



Notification of Product/Process Change

Doc. No.: 1023009

This letter intends as a formal notification of change to products which are currently supplied by ROHM Co., Ltd.

ROHM Co., Ltd. requires customers to provide acknowledgment of the receipt of this notification within 30 days from the date of this notice. Lack of acknowledgment of this notice within 30 days is considered as acceptance of the change.

After acknowledgement of the customer, lack of additional response within 90 day period constitutes acceptance of the change according to JEDEC Standard J-STD-046.

Your understanding and cooperation would be highly appreciated.

Issue Date: Mrz 1.2023

Title of change	Change to strengthen and improve container tube material for LSI DIP7, 8 series and TO220FP5 series	
Identification of change	Identification is possible through traceability from markings. In addition, identification is possible from the color of the container tube.	
Affected product(s)	Manufacturer part number	Customer part number
	See Attachment	See Attachment
Detailed description of change	Before	After
	Polyvinyl Chloride(PVC)	Poly Carbonate(PC)
Reason for change	Since the container tube is deformed by the heat during transportation, we will change to a material with high heat resistance.	
Anticipated impact on form, fit, function, quality or reliability	This change has no impact on quality.	
Planned first ship date	Aug 1.2023	
Qualification plan schedule, results and samples	If required, please contact the local ROHM sales office or the authorized distributor.	
Comments		
Supplier contact	Please contact the local ROHM sales office or the authorized distributor.	
Notes		



Electronics for the Future

No.1023009

Change to strengthen and improve container tube material for LSI DIP7, 8 series and TO220FP5 series

1. Summary of Changes
2. Change point of 4M due to change of container tube material
3. Evaluation result of tubes for DIP-T8, DIP7F, DIP7WF, DIP7AK, DIP7K, DIP8K
4. Evaluation result of tubes for TO220FP-5, TO220FP-3
5. Summary

March 1, 2023
ROHM Co., Ltd AP Quality Control Department

1 .Summary of Changes



【Date of Issue 】 March 1, 2023

【Notice No.】 1023009

【Details of changes】 The container tube material will be changed from polyvinyl chloride to polycarbonate in the following package.

Target package : DIP-T8, DIP7F, DIP7WF, DIP7AK, DIP7K, DIP8K
: TO220FP-5、TO220FP-3

【Reason of Changes】 The container tube may be deformed if it becomes hot during transportation, so we will change to a material with high heat resistance.

【DeQuMa Evaluation】 There are no applicable items.

【Evaluation result】 Please refer to the attachment.

【Schedule】 Scheduled sample supply date : March 1, 2023

PCN response deadline : June 1, 2023

First shipment date : August 1, 2023

【Contact information of ROHM】 Please contact your nearest ROHM sales office.

2. Change point of 4M due to change of container tube material




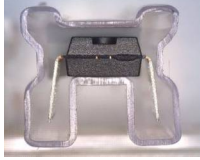


2-1) Change point of 4M

4M	Polyvinyl chloride(PVC) Container tube(existing)	Polycarbonate(PC) Container tube (after change)	Difference
Man	Worker certified by the company's in-house license system work according to work procedure.		Same
Machine	It has the same machine and has been evaluated and no differences have been confirmed.		Same
Material	Polyvinyl chloride(PVC)	Polycarbonate(PC)	Have※1
Method	There is no particular difference		Same

※1 See next page

2. Change point of 4M due to change of container tube material

2-2) Comparison of physical properties

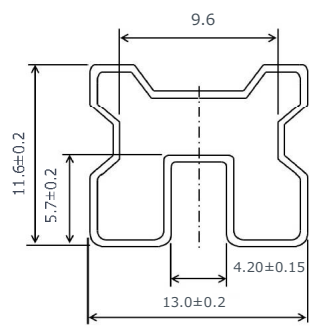
		Polyvinyl chloride(PVC)	Polycarbonate(PC)
Appearance	Shade	Bluish transparent	Colorless Transparent
	DIP-T8, DIP7F, DIP7WF, DIP7AK, DIP7K, DIP8K		
	TO220FP-5, TO220FP-3		
Material	—	Polyvinyl chloride(PVC)	Polycarbonate(PC)
Physical Properties	Bending Stress	69~98MPa	94MPa
	Coefficient of linear expansion	$6\sim 8 \times 10^{-5} K^{-1}$	$7 \times 10^{-5} K^{-1}$
	Heat resistance temperature	60~65°C	120°C
	Glass-transition temperature	81°C	147°C
	Melting point	212°C	225°C

3. Evaluation result of tubes for DIP-T8, DIP7F, DIP7WF, DIP7AK, DIP7K, DIP8K

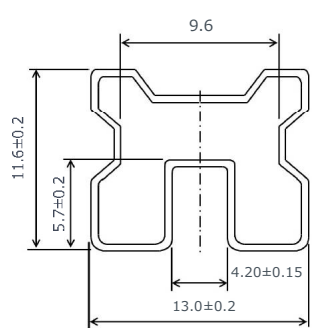
3-1 External Dimension

1) No change in design

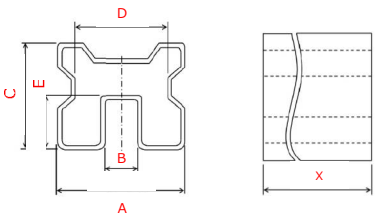
【Dimension before change】



【Dimension after change】



2) We have confirmed the performance with samples and have sufficient Cpk.

