NextGen Components,Inc.

PART CODE: DC455K0000S170

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q0317-DC455K0000S170
DATE	March 17, 2023
REVISION	A0
DESCRIPITION	KHz SMD Discriminators 6260 Type L6.2*W6.0*H3.1mm 2 Pads CDBC Series 455.0KHz, Demodulated Bandwidth (3dB) : ±5.0 kHz Min. From 455kHz Operating Temp. Range -20°C ~+80°C Reflow Profile Condition 260 °C Max. In Tape/Reel, 2000pcs/Reel RoHS III Complaint
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CDBC 455C70 TLF
PART CODE	DC455K0000S170

VENDOR APPROVE
Issued/Checked/Approved       
DATE: March 17, 2023

CUSTOMER APPROVE
DATE:

NextGen Components,Inc.

PART CODE: **DC455K0000S170**

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: NJM2591V(JRC)

APPLICATION

- Communication Electronics

PART CODE GUIDE

RFQ
Request For Quotation

DC	455K0000	S	170
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1) DC: Part family Code for KHz SMD Ceramic Discriminator 6260 Type L6.2*W6.0*H3.1mm 2 Pads

2) 455K0000: Frequency range code for 455.0000KHz

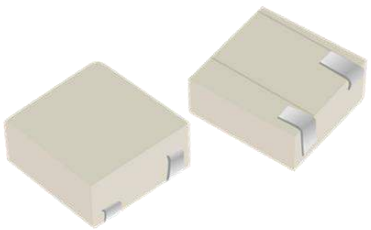
3) S: SMD type, Package Tape/Reel, 2000pcs/Reel

4) 170: Specification code for original part No.: **TGS CDBC 455C70 TLF**

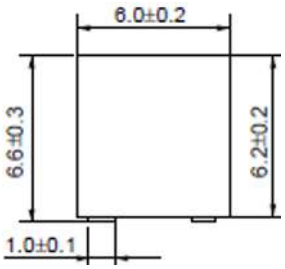
KHZ SMD CERAMIC DISCRIMINATOR CDBC SERIES

DIMENSION (Unit: mm)

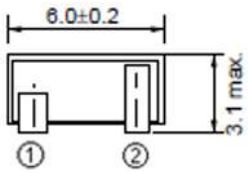
Image for reference



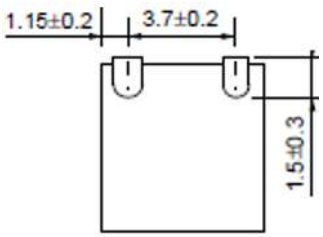
CDBC



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

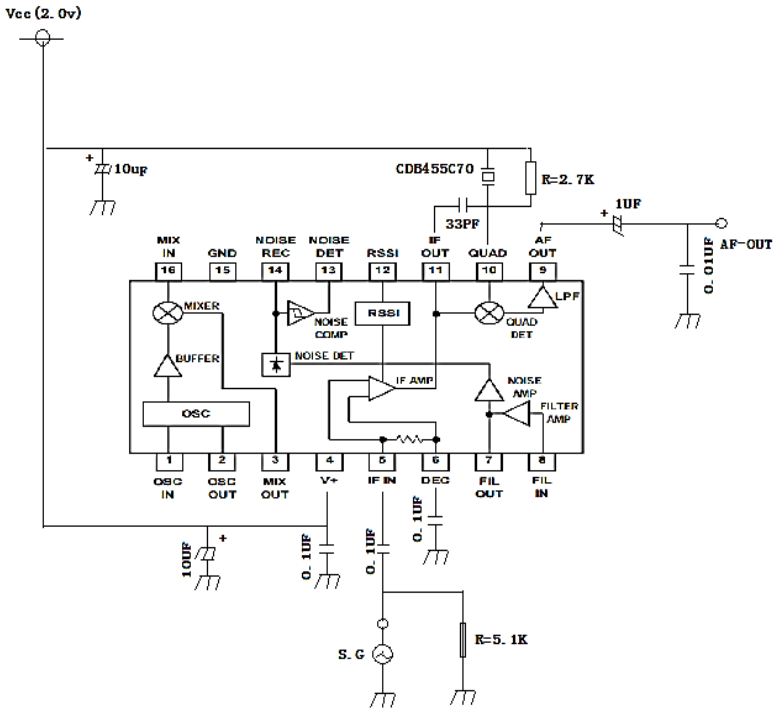
ELECTRICAL PARAMETERS

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
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)		455	KHz	455.00			@ ± 1.0KHz
Demodulated Bandwidth (3dB)		C70	KHz	±5.0			From 455KHz
Operation Temperance			°C	-20		+80	
Storage Temperance			°C	-40		+85	
Demodulated Output			mV	75	85	95	@ 455 kHz
Demodulated Distortion Factor			%			4.5	
Temperature Stability			%	0.3			@-20 ~+80 °C
IC Model No.				NJM2591V(JRC)			
Withstand Voltage				DC 5.0V 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				

MEASUREMENT CONDITION

Measurement shall be carried out at the standard temperature of 25±2℃. If no specific requirements, Test can be carried out under 5-35℃.

