Reference: QOD-510

Product/Process Change Notification

< Change of supplier, Power Inductors >

Date:	ID Number (MMDDYY): PCN-100126-MXK
Affected Products	MPEV1D Series. Part Number Alias MPEV1D0630LR47 UPI2X10630ER47 MPEV1D0630LR68 UPI2X10630ER68 MPEV1D0630L1R0 UPI2X10630E1R0 MPEV1D0630L1R5 UPI2X10630E1R5 MPEV1D0630L2R2 UPI2X10630E2R2 MPEV1D0630L3R3 UPI2X10630E3R3 MPEV1D0630L4R7 UPI2X10630E4R7 MPEV1D0630L6R8 UPI2X10630E6R8 MPEV1D0630L100 UPI2X10630E100 MPEV1D0630L150 UPI2X10630E150 MPEV1D0630L220 UPI2X10630E220 MPEV1D1040LR47 UPI2X11040ER47 MPEV1D1040LR68 UPI2X11040ER68 MPEV1D1040L1R0 UPI2X11040E1R0 MPEV1D1040L1R5 UPI2X11040E1R5 MPEV1D1040L2R2 UPI2X11040E2R2 MPEV1D1040L3R3 UPI2X11040E3R3 MPEV1D1040L4R7 UPI2X11040E4R7 MPEV1D1040L6R8 UPI2X11040E6R8 MPEV1D1040L100 UPI2X11040E100 MPEV1D1040L150 UPI2X11040E150 MPEV1D1040L220 UPI2X11040E220 MPEV1D1040L330 UPI2X11040E330 MPEV1D1040L470 UPI2X11040E470
Change	The binder material for the magnetic core will be changed.
Justification and Benefits	Due to the discontinuation of a binder material by the current supplier. No changes will be made to the magnetic powder, terminals, wire, inductor manufacturing process, or product specifications.
Effective Date and Identification	This change will be implemented sequentially starting with production in May 2027.
For General Information Contact	< KONNO Masataka> <Director, Product Management - Advanced Magnetics Technology> ph: +81-3-3515-9260 E-mail: Masataka.KONNO@yageo.com

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YAGEO GROUP
Built into Tomorrow

