

Change Request Form

Submission Address

To Our Valued Customers

Dear

We hope this letter finds your company in good health and continued success.

We sincerely thank you for your continued support.

Regarding the subject matter indicated above, as outlined below, we are submitting a request to change the components used in the rotary encoder.

We kindly ask that you review this request.

Sincerely,

Reference Number	8UCMH-0067-1(1)	
Publication Date	July 6, 2026	
Issued by	Nidec Components Co., Ltd. Actuator Division, Manufacturing Department 2, Quality Control Team	
Approved by	Checked by	Prepared by
		

D e t a i l s o f C h a n g e R e q u e s t	1.Change Title JT22 Series Chip Resistor Material Change																						
	2.Target Models (9models) • JT22-090-610-01 • JT22-320-C00 • JT22-120-500-01 • JT22-120-C00 • JT22-120-C01-01 • JT22-120-500-11 • JT22-120-C00-01 • JT22-120-500 • JT22-320-500																						
	3.Planned Implementation Date Switching from October 2026 production Modified items are tracked by lot number.																						
	4.Reason for Change Improved rated power and higher precision																						
	5.Change Details <table><tr><th>Category</th><th>Current model</th><th>Revised version</th></tr><tr><td>Manufacturer Name</td><td>ROHM Co., Ltd.</td><td>ROHM Co., Ltd.</td></tr><tr><td>Part Number</td><td>• MCR50JZHJ121 Glassware • MCR50JZHJ331 Glassware • MCR50JZHJ101 Glassware</td><td>• MCR50SJQPJ121 Plasticware • MCR50SJQPJ331 Plasticware • MCR50SJQPJ101 Plasticware</td></tr><tr><td>Exterior</td><td></td><td></td></tr></table>					Category	Current model	Revised version	Manufacturer Name	ROHM Co., Ltd.	ROHM Co., Ltd.	Part Number	• MCR50JZHJ121 Glassware • MCR50JZHJ331 Glassware • MCR50JZHJ101 Glassware	• MCR50SJQPJ121 Plasticware • MCR50SJQPJ331 Plasticware • MCR50SJQPJ101 Plasticware	Exterior								
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Exterior																							
6.Evaluation Results ① The modified functionality and performance meet the specifications. ② The modified reliability tests also meet the conditions specified in the specifications. <table><tr><th></th><th>Document Title</th><th>Reference Number</th><th>Rating Type (Representative Type)</th><th>Determination</th></tr><tr><td rowspan="3">①</td><td rowspan="3">Performance Evaluation Report</td><td rowspan="3">8UCBF-0203(1)</td><td>JT22-090-610-01(Resistor Part Number : MCR50SJQPJ121)</td><td>OK</td></tr><tr><td>JT22-120-C01-01(Resistor Part Number : MCR50SJQPJ331)</td><td>OK</td></tr><tr><td>JT22-320-500(Resistor Part Number : MCR50SJQPJ101)</td><td>OK</td></tr><tr><td>②</td><td>Reliability Test Report</td><td>8UCED-0172(1)</td><td>JT22-320-500(Resistor Part Number : MCR50SJQPJ101)</td><td>OK</td></tr></table>						Document Title	Reference Number	Rating Type (Representative Type)	Determination	①	Performance Evaluation Report	8UCBF-0203(1)	JT22-090-610-01(Resistor Part Number : MCR50SJQPJ121)	OK	JT22-120-C01-01(Resistor Part Number : MCR50SJQPJ331)	OK	JT22-320-500(Resistor Part Number : MCR50SJQPJ101)	OK	②	Reliability Test Report	8UCED-0172(1)	JT22-320-500(Resistor Part Number : MCR50SJQPJ101)	OK
	Document Title	Reference Number	Rating Type (Representative Type)	Determination																			
①	Performance Evaluation Report	8UCBF-0203(1)	JT22-090-610-01(Resistor Part Number : MCR50SJQPJ121)	OK																			
			JT22-120-C01-01(Resistor Part Number : MCR50SJQPJ331)	OK																			
			JT22-320-500(Resistor Part Number : MCR50SJQPJ101)	OK																			
②	Reliability Test Report	8UCED-0172(1)	JT22-320-500(Resistor Part Number : MCR50SJQPJ101)	OK																			
7.Preferred response date Through September 1, 2026																							
C u s t o m e r '' s D e c i s i o n	Decision ☐ Approve ☐ Cannot approve If you are unable to approve this, please state the reason.																						
	Comments		Approved by	Checked by	Prepared by																		

