



# Product Change Notification

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## ■ Purpose

[2024-07-19] Sharp Corporation would like to notify customers of changes to the variable resistor of dust sensor models:

- GP2Y1010AU0F
- GP2Y1014AU0F
- GP2Y1023AU0F
- GP2Y1026AU0F

Specifically, the resistor and electrodes comprising the variable resistor of dust sensor models will be changed to use lead-free materials.

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

## ■ Effective Time of Change

These are running changes that will be applied in production starting in January, 2025.

## ■ Details

Please refer to the pages that follow for more details concerning the changes.

If you have any questions concerning this notification, please contact your Socle representatives at: [Socle\\_Sales\\_NA@socle-tech.com](mailto:Socle_Sales_NA@socle-tech.com)

19th July, 2024

Issue No. ST- EDO2407A

## SHARP Products Change Notification

Sharp Semiconductor Innovation Corporation

Thank you very much for your continuous usage  
of our semiconductor device products.  
We would like to inform the change of ToF sensor as follows.

Product  
Planning Div.

H.Shioe

Subject	<b><u>Notification of the change of Dust sensor variable resistors (VR) to lead-free materials</u></b>
Applicable Product Category	Dust Sensor GP2Y1010AU0F／GP2Y1013AU0F／GP2Y1014AU0F／GP2Y1014AUVF GP2Y1022AU0F／GP2Y1023AU0F／GP2Y1024AU0F／GP2Y1026AU0F
Changed From	<b>Running change is scheduled for Jan 2025 onward.</b>

Regarding the variable resistor (hereinafter referred to as VR) <sup>[\*1]</sup> mounted on the dust sensor, we will be using a changed material from shipments (scheduled) from January 2025 onwards.

[\*1] This VR is used to adjust the sensitivity during product shipping testing(done in our process).

The resistor element of the currently installed VR contains lead compounds, which are exempt from the RoHS Directive.

The expiration period of the exemption has not yet been decided, we will be changing the resistor element to ones that do not contain lead compounds.

Thank you for your understanding and confirmation.

### **1. Applicable Models**

GP2Y1010AU0F／GP2Y1013AU0F／GP2Y1014AU0F／GP2Y1014AUVF  
GP2Y1022AU0F／GP2Y1023AU0F／GP2Y1024AU0F／GP2Y1026AU0F

### **2. Contents of Change**

Changed the resistor and electrodes of the variable resistor (VR) to lead-free products.

There are no changes to product shape, terminal layout, product characteristics, and reliability.  
Refer to the attached document in detail.

### **3. Reason for Change**

To continue the supply of Dust sensors.

July 19th, 2024



# Dust sensor: Regarding Change to lead-free materials

## < GP2Y101\* /GP2Y102\* VR-equipped products >

シャープセミコンダクターイノベーション株式会社  
第一開発部

Development Div. I  
Sharp Semiconductor Innovation Corporation

# Changing in the material of the variable resistor (VR) installed in the Dust Sensor

- Regarding the variable resistor (hereinafter referred to as VR)<sup>[\*1]</sup> mounted on the dust sensor, we will be using a changed material from shipments(scheduled) from January 2025 onwards. Thank you for your understanding and confirmation.
- [\*1] This VR is used to adjust the sensitivity during product shipping testing.

《Purpose》

The resistor element of the currently installed VR contains lead compounds, which are exempt from the RoHS Directive. The expiration period of the exemption has not yet been decided, we will be changing the resistor element to ones that do not contain lead compounds.

《Applicable models》

GP2Y1010AU0F／GP2Y1013AU0F／GP2Y1014AU0F／GP2Y1014AUVF  
GP2Y1022AU0F／GP2Y1023AU0F／GP2Y1024AU0F／GP2Y1026AU0F

《Changes》  
The photo shows a representative model.

