

Ceramic Discriminator kHz Lead Type & SMD Type
(450 kHz to 455 kHz)

1. Pin Type

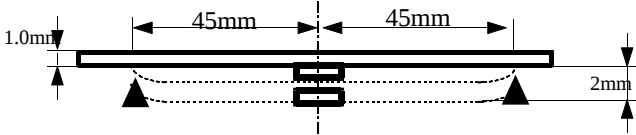
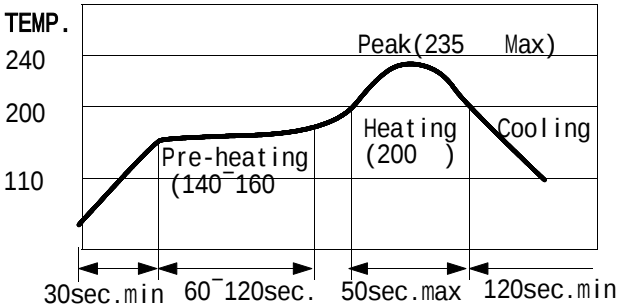
Test Item	Condition of Test	Requirements
1. Terminal Strength - Axial Direction - Folding	After force 1.0 kg is applied to each terminal in axial direction, discriminator shall be measured. When force of 0.5Kg is applied to each terminal in axial direction, the terminal shall be folded up to 90° from the axial direction and folded back to the axial direction	No mechanical damage and the measured values shall meet Table 1.
2. Solderability	The terminals of the discriminator shall be immersing in a solder bath of 230 ± 5 for 5 ± 0.5 seconds.	The solder shall coat at least 90% of terminal
3. Vibration	Discriminator shall be measured after being applied vibration of amplitude to 1.5mm with 600 to 3,300 r.p.m band of vibration frequency to each of 3 perpendicular direction for 24 hours.	The measured values shall meet Table 1.
4. Random Drop	Discriminator shall be measured after 3 times random dropping from the height of 30cm on concrete floor.	
5. Temperature Characteristics	Discriminator shall be measured within -20 to +80 temperature range.	
6. Humidity	After being placed in a chamber within +90 to 95% R. H. at $+40 \pm 2$ for a period of min. 100 hours and then being placed in room temperature for 24 hours, the discriminator shall be measured.	
7. Resistance to Soldering Heat	Lead terminals are immersed up to 1.5 mm of discriminator's body in solder bath of 260 ± 5 for 5 ± 0.5 seconds and then discriminator shall be measured after being placed in room temperature for 24 hours.	
8. Storage in High Temperature	The discriminator shall be measured after being placed in a chamber with 80 for 100 hours and then being placed in room temperature for min. 24 hours.	
9. Storage in Low Temperature	The discriminator shall be measured after being placed in a chamber with -30 for 100 hours and then being placed in room temperature for min. 24 hours.	
10. Thermal Shock	After temperature cycle from -55 (30 minutes) to +85 (30 minute) was performed 5 times and then being placed in room temperature for min. 24 hours.	

TABLE 1

IFD0455C03B0*		
Measurements	Requirements	
Anti-Resonant Frequency(Fa)	± 1.5 KHz	
Resonant Resistance	70 Ω max.	
F (Fa-Fr)	46 ± 5.5 KHz	
Static Capacitance	550 pF ± 20 %	
Measurements	Requirements	
	IFD0455C24B0*	IFD0455C28B0*
Recovered Audio 3dB Bandwidth (from 450/455KHz)	± 3.0 KHz min.	± 3.0 KHz min.
Recovered Audio Output Voltage (at 455KHz)	100 ± 50 mV	40 ± 25 mV
Distortion (at 455KHz)	3.0 % max.	4.0 % max.
Measurements	Requirements	
	IFD0455C32B0* IFD0455C40B0*	IFD0455C50B0*
Recovered Audio 3dB Bandwidth (from 455KHz)	± 3.0 KHz min.	± 3.0 KHz min.
Recovered Audio Output Voltage (at 455KHz)	40 ± 25 mV	64 ± 10 mV
Distortion (at 455KHz)	4.0 % max.	5.0 % max.
IFD0455C47B0*		
Measurements	Requirements	
Nominal Center Frequency	450 KHz	
S Curve characteristics) Voltage at 455 KHz) Difference of voltage deviation between 455 ± 4.8 KHz	130 ± 30 mv 150 ± 30 mV	
IFD0455C54B0*		
Measurements	Requirements	
Nominal Center Frequency	455 KHz	
S Curve characteristics) Voltage at 455 KHz) Difference of voltage deviation between 455 ± 4.8 KHz	165 ± 30 mv 170 ± 30 mV	