Potentiometer Model	Previous	New
JT22-090-610-01	MCR50JZHJ121	MCR50SJQPJ121
JT22-120-C00	MCR50JZHJ331	MCR50SJQPJ331
JT22-120-C00-01	MCR50JZHJ331	MCR50SJQPJ331
JT22-320-C00	MCR50JZHJ331	MCR50SJQPJ331
JT22-120-C01-01	MCR50JZHJ331	MCR50SJQPJ331
JT22-120-500	MCR50JZHJ101	MCR50SJQPJ101
JT22-120-500-01	MCR50JZHJ101	MCR50SJQPJ101
JT22-120-500-11	MCR50JZHJ101	MCR50SJQPJ101
JT22-320-500	MCR50JZHJ101	MCR50SJQPJ101

The glassware resistor MCR50JZHJ will be replaced by the plsticware resistor MCR50SJQPJ.
The resistance values will remain the same, but the material will change from glass to plstic.

Previous



MCR50JZHJ121 Glassware
MCR50JZHJ331 Glassware
MCR50JZHJ101 Glassware

*The image shows the
MCR50JZHJ331 as an example

New



MCR50SJQPJ121 Plasticware
MCR50SJQPJ331 Plasticware
MCR50SJQPJ101 Plasticware

The resistance code will no longer be printed
on the surface of the new resistor.

This change will be implemented for all three models effective from October 2026 production.

Reliability test reports are issued for the representative model of the entire product line.
The environmental data provided is for the MCR50SJQPJ total model.

Submission Address		Reliability Test Report	Reference Number 8UCED-0172(1)		
Publication Date March 26, 2026	Publishing Department Manufacturing		Approved by 	Checked by 	Prepared by
Document Classification Record	Part 2 QC	Title JT22 Series "Change in Chip Resistor Material" Reliability Test Results			

1.Purpose

Regarding Evaluation Samples for the JT22 Series Potentiometers
"Change in Chip Resistor Material Change" We are reporting the results of the reliability tests.

2.Prototyping Information

Item	Details
Category	4M Change Request •Change in Chip Resistor Material Previously: MCR50JZHJ121 Glassware MCR50JZHJ331 Glassware MCR50JZHJ101 Glassware New: MCR50SJQPJ121 Plasticware MCR50SJQPJ331 Plasticware MCR50SJQPJ101 Plasticware *For details, please refer to the "Change Request Form" Reference No. 8UCMH-0067(1).
Processing Slip	"Instructions for Partial Functional Prototyping" Reference No. 8UDDM-0903
Compatible Models	JT22 Series: 9 Models JT22-090-610-01 JT22-120-500 JT22-120-C00 JT22-120-500-01 JT22-120-C00-01 JT22-120-500-11 JT22-320-C00 JT22-320-500 JT22-120-C01-01
Test Model	JT22-320-500 Product Name: Potentiometer Control Number/Drawing Number: 7910 1K01 0111
Number of units	A total of 12 units
Identification	LotNo.56C

3.Conclusion

■ Result: Pass

Based on the evaluation results, we confirmed that the prototype met the conditions specified in the product specifications both before and after testing.
Furthermore, during the performance evaluation, the characteristics remained stable before and after testing, and no abnormalities were observed.
Therefore, we have determined that the prototype has passed the evaluation.

4. Reliability Test Items, Conditions, and Post-Test Specifications**■ Reliability testing=4 items in total**

Test items shall be conducted in accordance with Sub-Functional Prototype Instruction 8UDDM-0903-2.