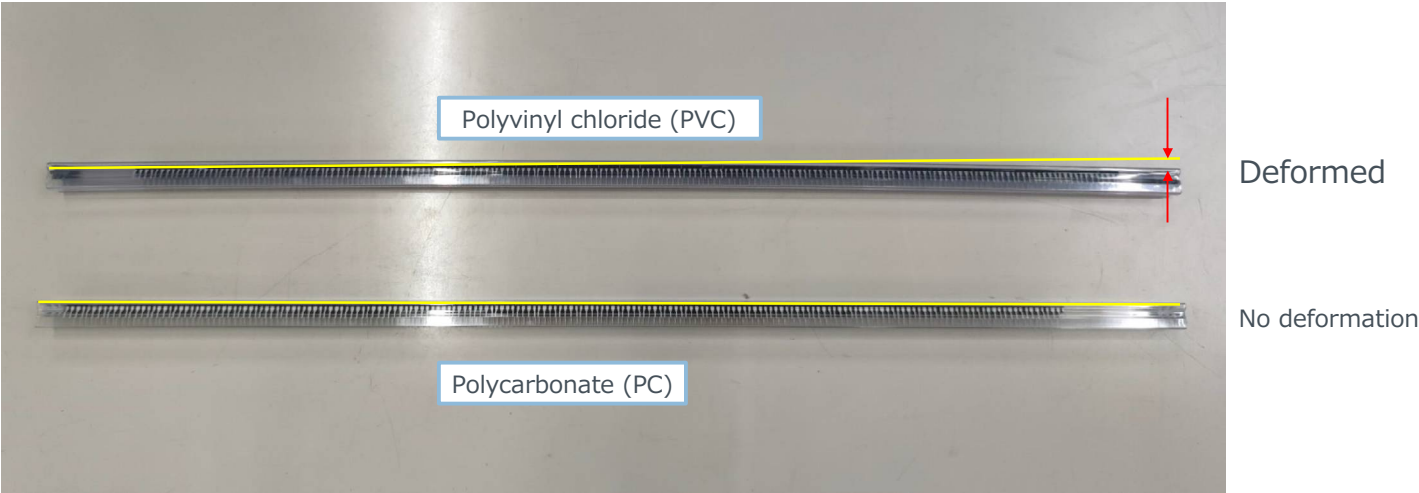


	A	B	C	D	E	X
STD	13.00	4.20	11.6	9.60	5.70	505.00
	±0.20	±0.15	±0.20	-	±0.20	+0.00 -1.00
Cpk	2.73	3.41	1.72	-	1.99	1.75

3. Evaluation result of tubes for DIP-T8, DIP7F, DIP7WF, DIP7AK, DIP7K, DIP8K

3-2 Heat resistance evaluation result

Polycarbonate tube and current tube were subjected to temperature for a long time, and deformation was evaluated. No difference was observed at 50°C and 60°C. At 70°C deformation was observed in the current tube, but not in the polycarbonate tube.

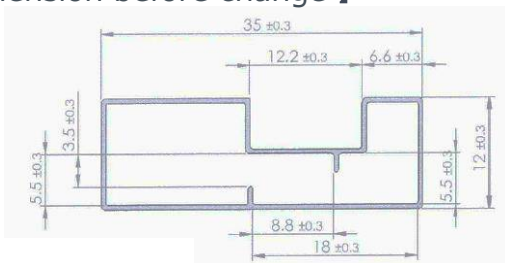


4. Evaluation result of container tube for TO220FP-5, TO220FP-3

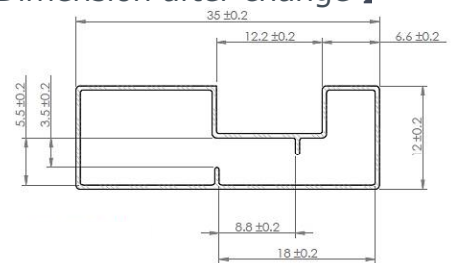
3-1 External Dimension

1) No change in design

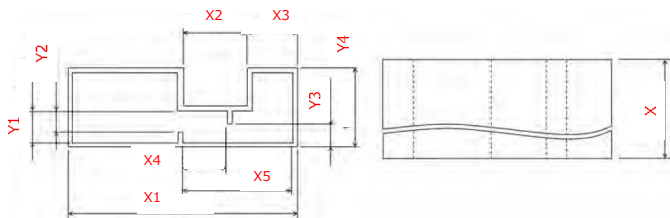
【 Dimension before change 】



【 Dimension after change 】



2) We have confirmed the performance with samples and have sufficient Cpk.