POWER INDUCTOR

MPEV1D Series

Notice of Magnetic Powder Binder Change

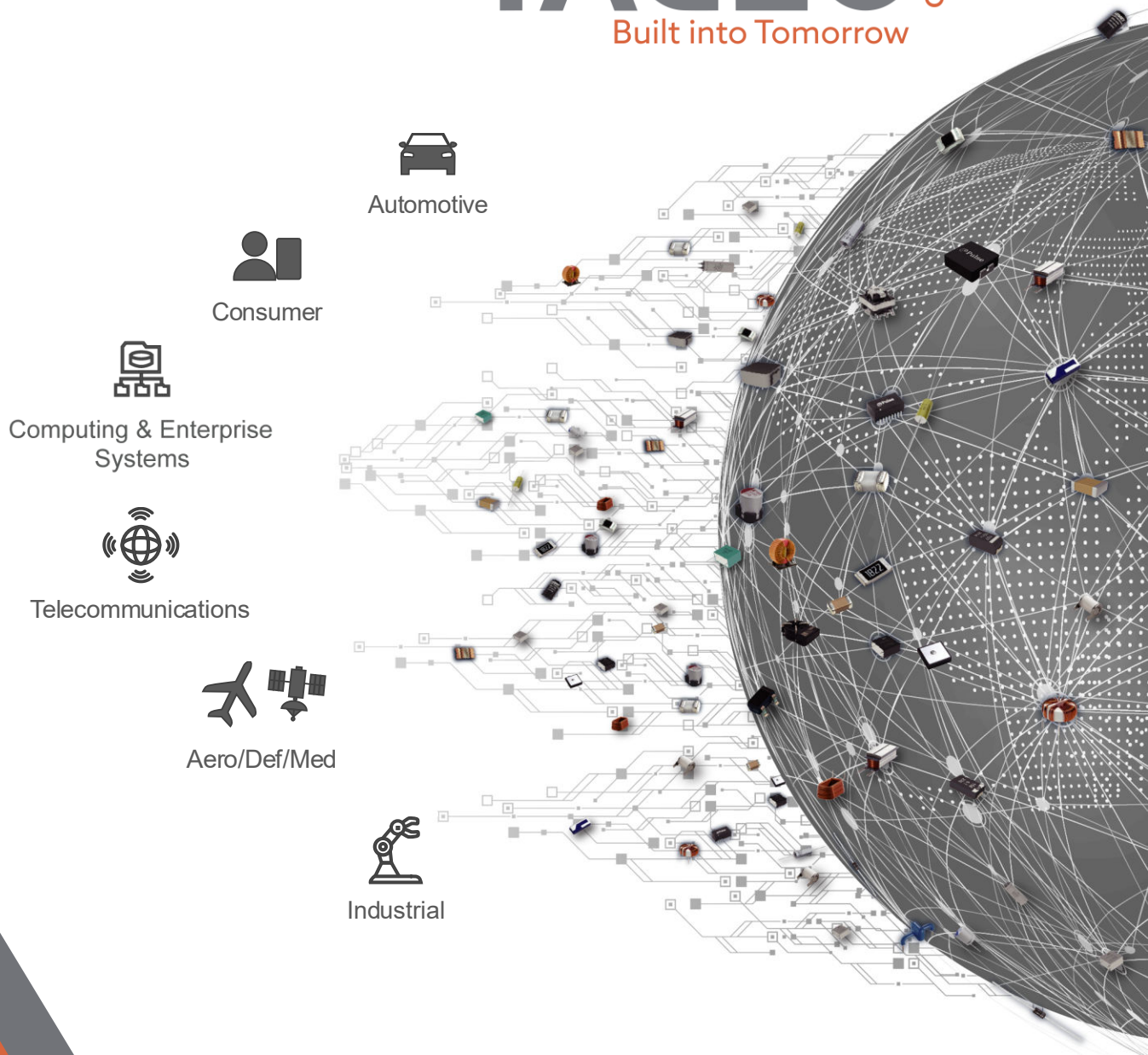
Inductor G, Magnetic product Engineering

MSA PBU – Magnetic, Sensor and Actuator

TOKIN Corporation

No.6230B-26159PE

30/September/2026



Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

YAGEO GROUP

1 . Products Affected

Product Name: Power Inductor

Series: MPEV1D Series (see the list below)

MPEV1D0630 Series

TOKIN Part Number	YAGEO Part Number
MPEV1D0630LR47	UPI2X10630ER47
MPEV1D0630LR68	UPI2X10630ER68
MPEV1D0630L1R0	UPI2X10630E1R0
MPEV1D0630L1R5	UPI2X10630E1R5
MPEV1D0630L2R2	UPI2X10630E2R2
MPEV1D0630L3R3	UPI2X10630E3R3
MPEV1D0630L4R7	UPI2X10630E4R7
MPEV1D0630L6R8	UPI2X10630E6R8
MPEV1D0630L100	UPI2X10630E100
MPEV1D0630L150	UPI2X10630E150
MPEV1D0630L220	UPI2X10630E220

MPEV1D1040 Series

TOKIN Part Number	YAGEO Part Number
MPEV1D1040LR47	UPI2X11040ER47
MPEV1D1040LR68	UPI2X11040ER68
MPEV1D1040L1R0	UPI2X11040E1R0
MPEV1D1040L1R5	UPI2X11040E1R5
MPEV1D1040L2R2	UPI2X11040E2R2
MPEV1D1040L3R3	UPI2X11040E3R3
MPEV1D1040L4R7	UPI2X11040E4R7
MPEV1D1040L6R8	UPI2X11040E6R8
MPEV1D1040L100	UPI2X11040E100
MPEV1D1040L150	UPI2X11040E150
MPEV1D1040L220	UPI2X11040E220
MPEV1D1040L330	UPI2X11040E330
MPEV1D1040L470	UPI2X11040E470