No.	Item	Test Conditions	Evaluation Criteria	Quantity
1	Left at high temperatures	Test temperature: 80°C Duration: 96 hours	Within the initial specifications	3
2	Left at a low temperature	Test temperature: -30°C Duration: 96 hours		3
3	Temperature cycling	JT22 温度サイクル試験条件 		3
4	Humidity resistance	Test conditions: 25°C(12 hours) to 65°C (12 hours), 95% relative humidity duration: 24 hours × 10 cycles		3

5. Reliability Test Results

The specifications were met both before and after the test. (Note: Three units per test item)

Item	Location/Facilities	Decision	Details	Data
① Left at high temperature	Ichinoseki Office	Pass	The specifications were met both before and after the test.	P.3
② Left at low temperature	Ichinoseki Office	Pass	The specifications were met both before and after the test.	P.4
③ Temperature cycling	Sano Office	Pass	The specifications were met both before and after the test.	P.5
④ Humidity resistance	Ichinoseki Office	Pass	The specifications were met both before and after the test.	P.6

That's all

Left at high temperature

Model/Test Model	Reliability Test Items	Test Conditions
JT22 Series (Test model:JT22-320-500)	Left at high temperature	80℃ 96hours

Decision
Pass

Evaluation Criteria		Absolute straightness	Absolute straightness							Sample Classification
		MAX	MIN							
Unit		%	%							
Pre-test specifications		±3% or less	±3% or less							
	upper limit	3.0								
	lower limit		-3.0							
Post-test specifications		↓	↓							
	upper limit	3.0								
	lower limit		-3.0							
No.1	Before	1.120	-1.390							OK
	after	0.686	-1.484							
	Change	-0.434	-0.094							
	Decision	○	○							
No.2	Before	0.880	-1.060							OK
	after	0.625	-1.484							
	Change	-0.255	-0.424							
	Decision	○	○							
No.3	Before	0.700	-0.940							OK
	after	0.452	-1.238							
	Change	-0.248	-0.298							
	Decision	○	○							
	Before									
	after									
	Change									
	Decision									
	Before									
	after									
	Change									
	Decision									
Average	Before	0.9000	-1.1300							
	after	0.5876	-1.4022							
	Change	-0.3124	-0.2722							
	Rate	-34.7%	24.1%							

Notes

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Left at low temperature

Model/Test Model	Reliability Test Items	Test Conditions
JT22 Series (Test model:JT22-320-500)	Left at low temperature	-30℃ 96hours

Decision
Pass

Evaluation Criteria		Absolute straightness	Absolute straightness							Sample Classification
		MAX	MIN							
Unit		%	%							
Pre-test specifications		±3% or less	±3% or less							
	upper limit	3.0								
	lower limit		-3.0							
Post-test specifications		↓	↓							
	upper limit	3.0								
	lower limit		-3.0							
No.4	Before	0.810	-0.750							OK
	after	0.879	-1.606							
	Change	0.069	-0.856							
	Decision	○	○							
No.5	Before	0.620	-1.540							OK
	after	0.005	-1.697							
	Change	-0.615	-0.157							
	Decision	○	○							
No.6	Before	1.250	-0.810							OK
	after	0.757	-0.935							
	Change	-0.493	-0.125							
	Decision	○	○							
	Before									
	after									
	Change									
	Decision									
	Before									
	after									
	Change									
	Decision									
Average	Before	0.89333	-1.03333							
	after	0.54687	-1.41276							
	Change	-0.34646	-0.37943							
	Rate	-38.8%	36.7%							

Notes

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Temperature cycling

Model/Test Model	Reliability Test Items	Test Conditions
JT22 Series (Test model:JT22-320-500)	Temperature cycling	-30℃,+25℃,+80℃,+25℃ 50cycle

Decision
Pass

Evaluation Criteria		Absolute straightness	Absolute straightness						
		MAX	MIN						
Unit		%	%						
Pre-test specifications		±3% or less	±3% or less						
	upper limit	3.0							
	lower limit		-3.0						
Post-test specifications		↓	↓						
	upper limit	3.0							
	lower limit		-3.0						
No.7	Before	0.080	-1.630						OK
	after	0.879	-1.362						
	Change	0.799	0.268						
	Decision	○	○						
No.8	Before	0.880	-1.490						OK
	after	0.442	-1.233						
	Change	-0.438	0.257						
	Decision	○	○						
No.9	Before	0.990	-0.500						OK
	after	1.052	-1.782						
	Change	0.062	-1.282						
	Decision	○	○						
	Before								
	after								
	Change								
	Decision								
	Before								
	after								
	Change								
	Decision								
Average	Before	0.650	-1.21						
	after	0.791	-1.46						
	Change	0.141	-0.25						
	Rate	-	-						

Notes

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Humidity resistance

Model/Test Model	Reliability Test Items	Test Conditions
JT22 Series (Test model:JT22-320-500)	Humidity resistance	25℃ 12H~65℃ 12H 95% Rh 24H×10cycle