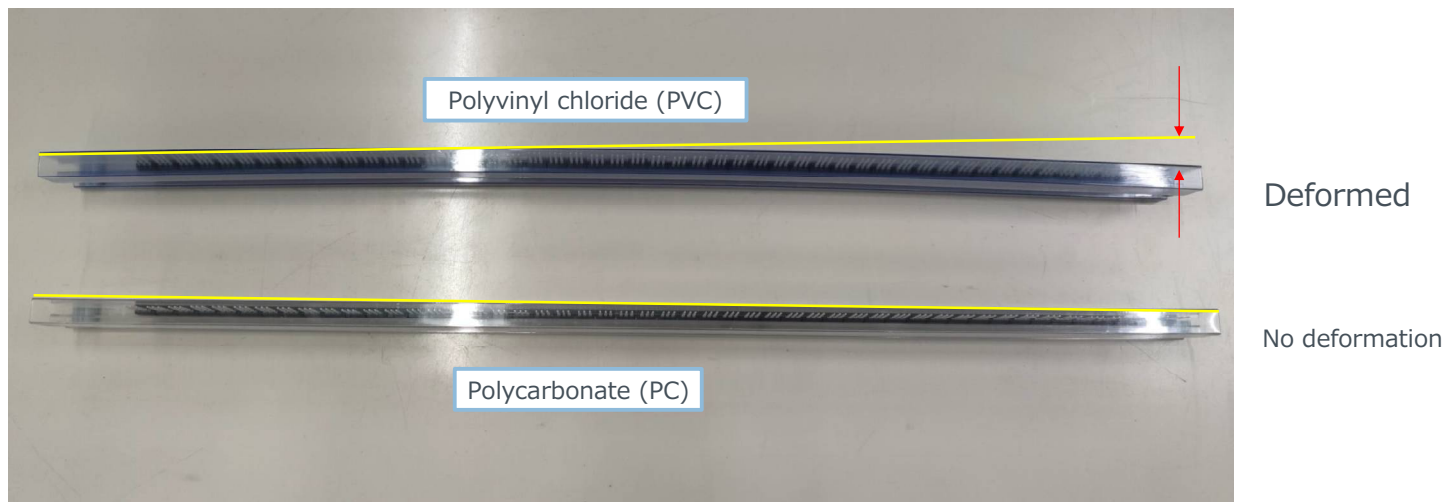
	X1	X2	X3	X4	X5	Y1	Y2	Y3	Y4	X
STD	35.00 ±0.3	12.2 ±0.3	6.6 ±0.3	8.8 ±0.3	18.0 ±0.3	5.5 ±0.3	3.5 ±0.3	3.5 ±0.3	12.0 ±0.3	550 +0.0 -1.5
Cpk	3.06	3.64	3.91	4.14	2.56	2.73	2.42	1.81	1.96	4.11

4. Evaluation result of container tube for TO220FP-5, TO220FP-3



4-2 Heat resistance evaluation result

Polycarbonate tube and current tube were subjected to temperature for a long time, and deformation was evaluated. No difference was observed at 50°C and 60°C. At 70°C deformation was observed in the current tube, but not in the polycarbonate tube.



5. Summary



Based on the above evaluation and verification, we have determined that polycarbonate container tube can prevent from deforming and that the same level of quality can be guaranteed, so we will change the tube material.

Regarding the target models for your company, we plan to change them sequentially from the scheduled date unless they are disapproved.

Thank you for confirmation



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ROHM Co.,Ltd. © ROHM Co., Ltd.

