

## VCR Safety Recognized Ceramic Capacitors



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No.	Item		Specifications	Testing Method
8	Solderability of Leads		Lead wire shall be soldered with uniformly coated on the axial direction over 3/4 of the circumferential direction.	The lead wire of a capacitor should be dipped into molten solder for 2±0.5 sec. The depth of immersion is up to about 1.5 to 2.0mm from the root of lead wires.  Temp. of solder: Lead Free Solder (Sn-3Ag-0.5Cu) 245±5°C  H63 Eutectic Solder 235±5°C
9	Soldering Effect (Non-Preheat)	Appearance	No marked defect.	As shown in figure, the lead wires should be immersed in solder of 350±10°C or 260±5°C Thermal Constraint of the property of 1.5 to 2.0mm from the root of terminal for
		Capacitance Change	Within ±10%	3.5±0.5 sec. (10±1 sec. for 260±5°C).  Pre-treatment:
		I.R.	1000MΩ min.	Capacitor should be stored at 85±2°C for 1 hr., then placed at room condition 1 for 24±2 hrs. before initial measurements.
		Dielectric Strength	Per Item 6.	Post-treatment: Capacitor should be stored for 1 to 2 hrs. at room condition 1.
10	Soldering Effect (On-Preheat)	Appearance	No marked defect.	First the capacitor should be stored at 120+0/- 5°C for 60+0/-5 sec. Then, as in figure, the lead wires should be immersed in solder of 260+0/- 5°C up to 1.5 to 2.0mm from the root of terminal for 7.5+0/-1 sec.
		Capacitance Change	Within ±10%	
		I.R.	1000MΩ min.	Pre-treatment: Capacitor should be stored at 85±2°C for 1 hr., then placed at room condition for 24±2 hrs. before initial measurements.
		Dielectric Strength	Per Item 6.	Post-treatment: Capacitor should be stored for 1 to 2 hrs. at room condition
11	Vibration Resistance	Appearance	No marked defect.	
		Capacitance	within the specified tolerance	The capacitor should be firmly soldered to the supporting lead wire
		tanō or Q	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	and vibrated at a frequency range of 10 to 55Hz, 1.5mm in total amplitude, with about a 1 minute rate of vibration change from 10Hz to 55Hz and back to 10Hz. Apply for a total of 6 hrs., 2 hrs. each in 3 mutually perpendicular directions.
12	Humidity (Under steady state)	Appearance	No marked defect.	
		Capacitance Change	C: Within ±2.5% L: Within ±5.0% X, B. E: Within ±10% F: Within ±15%	
		tanδ or Q	$\begin{tabular}{ c c c c c }\hline Char. & Specifications \\ \hline C, L & Q \geqslant 275 + 5/2C_R (C_R < 30pF) \\ Q \geqslant 350 & (C_R \geqslant 30pF) \\ \hline X, B, E & tan \delta \leqslant 0.050 \\ \hline F & tan \delta \leqslant 0.075 \\ \hline \end{tabular}$	Set the capacitor for 500±12 hrs. at 40±2°C in 90 to 95% relative humidity.  Post-treatment:  Capacitor should be stored for 1 to 2 hrs. at room condition 1.
		I.R.	3000MΩ min.	
		Dielectric Strength	Per Item 6.	

<sup>\*1 &</sup>quot;room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmospheric pressure: 86

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