



PRODUCT CHANGE NOTIFICATION

Title PCN-09282022 SM8S Conductive Adhesive Change

Description: Product Change Notification: Change of crystal attach conductive adhesive used in manufacturing of tuning fork crystals

Article: **Products Affected: SM8S Tuning Fork Crystal**

- **Description and Purpose of Change:** The crystal attach adhesive is being changed to the adhesive used in the automotive version.
- **Effect form change:** None
- **Customer impact and recommended action:** None
- **Effective Date:** April 2023

Pletronics Inc. certifies this material is in accordance with the RoHS and REACH directives.

Date Created 2022-09-28

Created By Pletronics Engineering



Reliability Data

Test	Condition	Specification	Qty	New Adhesive				Current Adhesive			
				Δf (ppm)		Δ ESR (kΩ)		Δf (ppm)		Δ ESR (kΩ)	
				x-bar	s	x-bar	s	x-bar	s	x-bar	s
Dry Heat	+85°C, 500 hours	ΔFrequency: ±10ppm ΔESR: ±15kΩ	10	1.1	0.1	-0.4	0.5	1.0	0.2	-0.4	0.5
Damp Heat	+65°C, 95% RH, 500 hours	ΔFrequency: ±10ppm ΔESR: ±15kΩ	10	0.6	0.1	0.2	0.1	0.5	0.1	0.1	0.2
Cold	-40°C, 500 hours	ΔFrequency: ±5ppm ΔESR: ±15kΩ	10	0.6	0.2	-0.2	0.1	0.5	0.2	0.0	0.2
Thermal Cycle	-40°C to 100°C, 30 minutes each temp, 5 cycles	ΔFrequency: ±5ppm ΔESR: ±15kΩ	10	0.7	0.4	0.2	0.3	2.2	0.4	0.2	0.1
Vibration	10 to 500Hz 1.5mm or 10G acceleration, 1.5 minute cycle. 2 hours each direction X,Y,Z	ΔFrequency: ±5ppm ΔESR: ±15kΩ	10	0.6	0.2	0.2	0.1	0.3	0.1	0.0	0.2
Shock (Drop test)	75cm, 3 times	ΔFrequency: ±5ppm ΔESR: ±15kΩ	10	-0.5	0.3	0.2	0.1	-0.5	0.3	0.2	0.1
Reflow	Per IPC J-020 profile	ΔFrequency: ±10ppm ΔESR: ±15kΩ	10	-2.6	0.3	0.8	0.3	-3.8	0.4	1.0	0.2