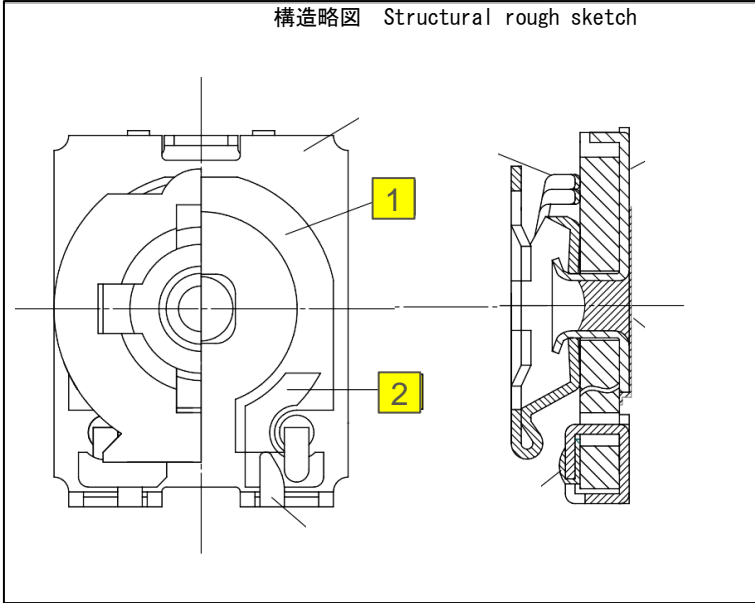
VR of applicable models



Variable resistor (VR) change points comparison table

	現行品 Current product	変更品 Changed product
メーカー名 Manufacturer	H社 (変更なし) Company H (no change)	
特長 Features	メタルグレーズ皮膜抵抗体 Metal Glaze type resistor element	
	抵抗体と電極材料に鉛化合物を含む Resistor and electrode material contains lead compounds	抵抗体と電極材料に鉛化合物を含まない Resistor and electrode material does not contain lead compounds
定格 Rating	同一 (仕様変更なし) Identical (no specification changes)	
機械的特性 Mechanical Characteristics	同一 (仕様変更なし) Identical (no specification changes)	
電気的特性 Electrical Characteristics	同一 (仕様変更なし) Identical (no specification changes)	
信頼性特性 Reliability Characteristics	同一 (仕様変更なし) Identical (no specification changes)	

Changes points to lead-free of VR(changed product)



No.	PART NAME 部 品 名	BASE MATERIAL 材 質
1	RESISTOR 抵 抗 体	METAL GLAZE COATING メタルグレーズ皮膜
2	ELECTRODE 電 極	AgPd 銀パラジウム

# Changing in the material of the variable resistor (VR) installed in the Dust Sensor

- This change in the VR's constituent materials has no effect on the characteristics described in the dust sensor specifications. The main characteristics of a representative model (GP2Y1026AU0F) before and after the change are shown below.
- We have also confirmed that there is no impact on the reliability items described in the specifications.

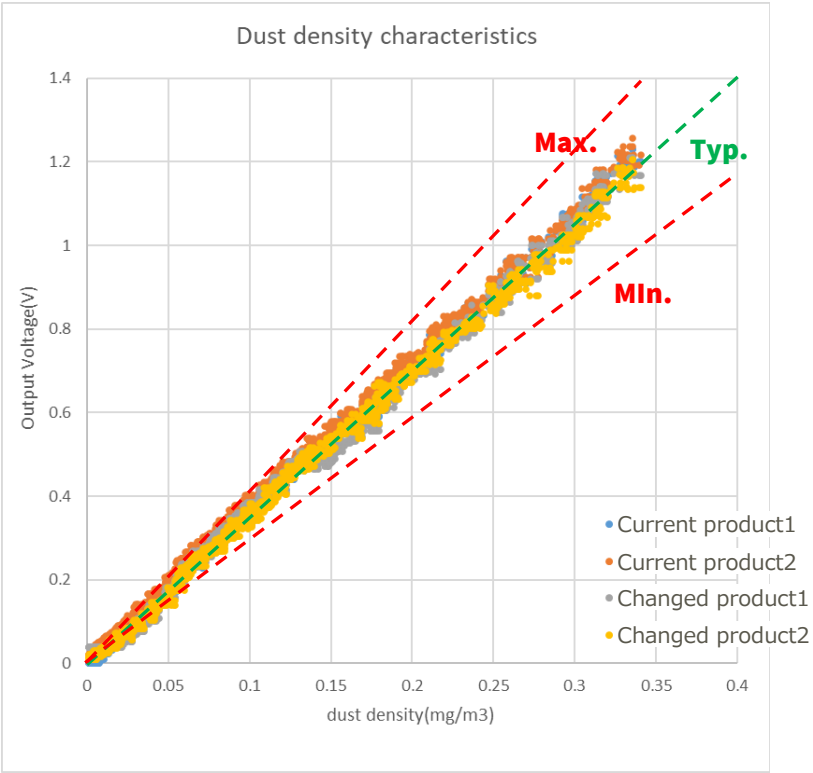
## 1) Current consumption

(mA)		
Sample No.	Current product	Changed product
1	12.84	12.84
2	13.04	13.04
Spec.	Typ. 15 mA Max. 20 mA	

## 2) Sensitivity (Output at no dust)

(V)		
Sample No.	Current product	Changed product
1	0.003	0.002
2	0.000	0.000
Spec.	Min. 0 V	

## 3) Sensitivity (Cigarette smoke detection)



Spec.	Max.	0.41V/(100ug/m3)
	Typ.	0.35V/(100ug/m3)
	Min.	0.29V/(100ug/m3)

# SHARP

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