Decision
Pass

Evaluation Criteria		Absolute straightness	Absolute straightness							Sample Classification
		MAX	MIN							
Unit		%	%							
Pre-test specifications		±3% or less	±3% or less							
	upper limit	3.0								
	lower limit		-3.0							
Post-test specifications		↓	↓							
	upper limit	3.0								
	lower limit		-3.0							
No.10	Before	1.240	-1.850							OK
	after	0.928	-0.513							
	Change	-0.312	1.337							
	Decision	○	○							
No.11	Before	1.310	-1.120							OK
	after	0.884	-0.752							
	Change	-0.426	0.368							
	Decision	○	○							
No.12	Before	1.120	-1.550							OK
	after	0.940	-0.874							
	Change	-0.180	0.676							
	Decision	○	○							
	Before									
	after									
	Change									
	Decision									
	Before									
	after									
	Change									
	Decision									
Average	Before	1.223	-1.51							
	after	0.917	-0.71							
	Change	-0.306	0.79							
	Rate	-	-							

Notes

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Submission Address		Performance Evaluation Report		Reference Number 8UCBF-0203(1)	
Publication Date March 31, 2026	Publishing Department Manufacturing	Title Model: JT22 Series Product Evaluation Results for Resistors with Modified Materials		Approved by 	Checked by 
Document Classification Record	Part 2 QC			Prepared by	

1 Purpose

We are reporting the performance evaluation results for the JT22 series with modified resistor materials.

2. Applicable Models/Changes

Item	Details
Evaluation model	①JT22-090-610-01 (Resistor Part Number:MCR50SJQPJ121) ②JT22-120-C01-01 (Resistor Part Number:MCR50SJQPJ331) ③JT22-320-500 (Resistor Part Number:MCR50SJQPJ101)
Purpose	Performance Evaluation of Products with Modified Resistor Materials
Identification	①LotNo.56C×3pcs ②LotNo.56C×3pcs ③LotNo.56C×12pcs
Related Documents	①JT22-090-610-01 「Minutes of the QC Meeting」8UCAC-0618 「Instructions for Partial Functional Prototyping」8UDDM-0903 ②JT22-120-C01-01 「Minutes of the QC Meeting」8UCAC-0618 「Instructions for Partial Functional Prototyping」8UDDM-0903-1 ③ JT22-320-500 「Minutes of the QC Meeting」8UCAC-0618 「Instructions for Partial Functional Prototyping」8UDDM-0903-2

3. Evaluation Criteria/Specifications/Results by Item

JT22-090-610-01 Number of samples×3pcs

Category	Evaluation Criteria	Specifications	Determination	
Features /Performance	Dielectric strength	500 V AC, 1 minute	OK	Meets the specifications
	Insulation resistance	DC 500 V, 100 MΩ or higher	OK	Meets the specifications
	Absolute straightness	within ± 3.0%	OK	Meets the specifications
	Current consumption	Less than 18 mA	OK	Meets the specifications

See page 2 for the data

JT22-120-C01-01 Number of samples×3pcs

Category	Evaluation Criteria	Specifications	Determination	
Features /Performance	Dielectric strength	500 V AC, 1 minute	OK	Meets the specifications
	Insulation resistance	DC 500 V, 100 MΩ or higher	OK	Meets the specifications
	Absolute straightness	within ± 3.0%	OK	Meets the specifications
	Current consumption	Less than 40 mA	OK	Meets the specifications

See page 3 for the data

JT22-320-500 Number of samples×12pcs

Category	Evaluation Criteria	Specifications	Decision	Process capability
Features /Performance	Dielectric strength	500 V AC, 1 minute	OK	—
	Insulation resistance	DC 500 V, 100 MΩ or higher	OK	—
	Absolute Straightness MAX	within ± 3.0%	OK	2.01(◎)
	Absolute straightness MIN		OK	1.43(◎)
	Current consumption	Less than 40 mA	OK	—

