




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q0707-DC450K0000S049
DATE	July 07, 2023
REVISION	A0
DESCRIPTION	<p>KHz SMD Discriminators 6260 Type L6.2*W6.0*H3.1mm 2 Pads CDBC Series 450.0KHz, Demodulated Bandwidth (3dB) : ±13.0 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>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CDBC 450C49 TLF
PART CODE	DC450K0000S049

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

CUSTOMER APPROVE	
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: MC3361



APPLICATION

- Communication Electronics

RFQ

[Request For Quotation](#)

PART CODE GUIDE

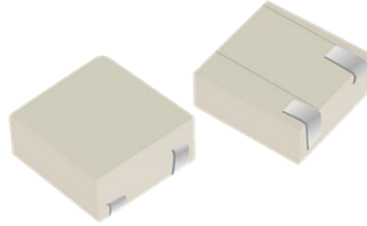
DC	450K0000	S	049
1	2	3	4

- 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) 049: Specification code or Blank

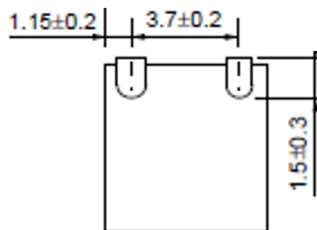
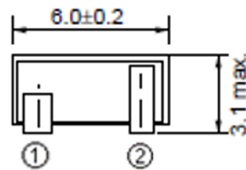
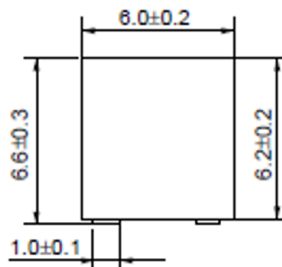
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DIMENSION (Unit: mm)

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

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ELECTRICAL PARAMETERS

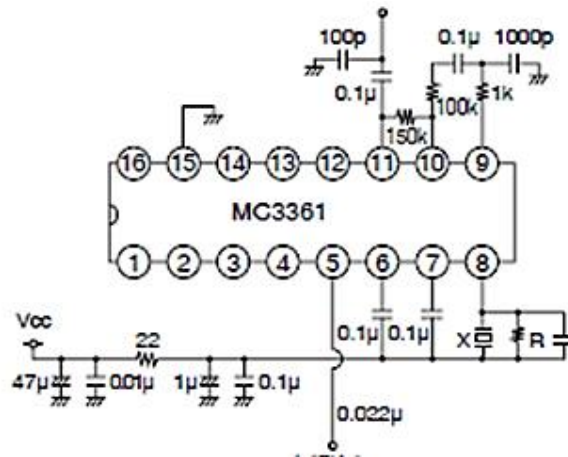
Parameter	Part No. Symbol	Units	Value			Condition	
			Min.	Typical	Max.		
Original Manufacturer	TGS	TGS Crystals					
Holder Type	CDBC	KHz SMD Discriminators 6260 Type L6.2*W6.0*H3.1mm 2 Pads					
Center Frequency Range (f0)	450	KHz	450.00			@ ± 1.0KHz	
Demodulated Bandwidth (3dB)	C49	KHz	±4.0			From 450KHz	
Operation Temperature		°C	-20		+80		
Storage Temperature		°C	-40		+85		
Demodulated Output		mV	35	45	55	@ 450 kHz	
Demodulated Distortion Factor		%			3.0		
Distortion Factor (FN±6kHz)		%			n/a		
IC Model No.				MC3361			
Withstand Voltage				D.C. 50V for 1 minute			
Other		Package	T	Tape/Reel, 2000pcs/Reel			
		RoHS Status	LF	RoHS III compliant			
	Add Value		N/A				
	Special Code		For Internal Control, Blank: N/A				

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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:



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TEST METHOD

Input Signal	Input level	80dB μ	
	Condition	Frequency Deviation	\pm 4.0 kHz
	Modulation Frequency	1.0 kHz	
Demodulated 3dB Bandwidth	<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 -3dB 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>	<p>It shall meet Table 1.</p>	
Demodulate Output	Demodulated output shall be measured when carrier frequency is adjusted to 450KHz.	<p>It shall meet Table 1.</p>	
Demodulated Distortion Factor	Carrier frequency is adjusted to 450KHz. And distortion shall be measured with 1 kHz modulation frequency.	<p>It shall meet Table 1.</p>	

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PHYSICAL CHARACTERISTICS

Test Items	Test Method And Conditions	Requirement
Random Drop	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
Vibration	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
Solderability	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.
Terminal strength Pulling	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.
Bending	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.

