

Note: This PCN is issued by Sharp Devices Europe, other SHARP business units might have different schedules.

## Product Change Notification

NOTIFICATION NO.	ISSUE DATE	LAST BUY DATE	LAST SHIP DATE
EU-PCN-20220301-01 Rev.1	14.06.2022	---	---

*This is to advise you that the following product will be changed.*

**Product ID (Description):**

**Distance Measuring Sensors - please see the attached model list**

**Description of Change:**

Due to discontinuation of the originally used signal processing IC and to secure a continuous supply of our distance measuring sensors, we will gradually switch the signal processing IC to a new one with the same function.

The change of the signal processing IC will be as follows:

Current: Manufacturing factory: ON Semiconductor Niigata

New: Manufacturing factory: UMC

In addition to the above changes, the resistance (R) and the capacitor (C) as well as the thermistor and lead frame for some models will also be changed due to the change in signal processing IC in the distance measuring sensor.

**Rev. 1: In the process of switching 4M ICs, some problems regarding Vo characteristics were discovered. Please see the Attachment 2 for details. Due to this, a redesign with a different IC product was done. The design change mask for the new IC is ordered and evaluation is going to start in September 2022. Afterwards, the new schedule will be reported.**

**Due to resources and production equipment in relation with the new 4M change, unfortunately, some models have to become EOL. This will be informed separately.**

**Effect of Change:**

This change is planned starting with **February 2023 production onwards**, depending on evaluation results.

**Note:**

There will be no changes to product shape, terminal layout, product characteristics and reliability.

New specifications and reliability test reports will be available, **starting end November 2022**. Please contact your key account manager.

**Suggested Alternative Parts and/or Manufactures:**

CHANGED SHARP PART NO.	SUCCESSOR / SUGGESTED ALTERNATE PART NO.	ALTERNATE MANUFACTURER
see above	-	---

*In case of further questions, please contact your SHARP sales representative.*

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# Attachment

## Distance measuring sensor 4M change

4M changes in each product are as follows.

○ : Change  
- : No change

R: Resistor, C: Capacitor, P: Board (Layout pattern change)  
IC: Distance sensor signal processing IC, T: Thermistor, LF: Lead frame