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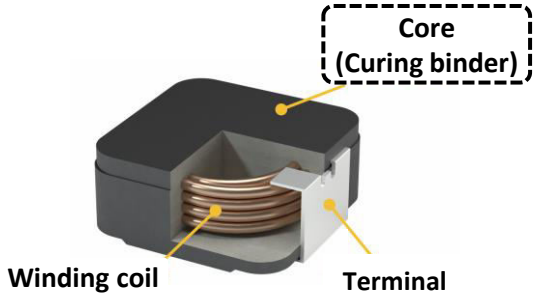
Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

2. Description of Change

The binder used for curing the magnetic powder will be changed.

No changes will be made to the magnetic powder, terminals, wire, inductor manufacturing process, or product specifications.



	Binder Type	Other Materials	Manufacturing Conditions	Electrical Characteristics	Reliability Tests
New Binder Version	Changed to an Equivalent Binder (High Heat Resistance)	No Change	No Change	Equivalent Performance (Refer to P-4)	Pass (Refer to P-5~9)

3. Reason for Change

The current supplier has notified us of the end-of-life (EOL) of the binder.

Therefore, the binder will be changed to an equivalent product supplied by another supplier.

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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4. Comparison Results of Electrical Characteristics

Representative Model MPEV1D0630L220

n=500 Avg.	Inductance	DC Resistance
	100kHz, 1mA, 25℃	25℃
Spec. Value	22.00μH±20% (17.6~26.4μH)	186.30mΩMAX (162.00mΩ typ.)
Current Product	21.71	161.69
Product with New Binder	21.64	159.79

Representative Model MPEV1D1040L470

n=500 Avg.	Inductance	DC Resistance
	100kHz, 1mA, 25℃	25℃
Spec. Value	47.00μH±20% (37.6~56.4μH)	182.60mΩMAX (158.80mΩ typ.)
Current Product	46.57	159.42
Product with New Binder	46.23	160.17

No significant differences were observed in the product characteristics before and after the change.

Based on the evaluation results, the changed product is considered equivalent to the current product.

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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5. Reliability Test Results of the Changed Product

Metal Compsite Inductors METCOM

MPEV1D series

Qualification per Q-200 Rev. D and Results Summary

			TOKIN Part #	MPEV1D0630L220	MPEV1D1040L470
Test Performed	**Method Reference**	**Test Conditions**	**Sample Size (per lot)**	**Failure Count**	**Failure Count**
Reliability and Environmental Tests					
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	1000 hrs. at TA = 180°C. Unpowered. Measurement at 24-/+2 hours after test conclusion.	77	0	0
Temperature Cycle	JESD22,Method JA-104	1000 cycles (TA = -55°C to +180°C). Measurement at 24 -/+2 hours after test conclusion. 30min maximum dwell time at each temperature extreme. 1min Maximum transition time.	77	0	0
Biased Humidity	MIL-STD-202 Method 103	1000 hours TA = 85°C / 85%RH. Unpowered. Measurement at 24-/+2 hours after test conclusion.	77	0	0
Operational Life	MIL-PRF-27	1000 hrs. Operationg 180°C. Measurement at 24-/+2 hours after test conclusion.	77	0	0
Physical, Mechanical, and Process Tests					
Extermal Visual	MIL-STD-883, Method 2009	Inspect device construction, marking and workmanship. Electrical Test not required.	All	0	0
Physical Dimension	JESD22 Method JB-100	Verify physical dimentions to the applicable device specification. Note: TOKIN product catalog. Electrical Test not required.	30	0	0
Resistance to Solvents	MIL-STD-202, Method 215	Note: Add Aqueous wash chemical. OKEM Clean or equivalent. Do not use banned solvents.	5	0	0
Mechanical Shock and Vibration	MIL-STD-202, Methods 213, 204	Method 213: Figure 1, Condition C, Method 204: 5g's for 20 minutes, 12 cycles	30	0	0
Resistance to Soldering Heat	MIL-STD-202, Method 210	Condition K, Peak 255°C(250±5°C)	30	0	0
ESD	AEC-Q200-002	Human body model with 150 pF charge cap. One positive pulse, followed by discharge through 2000ohm resistor, and then repeat cycle with negative pulse.	15	0	0
Solderability	J-STD-002	Magnification 50X. Conditions:			
		a) Method B1, 4hrs TA = 155°C dry heat, Solder bath 240°C(245±5°C)	15	0	0
		b) Method D, Peak 255°C(260±5°C)	15	0	0
Board Flex	AEC Q200-005	Note: 2mm (min) ,60 sec minimum holding time.	30	0	0
Terminal Strength(SMD)	AEC Q200-006	Note: Force of 1.8kg for 60 seconds.	30	0	0
Qualification Status				**PASS**	**PASS**
			508	0	0

