	T	Tape/Reel, 2000pcs/Reel			
	<b>RoHS Status</b>	LF	RoHS III compliant				
	<b>Add Value</b>		N/A				
	<b>Special Code</b>		For Internal Control, Blank: N/A				

**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**MEASUREMENT CONDITION:**

Measurement shall be carried out at the standard temperature of  $25 \pm 2^\circ\text{C}$ . If no specific requirements, Test can be carried out under  $5\text{-}35^\circ\text{C}$ .

**MEASURING CIRCUIT:**



**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**TEST METHOD**

<b>Input Signal</b>	Input level	80dB $\mu$
	<b>Condition</b>	
	Frequency Deviation	$\pm$ 4.0 kHz
	Modulation Frequency	1.0 kHz
<b>Demodulated 3dB Bandwidth</b>	<p>Input the above signal and sweep the carrier around 450 kHz, and find out the maximum audio output frequency. Then sweep the carrier frequency again and find two frequencies, which are observed <math>-3</math>dB attenuation points from the maximum point.</p> <p>Higher frequency point is called (f1) and lower called (f2). (F1-450KHz) is defined as upper 3dB bandwidth and (450KHz-f2) defined as lower 3dB bandwidth.</p>	It shall meet Table 1.
<b>Demodulate Output</b>	Demodulated output shall be measured when carrier frequency is adjusted to 450KHz.	It shall meet Table 1.
<b>Demodulated Distortion Factor</b>	Carrier frequency is adjusted to 450KHz. And distortion shall be measured with 1 kHz modulation frequency.	It shall meet Table 1.

**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**PHYSICAL CHARACTERISTICS**

Test Items	Test Method And Conditions	Requirement
<b>Random Drop</b>	Filter shall be measured after 3 times random drops from the height of 30cm on concrete floor	No visible damage and it meet Table 1
<b>Vibration</b>	Filter shall be measured after being applied vibration of amplitude of 1.5mm with 10-55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours	No visible damage and it meet Table 1
<b>Solderability</b>	Lead terminals are immersed in aide solder for 5 sec and then immersed in soldering bath of 230±5°C, for 3±0.5 sec.	At least 95% lead terminals shall be covered with solder.
<b>Terminal strength Pulling</b>	After force of 1kg for 10 seconds is applied to each terminal in axial direction, Filter shall be measured.	No damage, no cut-off and it meet Table 1.
<b>Bending</b>	After lead terminals shall be fixed at 2mm from filter’s body, they shall be folded up to 90°from their axial directions and folded back to – 90°.Then folded back to their axial direction, the speed of folding be each 3 seconds.	No damage, no cut-off and it meet Table 1.

**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**ENVIRONMENTAL CHARACTERISTICS**

Test Items	Test Method And Conditions	Requirement
<b>Humidity</b>	After being placed in a chamber with 90-95% R.H. at 40±2°C for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.
<b>Resistance to Solder Heat</b>	Lead terminals are immersed up to 1.5mm from filter’s body in soldering bath of 350±10°C, for 3±0.5 sec. And then filter shall be measured after being placed in room temperature for 1 hour.	It shall meet Table 1.
<b>High Temperature</b>	After being placed in a chamber with 80±2°C,for 100 hours and then being placed in room temperature for 1 hour , filter shall be measured.	It shall meet Table 1.
<b>Low Temperature</b>	After being placed in a chamber with -20±2°C,for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.
<b>Heat Shock</b>	After being kept at room temperature, filter shall be placed at temperature of –55 °C , for 30 minutes, then be placed at temperature. 85°C, for 30 minutes. After that returned to –55°C again. Repeated above cycle for 5 times. After being kept in room temp. for 1 hour, filter shall be measured	It shall meet Table 1.