See pages 4-7 for the data

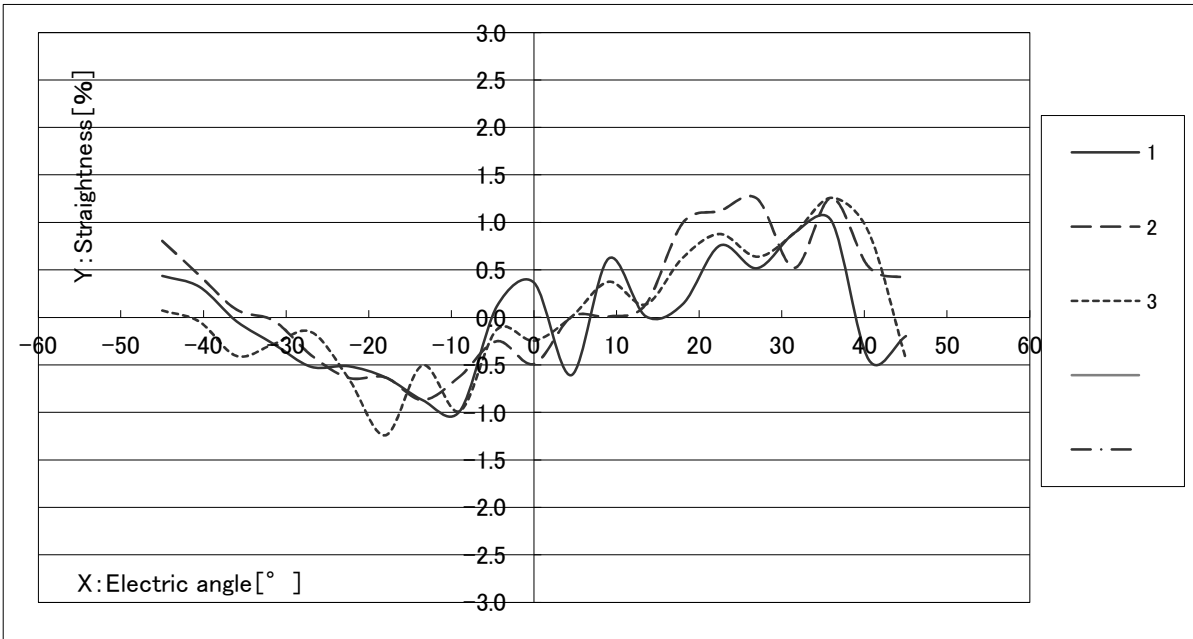
4. Conclusion

■Result...Pass

All functions and performance met the specifications, and there were no defective units.

That's all

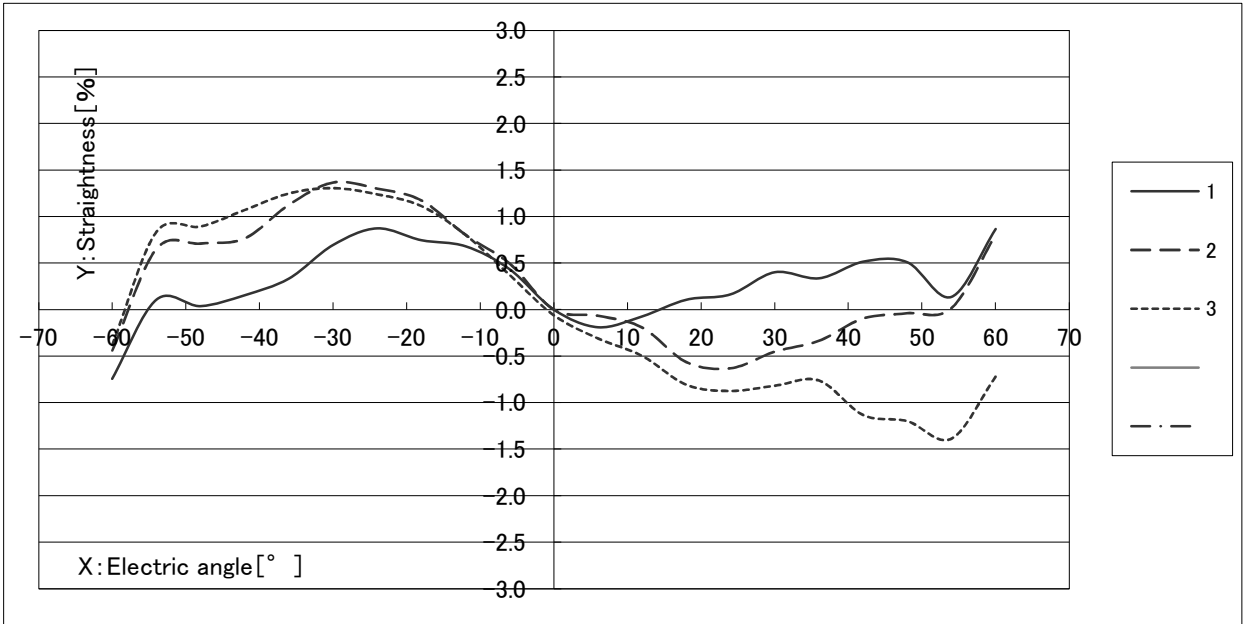
Model		Lot No.	Lot size	Date of examination		
J T 2 2 - 0 9 0 - 6 1 0 - 0 1		56C	N=3	September 4, 2025		
Test Items	Specifications	No. 1	No. 2	No. 3		
1. Dielectric strength	500 V AC for 1minute	0 K	0 K	0 K		
2. Insulation resistance	DC 500 V, 100 MΩ or higher	0 K	0 K	0 K		
3. Absolute straightness	±3.0% M A X	1.02	1.26	1.26		
	M I N	-0.99	-0.87	-1.24		
4. Current consumption (6 V DC)	Less than 18 mA	0 K	0 K	0 K		