MEASURING CIRCUIT



TEST METHOD

Input Signal Condition	Input level	80dBμ
	Frequency Deviation	±4.0 kHz
	Modulation Frequency	1.0 kHz
Demodulated 3dB Bandwidth	Input the above signal and sweep the carrier around 455 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 3dB bandwidth.	It shall meet Table 1.
Demodulate Output	Demodulated output shall be measured when carrier frequency is adjusted to 455KHz.	It shall meet Table 1.
Demodulated Distortion Factor	After being placed in a chamber with -20±2 ℃,for 100 hours and then being placed in room temperature for 1 hour, filter shall be measured.	It shall meet Table 1.

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℃, 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.

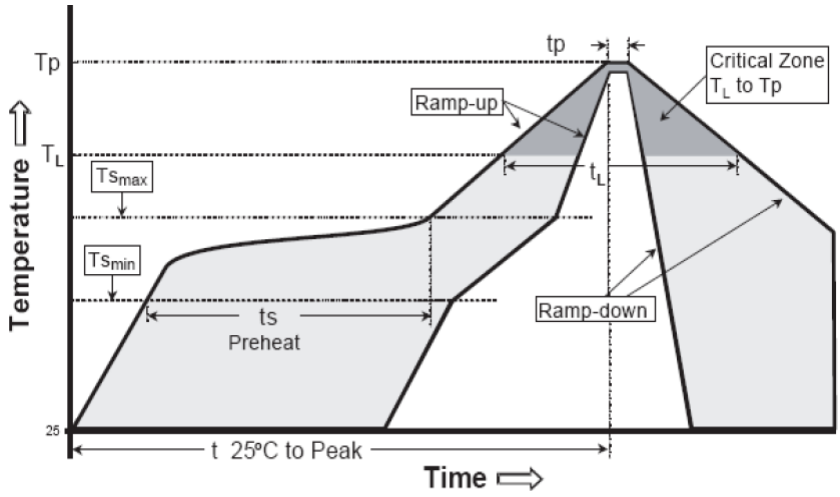
ENVIRONMENTAL CHARACTERISTICS

Test Items	Test Method And Conditions	Requirement
Humidity	After being placed in a chamber with 90-95% R.H. at 40±2℃ 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℃, 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℃,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℃,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 ℃ , for 30 minutes, then be placed at temperature. 85℃, for 30 minutes. After that returned to –55℃ 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

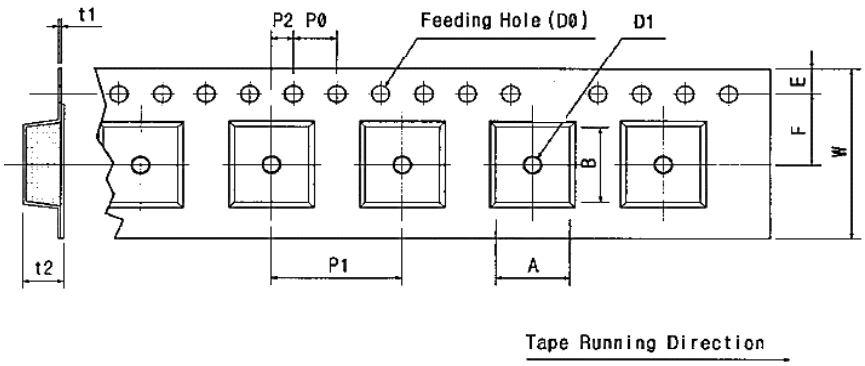
Item	Center Frequency	Demodulated Bandwidth(3dB)	Demodulated Output	Demodulated Distortion Factor
Specification	455±1.0KHz	±5.0KHz min (from 455 kHz)	85±40mV. (at 455 kHz)	4.5% Max.

SUGGESTED REFLOW PROFILE (For Reference Only)



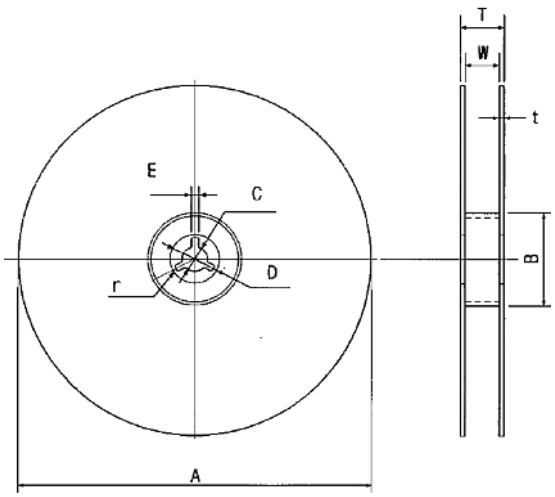
Profile Feature		Pb-Free Assembly
Average Ramp-up Rate (Ts Max to Tp)		3℃/second Max
Preheat	**Temperature Min (Ts Min.)**	125℃
	Temperature Max (Ts Max.)	200℃
	Time (ts Min. to ts Max.)	60 ~ 180 seconds
Time maintained above	**Temperature (T_L)**	217℃
	Time (t_L)	60 ~ 150 seconds
Peak/Classification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

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

DISCLAIMER

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