The changed product met the acceptance criteria for all reliability test items. No mechanical damage was observed after testing.

Based on these results, the changed product is considered equivalent to the current product.

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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5. Reliability Test Results of the Changed Product

Metal Composite Inductors METCOM

MPEV1D0630L220

Qualification per Q-200 Rev. D and Results Summary

		Initial Readings		Post Test Readings			
		Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Delta Inductance, %	Delta Rdc, %
High Temperature Exposure (Storage)	Limits	17.6 - 26.4	186.3 max.	17.6 - 26.4	186.3 max.	± 15	± 15
180°C, Unpowered, 1000 Hours	AVG	21.76	161.64	21.81	161.45	0.2%	-0.1%
	STD	0.690	1.275	0.710	1.312	---	---
	Max	23.1	163.6	23.3	163.4	0.8%	0.6%
	Min	20.4	159.2	20.4	158.5	-0.1%	-0.9%
Temperature Cycle	Limits	17.6 - 26.4	186.3 max.	17.6 - 26.4	186.3 max.	± 15	± 15
-55°C to +180°C, 1000 Cycles	AVG	21.84	161.73	22.03	161.81	0.9%	0.1%
	STD	0.830	1.118	0.820	1.126	---	---
	Max	23.4	163.7	23.5	163.6	1.3%	1.0%
	Min	20.1	159.9	20.3	160.0	0.6%	-0.8%
Biased Humidity	Limits	17.6 - 26.4	186.3 max.	17.6 - 26.4	186.3 max.	± 15	± 15
85°C, 85% RH, Unpowered, 1000 Hours	AVG	21.88	161.45	22.01	161.46	0.6%	0.0%
	STD	0.820	1.714	0.833	1.656	---	---
	Max	23.3	163.7	23.5	163.9	1.0%	0.8%
	Min	20.0	156.1	20.1	156.9	0.0%	-1.0%
Operational Life	Limits	17.6 - 26.4	186.3 max.	17.6 - 26.4	186.3 max.	± 15	± 15
180°C, 1000 Hours	AVG	21.00	161.70	21.11	161.95	0.5%	0.2%
	STD	0.687	1.093	0.703	0.958	---	---
	Max	22.1	164.3	22.3	163.9	0.9%	2.5%
	Min	19.3	159.7	19.4	159.8	0.0%	-1.7%

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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5. Reliability Test Results of the Changed Product