room temperature : 22°C

Humidity : 41%Rh

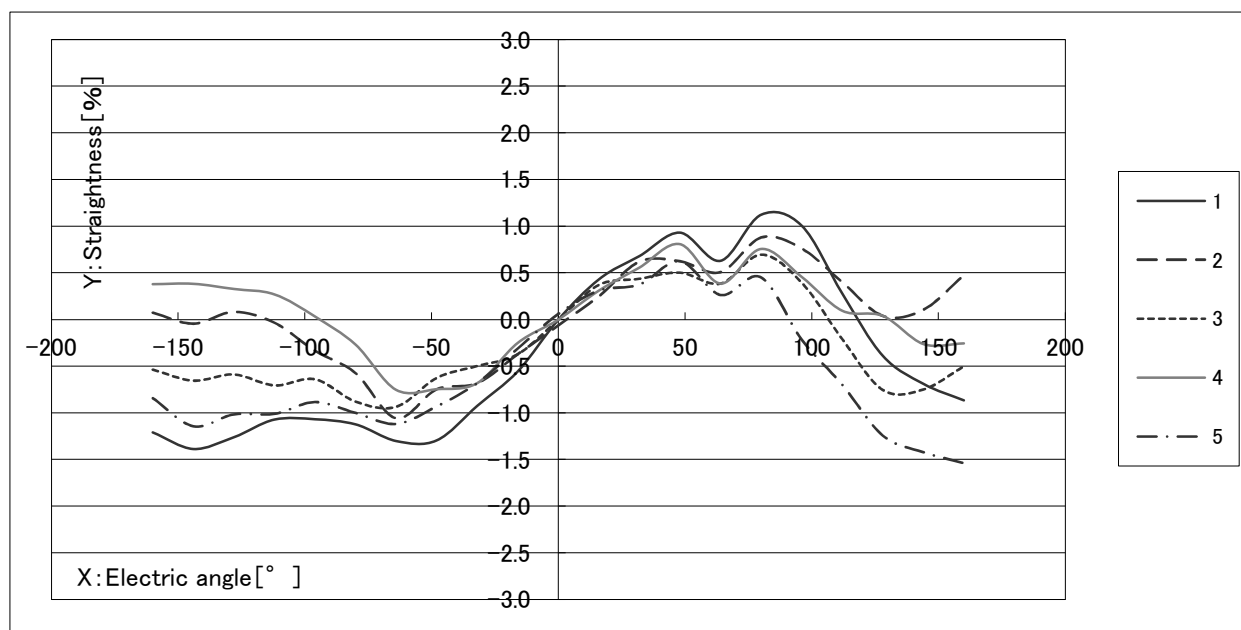
Model		Lot No.	Lot size	Date of examination		
J T 2 2 - 1 2 0 - C 0 1 - 0 1		56C	N=3	September 4, 2025		
Test Items	Specifications	No. 1	No. 2	No. 3		
1. Dielectric strength	500 V AC for 1minute	0 K	0 K	0 K		
2. Insulation resistance	DC 500 V, 100 MΩ or higher	0 K	0 K	0 K		
3. Absolute straightness	±3.0% MAX MIN	0.87	1.37	1.31		
		-0.74	-0.63	-1.39		
4. Current consumption (12 V DC)	Less than 40 mA	0 K	0 K	0 K		