450 KHz is also available.

2. SMD Type

Test Item	Condition of Test	Requirements
1. PCB Bend Strength	The discriminator is soldered onto the center of PCB which is laid on the two small supporters spaced 90mm as show in below figure. PCB is deflected to 2mm below from horizontal level. 	No visible damage and the measured values shall meet Table 2.
2. Vibration	The discriminator shall be measured after being applied vibration of amplitude to 1.5mm with 600 to 3,300 r.p.m band of vibration frequency to each of 3 perpendicular direction for 1 hour.	The measured values shall meet Table 2.
3. Dropping Shock	The discriminator shall be measured after being 3 times to the concrete floor from the 30 cm height.	
4. Temperature Characteristics	The discriminator shall be measured within -20 to +80 temperature range.	
5. Humidity	After being placed in a chamber at 90~95% R. H. and $+40 \pm 2$ for a period of min 100 hours and then being placed in room temperature for min. 24 hours, the discriminator shall be measured.	
6. Storage in High Temperature	The discriminator shall be measured after being placed in a chamber with 80 for 100 hours and then being placed in room temperature for min. 24 hours.	
7. Storage in Low Temperature	The discriminator shall be measured after being placed in a chamber with -30 for 100 hours and then being placed in room temperature for min. 24 hours.	
8. Heat Shock	After temperature cycle from -55 (30minutes) to +85 (30 minutes) was performed 5 times and then being placed in room temperature for min. 24 hours.	
9. Resistance to Soldering heat Reflow Soldering	The discriminator Shall be measured after soldered once within the following temperature conditions and then being placed in room temperature for min 24 hours. 	

Test Item	Condition of Test	Requirements
10. From previous page	1. Pre-heating shall be fixed at 140~160 for 60~120 seconds. 2. Ascending time to pre-heating temperature 150 shall be 30 seconds min. 3. Heating shall be fixed at 200 within 50 seconds and at 235 peak.	

TABLE 2

IFD0455C03E0*		
Measurements	Requirements	
Anti-Resonant Frequency(Fa)	± 1.5 KHz	
Resonant Resistance	70 Ω max.	
F (Fa-Fr)	46 ± 5.5 KHz	
Static Capacitance	550 pF ± 20 %	
Measurements	Requirements	
	IFD0455C24E0*	IFD0455C28E0*
Recovered Audio 3dB Bandwidth (from 455KHz)	± 3.0 KHz min.	± 3.0 KHz min.
Recovered Audio Output Voltage (at 455KHz)	100 ± 50 mV	40 ± 25 mV
Distortion (at 455KHz)	3.0 % max.	4.0 % max.
Measurements	Requirements	
	IFD0455C32E0* IFD0455C40E0*	IFD0455C50E0*
Recovered Audio 3dB Bandwidth (from 455KHz)	± 3.0 KHz min.	± 3.0 KHz min.
Recovered Audio Output Voltage (at 455KHz)	40 ± 25 mV	64 ± 10 mV
Distortion (at 455KHz)	4.0 % max.	5.0 % max.
IFD0455C47E0*		
Measurements	Requirements	
Nominal Center Frequency	455 KHz	
S Curve characteristics) Voltage at 455 KHz) Difference of voltage deviation between 455 ± 4.8 KHz	130 ± 30 mV 150 ± 30 mV	
IFD0455C54E0*		
Measurements	Requirements	
Nominal Center Frequency	455 KHz	
S Curve characteristics) Voltage at 455 KHz) Difference of voltage deviation between 455 ± 4.8 KHz	165 ± 30 mV 170 ± 30 mV	

450 KHz is also available.