Series	Type	Internal Model	Model No	Material	
GP2Y Series	Analog output	GP2Y0A21YK16	GP2Y0A21YK1F	○ IC, R, C, P	
		GP2Y0A21YKF4	GP2Y0A21YK0F	○ IC, R, C, P	
		GP2Y0A02YKF4	GP2Y0A02YK0F	○ IC, R, C, P	
		GP2Y0A02YKS4	GP2Y0A02YK0F	○ IC, R, C, P	
		GP2Y0A51SK04	GP2Y0A51SK0F	○ IC, R, C, P	
		GP2Y0A51SK06	GP2Y0A51SK0F	○ IC, R, C, P	
		GP2Y0A41SKF4	GP2Y0A41SK0F	○ IC, R, C, P	
		GP2Y0A02SKD4	GP2Y0A02SKDF	○ IC, R, C, P	
		GP2Y0A02YK14	GP2Y0A02YK1F	○ IC, R, C, P, T	
		GP2Y0A710KF4	GP2Y0A710K0F	EOL Announcement / separate PDN	
	Digital output (1bit)	GP2Y0D02YK24	GP2Y0D02YK2F	○ IC, R, C, P	
		GP2Y0D02YKF4	GP2Y0D02YK0F	○ IC, R, C, P	
		GP2Y0D21YKF4	GP2Y0D21YK0F	○ IC, R, C, P	
		GP2Y0D413KF4	GP2Y0D413K0F	○ IC, R, C, P	
		GP2Y0D417KB4	GP2Y0D417KBF	○ IC, R, C, P	
		GP2Y0D421K06	GP2Y0D421K0F	○ IC, R, C, P	
	GP3Y Series	Digital output (1bit)	GP3Y0D013K26	GP3Y0D013K	○ IC, R, C, P
			GP3Y0D024KF6	GP3Y0D024K0F	○ IC, R, C, P
			GP3Y0D015K26	GP3Y0D015K	○ IC, R, C, P
GP3Y0D016K26			GP3Y0D016K	○ IC, R, C, P, T	
GP3Y0D025KF6			GP3Y0D025K0F	○ IC, R, C, P, T	
GP3Y0D026K06			GP3Y0D026K0F	○ IC, R, C, P, T	
GP3Y0D026KA6			GP3Y0D026KAF	○ IC, R, C, P, T	
GP3Y0D027K06			GP3Y0D027K0F	○ IC, R, C, P, T	
GP3Y0D028K06			GP3Y0D028K0F	○ IC, R, C, P	
GP3Y0D029K06			GP3Y0D029K0F	○ IC, R, C, P	
GP3Y0D031K06			GP3Y0D031K0F	○ IC, R, C, P, T	
GP3Y0D032K06			GP3Y0D032K0F	○ IC, R, C, P, T	
GP3Y0D033K06			GP3Y0D033K0F	○ IC, R, C, P, T	
GP3Y0D01YK			GP3Y0D01YK	○ IC, R, C, P	
GP3Y0D014K26			GP3Y0D014K26	○ IC, R, C, P	
GP3Y0D418K04			GP3Y0D418K0F	○ IC, R, C, P	
GP2Y0AF Series (Small type)	Analog output	GP2Y0AF15R04	GP2Y0AF15R	○ IC, R, C, P, LF	
		GP2Y0AF15X04	GP2Y0AF15X	○ IC, R, C, P, LF	
		GP2Y0AF15XR4	GP2Y0AF15XR	○ IC, R, C, P, LF	
		GP2Y0AF15Q04	GP2Y0AF15Q	○ IC, R, C, P, LF	
		GP2Y0AF15Q06	GP2Y0AF15Q	○ IC, R, C, P, LF	
		GP2Y0AF15Y04	GP2Y0AF15Y	○ IC, R, C, P, LF	
		GP2Y0AF15YS4	GP2Y0AF15Y	○ IC, R, C, P, LF	
		GP2Y0AF30Q04	GP2Y0AF30Q	○ IC, R, C, P, LF	
		GP2Y0AF30R04	GP2Y0AF30R	○ IC, R, C, P, LF	
		GP2Y0AF30S04	GP2Y0AF30S	○ IC, R, C, P, LF	
GP2Y0AF30Y04	GP2Y0AF30Y	○ IC, R, C, P, LF			

**Model Name** = SDE / Europe models

## Attachment 2 - Concerning IC change schedule delay

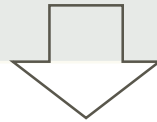
We made the necessary modifications to the successor IC to meet the specifications of the current DMS, and as a result of the evaluation of the representative model, we decided that it would be possible to change by 4M.

However, when creating additional samples, some DMSs did not meet the specifications, and it was found that there are two problems as shown in the table below. These two issues affect the  $\Delta V_o$  characteristics that are the specifications of the DMS, and there are differences in characteristics from the current product depending on the usage conditions of the sensor.

In order to solve these two problems, we have made a design change again and are currently prototyping a wafer of the changed IC.

Due to the current operating status of semiconductor factories, the next sample acquisition schedule is in flux, but we will continue to promote it with the aim of providing samples as soon as possible.

IC issue	Influence on the SPEC.	Supplement
①Sensitivity high	$\Delta V_o$ becomes higher than that of the current model	Modified point from the replacement IC. It couldn't be adjusted.
②Output voltage is distorted on the short distance side	$\Delta V_o$ shifts lower than that of the current model	Since the input signal is determined by the optical module of the DMS, its signal level differs for each DMS.



Regarding the sensitivity, it was a correction part from the alternative, but it could not be completely matched because of the analog characteristics determined by the combination with the sensor.

