



Product Change Notification

Date of Publication: 2021/11/24
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Change Subject (Change Title):
Material change for the IC of oscillator

Description of Change to Customer (Change Description) :
Because of the IC shortage, we will use another IC with same function for the substitute.

Customer Impact of Change (Customer Impact) & Recommended Action :
The performance of products will be same as the specification of approved sheets.

Products Affected:

AKER Part No.
S23305T-50.000-X-R
S318025T-26.000-X-R
S73305T-25.000-X-15-R
S73310-125.000-15-R
S75005-3.6864-X-50-R
S75005-6.000-X-50-R

The Verification Result of Reliability Test:

NO	Test Item		Δ FREQ(ppm)			Δ Duty(%)			Q'TY	Test Condition	Requirement	Fail	Result
			MAX	MIN	AVG	MAX	MIN	AVG					
1	Temperature Cycling Test	1000cycles	0.56	-0.62	0.10	0.56	-0.19	0.20	16	-55 $\pm$ 3 $^{\circ}$ C/15 $\pm$ 3min $\sim$ +125 $\pm$ 3 $^{\circ}$ C/15 $\pm$ 3min, 1000cycles	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
	JESD22 Method JA104												
2	Low Temperature Exposure Test	48hrs	1.12	-1.02	0.02	0.31	-0.25	0.02	16	-40 $\pm$ 3 $^{\circ}$ C, 1000 $\pm$ 6 hrs	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
		96hrs	-0.32	-2.19	-1.08	0.19	-0.44	-0.08					
		168hrs	0.35	-1.57	-0.54	0.31	-0.44	-0.03					
		1000hrs	0.95	-0.91	0.13	0.63	-0.50	0.14					
	JIS-C0020												
3	Biased Humidity Test (Voltage test)	48hrs	3.96	-1.01	0.27	0.25	-0.19	-0.02	16	85 $^{\circ}$ C $\pm$ 5 $^{\circ}$ C&85% $\pm$ 5%R.H., 1000 $\pm$ 12hrs, Rated VDD applied.	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
		96hrs	3.38	-2.60	-1.09	0.07	-0.25	-0.05					
		168hrs	3.28	-2.49	-0.86	0.13	-0.38	-0.07					
		1000hrs	3.52	-3.76	-0.28	0.50	-0.50	0.05					
	MIL-STD-202 Method 103												
4	Resistance To Soldering Heat Test	1	0.61	-0.78	0.19	0.31	-0.25	0.03	16	IR Reflow furnace 2 times Peak temp.260 $\pm$ 3 $^{\circ}$ C, 10sec(Min.)	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
		2	0.14	-1.04	-0.34	0.32	-0.19	0.04					
	MIL-STD-202 Method 210												
5	Drop Test	180cm	-0.05	-1.10	-0.62	0.25	-0.25	0.04	16	Free drop from 180 cm height on a hard wooden board for 6 times (board thickness is more than 30 mm)	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
	JIS-C0044												
6	High Temperature Exposure Test	24hrs	0.62	-0.56	-0.02	0.37	-0.31	0.00	32	150 $\pm$ 3 $^{\circ}$ C, 1000 $\pm$ 12hrs	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
		240hrs	0.96	-0.13	0.41	0.37	-0.31	-0.01					
		360hrs	0.70	-0.53	0.16	0.37	-0.38	-0.03					
		720hrs	0.32	-1.07	-0.55	0.38	-0.63	-0.17					
		1000hrs	0.50	-1.24	-0.51	0.38	-0.31	-0.06					
	MIL-STD-202 Method 108												
7	Vibration Test		-0.20	-2.15	-0.49	0.25	-0.38	-0.07	16	Freq. range: 10~2000Hz Amplitude: 1.52mm/5G Sweep time: 20 mins/cycle, total 12 cycles Each axes test time: 240 mins	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
	MIL-STD-202 Method 204												
8	Operational Life (Voltage test)	24hrs	4.01	-0.18	0.46	0.25	-0.63	-0.09	32	125 $^{\circ}$ C $\pm$ 3 $^{\circ}$ C, 1000hrs $\pm$ 12hrs, Rated VDD 3.3V applied.	$\Delta F \leq \pm 10$ ppm $\Delta D \leq \pm 5\%$	0	PASS
		240hrs	4.41	-0.06	1.41	0.44	-0.38	-0.08					
		360hrs	2.96	-1.53	0.07	0.38	-0.75	-0.15					
		720hrs	4.48	0.52	1.54	0.50	-0.50	0.02					
		1000hrs	3.98	-0.38	0.80	0.88	-0.25	0.16					
	MIL-STD-202 Method 108												

We do apologize for any inconvenience and appreciate your understanding. If you have any questions or require additional information about this PCN notice, please contact your AKER team for recommendations.

Prepared by: Earnest Kuo
Title: R&D Director
Signature:

Date: 2021/11/24

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