room temperature : 22°C

Humidity : 41%Rh

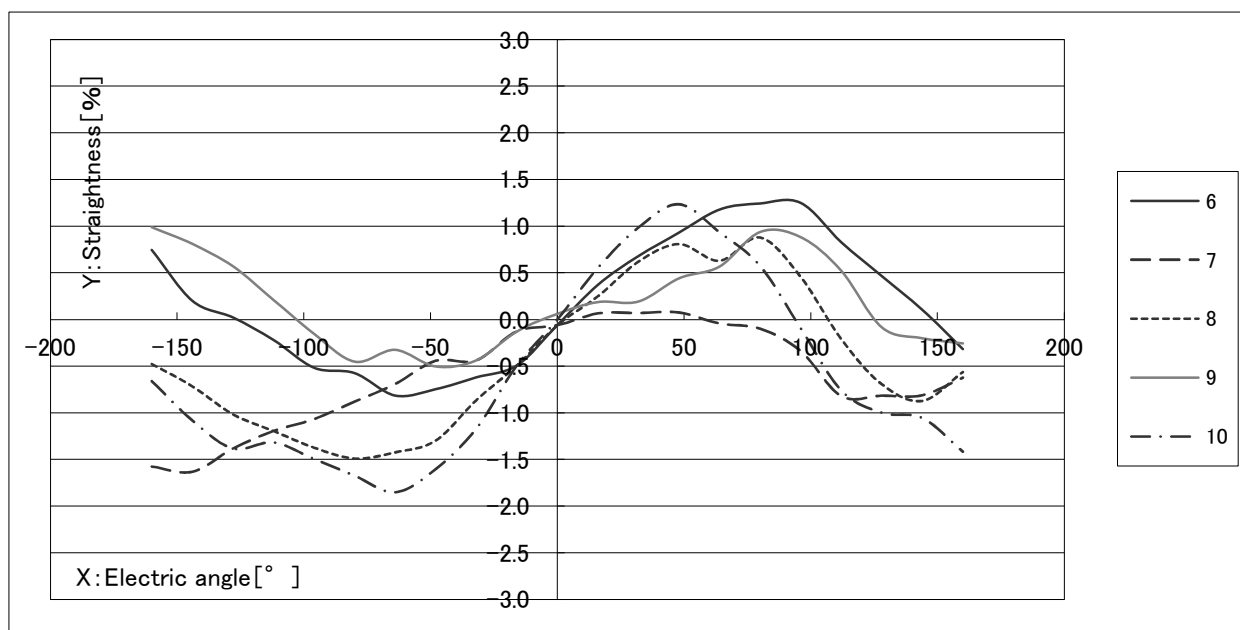
Model		Lot No.	Lot size	Date of examination		
J T 2 2 - 3 2 0 - 5 0 0		56C	N=12	September 4, 2025		
Test Items	Specifications	No. 1	No. 2	No. 3	No. 4	No. 5
1. Dielectric strength	500 V AC for 1minute	0 K	0 K	0 K	0 K	0 K
2. Insulation resistance	DC 500 V, 100 MΩ or higher	0 K	0 K	0 K	0 K	0 K
3. Absolute straightness	±3.0% MAX	1.12	0.88	0.70	0.81	0.62
	MIN	-1.39	-1.06	-0.94	-0.75	-1.54
4. Current consumption (5 V DC)	Less than 40 mA	0 K	0 K	0 K	0 K	0 K



