



Product Change Notification

● Purpose

We would like to notify customers of the following product changes regarding certain Sharp reflective photointerrupter models. Sharp will be applying this running change from September, 2018. There is no change to the device specifications or reliability. The model numbers will remain unchanged.

- Addition of a second supplier of MLCC chip condenser component to ensure stable supply for production.
- Change in reflow mounting process for MLCC.

● Effective Time of Change

These are running changes that will be applied starting in September, 2018.

● Details

Please refer to the pages that follow for the details of the product changes from Sharp.

If you have any questions concerning this notification, please contact your Socle representatives.

SHARP Product Change Notification

SHARP Corporation
Electronics Components And Devices BU
Semi conductor Business unit

We would like to express our application for selecting SHARP devices.
Please be informed that our products change notification as follows;



Subject	MLCC(Chip Condenser)2nd Supplier Selection and Mounting Process Change Announcement
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Category	Reflective type photo interrupters with OPIC light modulated output (15 models)
Applicable From	Running change is scheduled from September 2018 lot

Please be informed that we will add new MLCC(Chip Condenser) component supplier due to sudden supply limitation, and some EOLs from Murata Manufacturing Co., Ltd.(Murata), since we need continuous production for reflective type photointerrupters , and stable supply.

And let us announce that we will introduce reflow mouting process for MLCC.

We are very sorry for your inconvenience, especially no time for announcement, however we would like to seek your understanding for this situation.

1. Model

	Model No.		Model No.		Model No.
1	GP2A230LRS0F	6	GP2A25NJJ00F	11	GP2A200LCSCF
2	GP2A230LRSAF	7	GP2A28A1J00F	12	GP2A210LCSCF
3	GP2A231LRSAF	8	GP2A28AJ000F	13	GP2A210LCSJF
4	GP2A25DJ000F	9	GP2A28CJ000F	14	GP2A240LCS0F
5	GP2A25J0000F	10	GP2A200LCS0F	15	GP2A250LCS0F

※ Please refer details on another supplemental document (model no, and schedule)

2. Additional suppliers for MLCC (Chip Condenser)

Current Products MLCC			New, Combined use for MLCC		
Supplier	Size	Capacitance	Supplier	Size	Capacitance
Murata	1608	1.0 μF	Kyocera	1608	1.0 μF
Murata	1608	0.1 μF	Walsin(TW)	1608	0.1 μF
Murata	3216	1.0 μF	Walsin(TW)	3216	1.0 μF

To archive more stable production, we will continue evaluation to other supplier's components due to world wide shortage of MLCC.

We update them in our best schedule, we hope you could understand our current situations.

※Please also refer comparison sheet in details.

3. As for new mouting method for MLCC
Currently implimented by hand, and it will be reflow mouting process.
4. Purpose of selecting new MLCC supplier, and introducing new method
For continous/stable production supply

The specification sheet and product reliability will not be changed.

Table of selecting new supplier and mounting for Reflective Type Photointerrupter MLCC(*1)

[*1] Chip Multilayer Ceramic Capacitors

Category	Model Number	MLCC 2nd(New, Combined use) Supplier 《Current MLCC:made in Murata》			Schedule	Mounting Change	Schedule	Note	
		1608 size 0.1uF	1608 size 1.0uF	3216 size 1.0uF	MLCC 2nd supplier Schedule	By hand ↓ ↓ ↓ By reflow	MLCC Reflow mount Schedule		
1	Photointerrupter	GP2A230LRS0F	Walsin	Kyocera				Considering to add 3rd supplier	
2	Photointerrupter	GP2A230LRSAF	Walsin	Kyocera				Considering to add 3rd supplier	
3	Photointerrupter	GP2A231LRSAF	Walsin	Kyocera				Considering to add 3rd supplier Done LTB acceptance	
4	Photointerrupter	GP2A25DJ000F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
5	Photointerrupter	GP2A25J0000F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
6	Photointerrupter	GP2A25NJJ00F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
7	Photointerrupter	GP2A28A1J00F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to select 3rd supplier Done LTB acceptance
8	Photointerrupter	GP2A28AJ000F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
9	Photointerrupter	GP2A28CJ000F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
10	Photointerrupter	GP2A200LCS0F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
11	Photointerrupter	GP2A200LCSCF			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
12	Photointerrupter	GP2A210LCSCF			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
13	Photointerrupter	GP2A210LCSJF			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
14	Photointerrupter	GP2A240LCS0F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier
15	Photointerrupter	GP2A250LCS0F			Walsin	(Nov-18)	Applicable	(Mar-19)	Considering to add 3rd supplier

Mounted MLCC^[*1] comparison table

[*1] Chip Multilayer Ceramic Capacitors

Applicable type: Reflective type photo interrupters with OPIC light modulated output

【Model】 GP2A230LRS0F, GP2A230LRSAF, GP2A231LRSAF			
		Current MLCC	Combine use of Current and New MLCC
Supplier		Murata Manufacturing Co., Ltd.	KYOCERA Corporation
Part number		GRM188B31C105KA92D	AM105X7R105K16AT
Size code[mm]		1608	
Capacitance value		1.0 μ F	
Capacitance tolerance		$\pm 10\%$	$\pm 10\%$
Rated voltage		16 Vdc	16 Vdc
Temperature Characteristic	Public STD Code	B (JIS)	X7R (EIA)
	Capacitance Change Rate	$\pm 10\%$	$\pm 15\%$
	Temperature Range	-25~+85°C	-55~+125°C

【Model】 GP2A230LRS0F, GP2A230LRSAF, GP2A231LRSAF			
		Current MLCC	Combine use of Current and New MLCC
Supplier		Murata Manufacturing Co., Ltd.	Walsin Technology Corporation
Part number		GRM188R11E104KA01D	0603B104K250CT
Size code[mm]		1608	
Capacitance value		0.1 μ F	
Capacitance tolerance		$\pm 10\%$	$\pm 10\%$
Rated voltage		25 Vdc	25 Vdc
Temperature Characteristic	Public STD Code	R (JIS)	X7R (EIA)
	Capacitance Change Rate	$\pm 15\%$	$\pm 15\%$
	Temperature Range	-55~+125°C	-55~+125°C

【Model】 GP2A25series/GP2A28series, GP2A200series, GP2A210series, GP2A240LCS0F, GP2A250LCS0F			
		Current MLCC	Combine use of Current and New MLCC
Supplier		Murata Manufacturing Co., Ltd.	Walsin Technology Corporation
Part number		GRM31MB11C105KA01L	1206B105K160CT
Size code[mm]		3216	
Capacitance value		1.0 μ F	
Capacitance tolerance		$\pm 10\%$	$\pm 10\%$
Rated voltage		16 Vdc	16 Vdc
Temperature Characteristic	Public STD Code	B (JIS)	X7R (EIA)
	Capacitance Change Rate	$\pm 10\%$	$\pm 15\%$
	Temperature Range	-25~+85°C	-55~+125°C