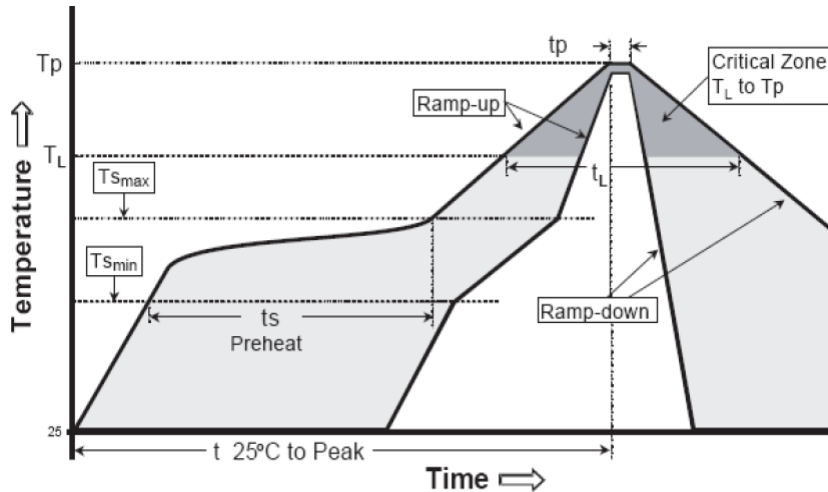
Table 1

Item	Center Frequency	Demodulated Bandwidth (3dB)	Demodulated Output	Demodulated Distortion Factor	Temperature Stability
<b>Specification</b>	450±1.0KHz	±4.0KHz min (from 450 kHz)	40±20mV. (at 450 kHz)	3.0% Max.	0.3 %Max. @ -20~80°C



**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

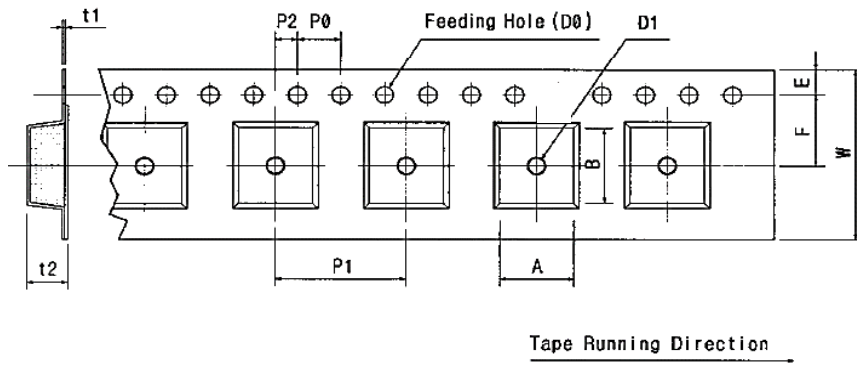
**SUGGESTED REFLOW PROFILE (For Reference Only)**



<b>Profile Feature</b>		Pb-Free Assembly
<b>Average Ramp-up Rate (Ts Max to Tp)</b>		3°C/second Max
<b>Preheat</b>	<b>Temperature Min (Ts Min.)</b>	125°C
	<b>Temperature Max (Ts Max.)</b>	200°C
	<b>Time (ts Min. to ts Max.)</b>	60 ~ 180 seconds
<b>Time maintained above</b>	<b>Temperature (Tl)</b>	217°C
	<b>Time (tL)</b>	60 ~ 150 seconds
<b>Peak/Classification Temperature (Tp)</b>		260 °C
<b>Time within 5°C of actual Peak Temperature (tp)</b>		20 ~ 40 seconds
<b>Ramp-down rate</b>		6 °C /Second Max.
<b>Time 25 °C to Peak Temperature</b>		8 minutes Max.
<b>Suggest reflow times</b>		3 Times Max.

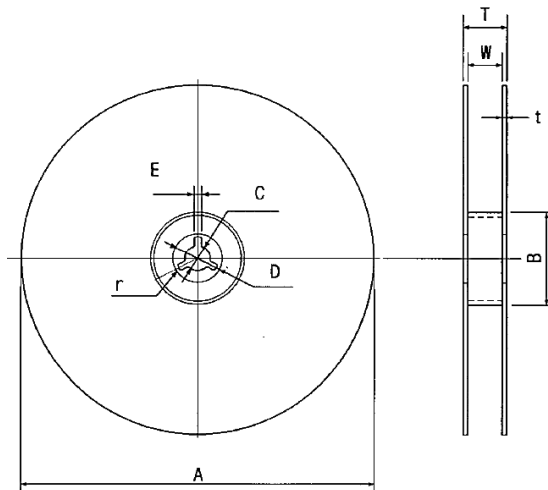
**KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES**

**REEL DIMENSION (Unit: mm, 2000pcs/Reel)**



Code	Dimension
W	16.0+/-0.30
F	6.80+/-0.20
E	1.75+/-0.10
P 0	4.00+/-0.10
P 1	7.80+/-0.10
P 2	2.00+/-0.05
D 0	Ø1.5+/-0.10
D 1	Ø1.5+/-0.10
t 2	3.60+/-0.10
A	7.70+/-0.10

**TAPE DIMENSION (Unit: mm)**



Code	Dimension
A	Ø330+/-1.0
B	Ø80.0+/-0.5
C	Ø13.0+/-0.5
E	2.00+/-0.3
W	16.0+/-1.0

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7/10/2023