Internal PN	Public (External) PN	PCN/PTNs which ROHM is applying for in parallel
BM2P061EK-LBZ	BM2P061EK-LBZ	—
BM2P061E-Z	BM2P061E-Z	—
BM2P134H-Z	BM2P134H-Z	—
BM2P104E-Z	BM2P104E-Z	—
BM2P064E-Z	BM2P064E-Z	—
BM2P101FK-LBZ	BM2P101FK-LBZ	—
BM2P061FK-LBZ	BM2P061FK-LBZ	—
BM2P104H-Z	BM2P104H-Z	—
BM2P131FK-LBZ	BM2P131FK-LBZ	—
BM531Q11-Z	BM531Q11-Z	—
BM2P101H-Z	BM2P101H-Z	—
BM2P064H-Z	BM2P064H-Z	—
BM2P063HK-LBZ	BM2P063HK-LBZ	—
BM2P101E-Z	BM2P101E-Z	—
BM532Q11-Z	BM532Q11-Z	—
SLC1015R-Z	SLC1015R-Z	—
BM2P034	BM2P034	—
BM2P0141-SZ	BM2P0141-Z	—
BM2P091	BM2P091	—
BM2P011	BM2P011	—
BM2P031	BM2P031	—
BM2P094	BM2P094	—
BM2P012	BM2P012	—
BM2P013	BM2P013	—
BM2P094-S	BM2P094	—
BM2P053	BM2P053	—
BM2P093	BM2P093	—
BM2P054	BM2P054	—
BM2P014	BM2P014	—
BM2P0141-Z	BM2P0141-Z	—
BM2P051	BM2P051	—
BM2P052	BM2P052	—
BM2P092	BM2P092	—
BM2P092-S	BM2P092	—
BM2P014-S	BM2P014	—
BM2P032	BM2P032	—
BM2P033	BM2P033	—
BM2P0142	BM2P0142	—
BM2P034-S	BM2P034	—
BM2P054-S	BM2P054	—
BM2P013-Z	BM2P013	—
BM2P0161K-Z	BM2P0161K-Z	—
BM2P101W-Z	BM2P101W-Z	—
BM2P033-Z	BM2P033	—
BM2P0141-SZA	BM2P0141-Z	—
BM2P091-Z	BM2P091	—
BM2P034-SZ	BM2P034	—
BM2P141X-Z	BM2P141X-Z	—
BM2P151S-Z	BM2P151S-Z	—
BM2P094-Z	BM2P094	—
BM2P039-Z	BM2P039-Z	—

BM2P0391-Z	BM2P0391-Z	-
BM2P134Q-Z	BM2P134Q-Z	-
BM2P131X-Z	BM2P131X-Z	-
BM2P094-SZ	BM2P094	-
BM2P016-Z	BM2P016-Z	-
BM2PA15-Z	BM2PA15-Z	-
BM2P032-Z	BM2P032	-
BM2P0161-Z	BM2P0161-Z	-
BM2P10B3J-Z	BM2P10B3J-Z	-
BM2P092-SZ	BM2P092	-
BM2P201X-Z	BM2P201X-Z	-
BM2P121XH-Z	BM2P121XH-Z	-
BM2P161X-Z	BM2P161X-Z	-
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BM2P034-Z	BM2P034	-
BM2PA55-Z	BM2PA55-Z	-
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BM2P201W-Z	BM2P201W-Z	-
BM2P051-Z	BM2P051	-
BM2P249Q-Z	BM2P249Q-Z	-
BM2P015-Z	BM2P015-Z	-
BM2P0141-ZA	BM2P0141-Z	-
BM2P011-Z	BM2P011	-
BM2P0362-Z	BM2P0362-Z	-
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BM2P101X-Z	BM2P101X-Z	-
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BM2PA35-Z	BM2PA35-Z	-
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BM2P054-Z	BM2P054	-
BM2P014-SZ	BM2P014	-
BM2P0361-Z	BM2P0361-Z	-
BM2P092-Z	BM2P092	-
BM2P053-Z	BM2P053	-
BM2P134Q-ZA	BM2P134Q-Z	-
BM2P016-ZA	BM2P016-Z	-
BM2P0161-ZA	BM2P0161-Z	-
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BM2P161W-ZA	BM2P161W-Z	-
BM2P014-ZA	BM2P014	-
BM2P0361K-ZA	BM2P0361K-Z	-
BM2P054-ZA	BM2P054	-
BM2P151S-ZA	BM2P151S-Z	-

BA6220-Z	BA6220	-
BR24G16-3Z	BR24G16-3Z	Application number 1023002
BA6220	BA6220	Application number 1018009
BR93LC46-M	BR93LC46	Application number 1018009
BA10393	BR24C64	Application number 1018009
BA10358	BR24G16-3	Application number 1018009
BR93L46-WS	BR93L46-W	-
BA178M08T	BA178M08T	-
BA80JC5T	BA80JC5T	-
BA17824T	BA17824T	-
BA033CC0T-M	BA033CC0T	-
BA033T	BA033T	-
BA18BC0T	BA18BC0T	-
BA33JC5T	BA33JC5T	-
BA05CC0T	BA05CC0T	-
BA80BC0T	BA80BC0T	-
BA08CC0T-M	BA08CC0T	-
BA06T	BA06T	-
BA15BC0T	BA15BC0T	-
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BA12T	BA12T	-
BA03CC0T	BA03CC0T	-
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BA17809T	BA17809T	-
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BA178M24T	BA178M24T	-
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BA25DD0T	BA25DD0T	-
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