room temperature : 22°C

Humidity : 41%Rh

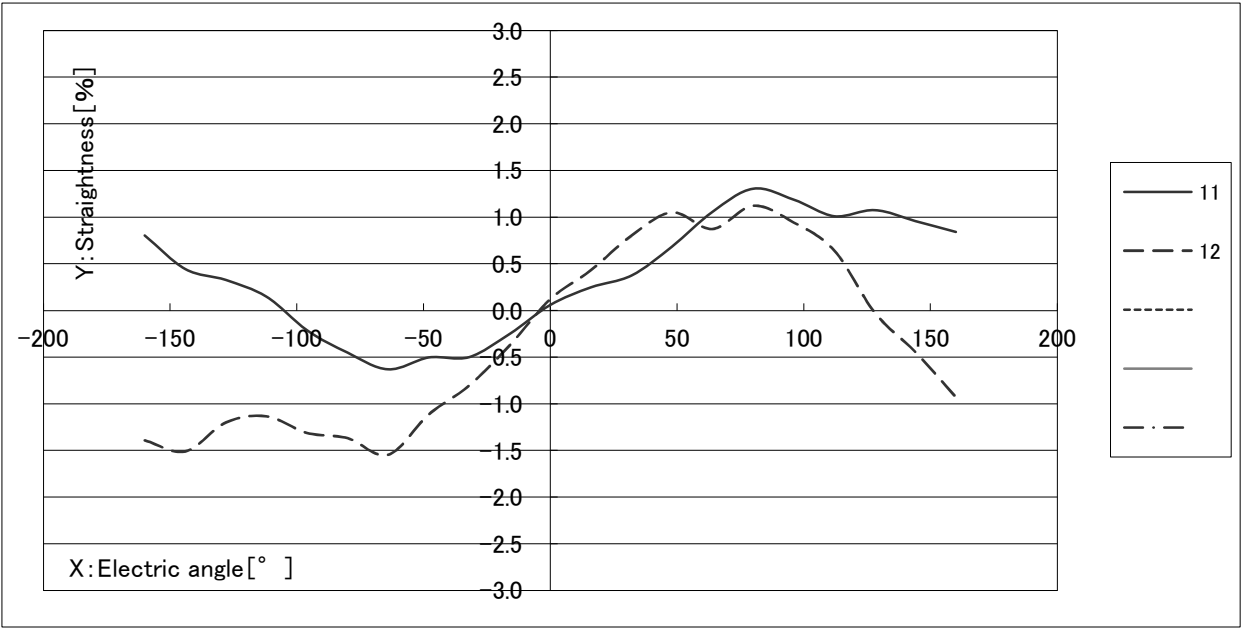
Model		Lot No.	Lot size	Date of examination		
J T 2 2 - 3 2 0 - 5 0 0		56C	N=12	September 4, 2025		
Test Items	Specifications	No. 6	No. 7	No. 8	No. 9	No. 10
1. Dielectric strength	500 V AC for 1minute	0 K	0 K	0 K	0 K	0 K
2. Insulation resistance	DC 500 V, 100 MΩ or higher	0 K	0 K	0 K	0 K	0 K
3. Absolute straightness	±3.0% M A X M I N	1.25	0.08	0.88	0.99	1.24
		-0.81	-1.63	-1.49	-0.50	-1.85
4. Current consumption (5 V DC)	Less than 40 mA	0 K	0 K	0 K	0 K	0 K



room temperature : 22°C

Humidity : 41%Rh

Model		Lot No.	Lot size	Date of examination
J T 2 2 - 3 2 0 - 5 0 0		56C	N=12	September 4, 2025
Test Items	Specifications	No. 11	No. 12	
1. Dielectric strength	500 V AC for 1minute	0 K	0 K	
2. Insulation resistance	DC 500 V, 100 MΩ or higher	0 K	0 K	
3. Absolute straightness	±3.0% M A X M I N	1.31	1.12	
		-0.63	-1.55	
4. Current consumption (5 V DC)	Less than 40 mA	0 K	0 K	



room temperature : 22℃

Humidity : 41%Rh

Specifications

7/7

Model		Test Items			LotNo.		Temperature 21 °C		Exam Date	
JT22-320-500		Absolute straightness Process capability			56C		Humidity 44 %Rh		September 4, 2025	
No.	①	②								
Item	Absolute Straightness MAX	Absolute Straightness MIN								
MAX	3.0									
MIN		-3.0								
1	1.12	-1.39								
2	0.88	-1.06								
3	0.70	-0.94								
4	0.81	-0.75								
5	0.62	-1.54								
6	1.25	-0.81								
7	0.08	-1.63								
8	0.88	-1.49								
9	0.99	-0.50								
10	1.24	-1.85								
11	1.31	-1.12								
12	1.12	-1.55								
Ave	0.917	-1.219								
R	1.230	1.350								
MAX	1.31	-0.50								
MIN	0.08	-1.85								
σ	0.345	0.416								
Cpk										
Cp										
Cp Upper	2.01									
Cp lower		1.43								