

Product change notification

PCN 13-01 KSC

Document revision

Revision	Date	Description	Author
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1. Purpose

C&K components, as design and manufacturing company for micro-miniature tact switches, set up continuous product improvement.

We have defined a new internal design configuration on KSC6 series in order to improve product tactility, stability of such tactility after reflow and robustness against overload.

We have validated such improvement over a specific version where more than 10 millions parts are already produced.

Due to the success of such improvement, C&K Components has decided to deploy it over the complete KSC6 family.

2. Change definition

Change is applied on 2 components on the switch:

- Sealing membrane
- Actuator

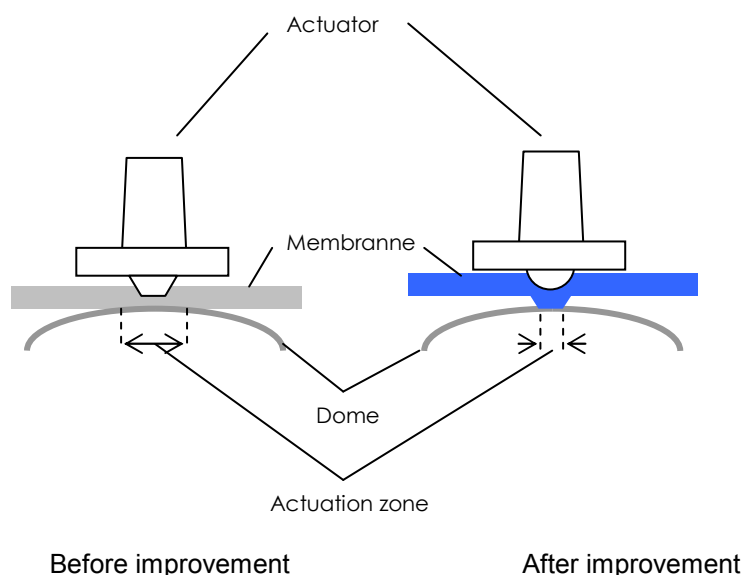
The description of the improvement is as follow

- Sealing membrane, which used to be flat, is now incorporating a actuating pin. Such internal design is same as KSC2 or KSC4 soft actuator. The benefit of such feature is reducing the actuating area on the dome.
- Actuator: his internal shape, which uses to integrate an actuating pin, is now a hemisphere considering that actuating pin is now on the membrane.

Improved features are

- Tactile ratio is improved by reduction of the actuating area on the dome
- Stability after reflow process is managed by a preload done by the actuating pin on the silicon membrane
- Resistance against overload is manage by the combination of new dome and the hemisphere on the actuator

Other components such as housing, dome, top plate and packaging remains unchanged
Manufacturing process remains unchanged.



3. Change impact and qualification method

3.1 Specification

This new configuration generates a slight shift of some specification item. The deviation is described in the table below. For any reference to new specification, please refer to appendix. Dimensions and outlines remains exactly the same.

P/N	Feature	Current value	New value
KSC62x	Switching force	1.0N-1.65N	1.2N-2.2N
	Tactile feeling	>0.35N	>20%
	Return force	>0.4N	>0.3N
	Travel	0.3mm-0.7mm	0.2-0.6mm
KSC64x	Switching force	2.25N-3.75N	2.55N-4.25N
	Tactile feeling	>0.35N	>25%
	Return force	>1.0N	>0.8N
	Travel	0.3mm-0.7mm	0.2-0.6mm

3.2 Material compositions & declaration

Grades of involved materials remain the same – no impact on material declaration and composition

3.3 Qualification

The completed qualification report is shared in appendix.

3.4 Sampling

Samples are available upon request.

3.5 Differentiation

New versions can be distinguished from previous version by membrane colour which is light blue.

4. Application

4.1 Product range affected

KSC6 sub-range, with the following P/N

- KSC621J LFS
- KSC623J LFG
- KSC621G LFS
- KSC623G LFG
- KSC641J LFS
- KSC643J LFG
- KSC641G LFS
- KSC623J LFGB
- KSC643J LFGH

Nota 1: we have introduced new P/N based on the new version

- KSC631J LFS
- KSC633J LFG
- KSC631G LFS
- KSC633G LFG
- KSC643G LFG

4.2 *Date of application & time frame*

- PCN release: CW26/2013
- PPAP release until CW 40/2013 when applicable
- Change application in production CW48/2013

4.3 *Ordering, pricing and stock handling policy*

- Ordering: P/N codes remain unchanged,
- Pricing: any pricing and other sales conditions remain valid even if this new configuration requests extra cost
- Stock handling: No return or scrap for obsolescence will be accepted for any reason.
- Lead times: lead times may increase before application change in order to manage transition. Information will be share through our customer services in case of.

4.4 *Customer qualification*

We recommend to our customer taking the necessary qualification actions based on the information contained inside this notification. Samples are available at any time for testing purpose. In case of extra documentation such as PPAP, specific reports are needed, please apply request to your sales representative before CW29/2013.

5. Acknowledgement

We recommend acknowledging this notification until CW28/2013 to your sales representative. When applicable, we recommend asking the PPAP information to our quality department until CW20/2013

6. Support

For any question, please contact your sales representative