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ENVIRONMENTAL CHARACTERISTICS

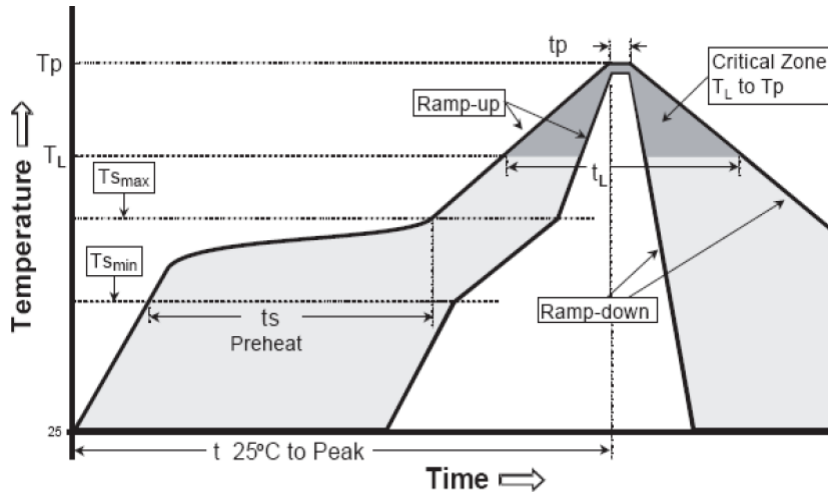
Test Items	Test Method And Conditions	Requirement
Humidity	After being placed in a chamber with 90-95% R.H. at 40±2°C for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.
Resistance to Solder Heat	Lead terminals are immersed up to 1.5mm 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.
High Temperature	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.
Low Temperature	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.
Heat Shock	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
Specification	450±1.0KHz	±4.0KHz min (from 450 kHz)	45±10mV. (at 450 kHz)	3.0% Max.

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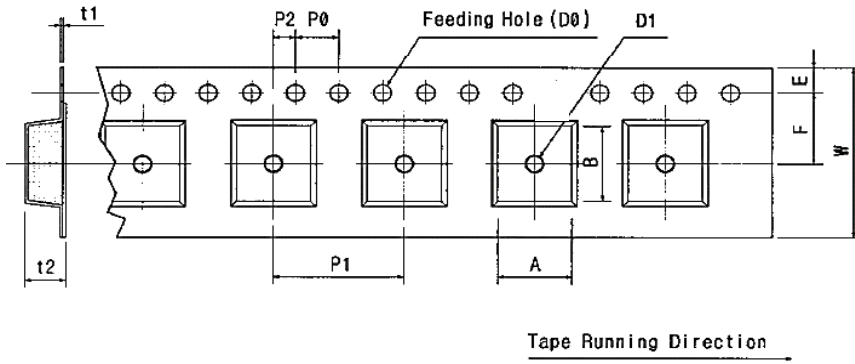
SUGGESTED REFLOW PROFILE (For Reference Only)



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

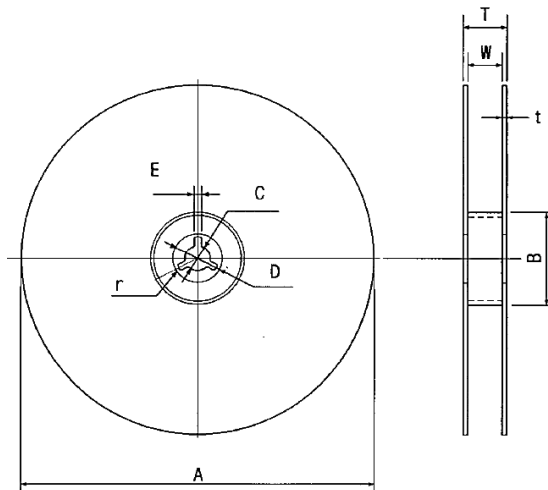
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REEL DIMENSION (Unit: mm, 2000pcs/Reel)



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