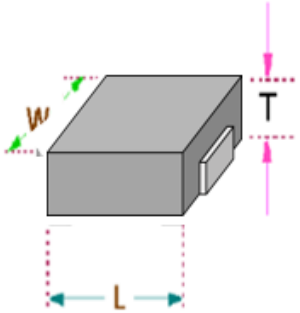
Metal Composite Inductors METCOM

MPEV1D0630L220

Qualification per Q-200 Rev. D and Results Summary

		Initial Readings		Post Test Readings			
		Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Delta Inductance, %	Delta Rdc, %
Resistance to Soldering Heat	Limits	17.6 - 26.4	186.3 max.	17.6 - 26.4	186.3 max.	± 15	± 15
Condition K, Peak @255(250±5)	AVG	21.82	162.10	21.77	162.03	-0.3%	0.0%
	STD	0.657	0.862	0.607	0.865	---	---
	Max	23.4	163.8	23.4	163.9	0.5%	0.9%
	Min	20.8	160.9	20.9	160.3	-2.2%	-0.9%
Mechanical Shock / Vibration	Limits	17.6 - 26.4	186.3 max.	17.6 - 26.4	186.3 max.	± 15	± 15
Method 213: Figure 1, Condition C	AVG	20.92	161.75	20.93	161.64	0.1%	-0.1%
Method 204: 5gs for 20 min, 12 cycles	STD	0.554	1.083	0.554	1.173	---	---
	Max	21.9	163.1	21.9	163.2	0.9%	0.7%
	Min	19.6	158.5	19.8	158.5	-0.9%	-0.8%

Other Mechanical / Performance Results		
ESD, per AEC-Q200-002	Class	2



	Dimensions, mm		
	Length	Width	Thickness
Limits	6.75 - 7.25	6.3 - 6.7	3.0 max.
AVG	7.05	6.44	2.83
STD	0.017	0.010	0.032
Max	7.10	6.48	2.90
Min	7.03	6.43	2.75

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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5. Reliability Test Results of the Changed Product

Metal Composite Inductors METCOM

MPEV1D1040L470

Qualification per Q-200 Rev. D and Results Summary

		Initial Readings		Post Test Readings			
		Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Delta Inductance, %	Delta Rdc, %
High Temperature Exposure (Storage)	Limits	37.6 - 56.4	182.6 max.	37.6 - 56.4	182.6 max.	± 15	± 15
180°C, Unpowered, 1000 Hours	AVG	45.37	159.95	45.14	159.20	-0.5%	-0.5%
	STD	0.910	0.985	0.917	0.977	---	---
	Max	47.3	161.8	47.1	161.2	-0.2%	1.2%
	Min	43.7	157.4	43.3	157.3	-0.8%	-1.2%
Temperature Cycle	Limits	37.6 - 56.4	182.6 max.	37.6 - 56.4	182.6 max.	± 15	± 15
-55°C to +180°C, 1000 Cycles	AVG	45.84	160.23	45.98	159.80	0.3%	-0.3%
	STD	0.738	1.084	0.736	1.186	---	---
	Max	47.8	164.1	47.9	163.2	0.5%	1.0%
	Min	44.6	158.6	44.8	158.2	0.2%	-1.1%
Biased Humidity	Limits	37.6 - 56.4	182.6 max.	37.6 - 56.4	182.6 max.	± 15	± 15
85°C, 85% RH, Unpowered, 1000 Hours	AVG	45.00	159.88	45.16	160.11	0.3%	0.1%
	STD	1.035	1.188	1.048	1.220	---	---
	Max	46.6	162.1	46.8	161.4	0.5%	0.9%
	Min	43.3	157.3	43.3	157.7	0.1%	-1.1%
Operational Life	Limits	37.6 - 56.4	182.6 max.	37.6 - 56.4	182.6 max.	± 15	± 15
180°C, 1000 Hours	AVG	44.02	160.84	44.05	160.88	0.1%	0.0%
	STD	0.812	1.098	0.792	1.135	---	---
	Max	45.4	164.3	45.5	164.1	0.8%	1.2%
	Min	41.6	158.1	41.6	159.3	-1.1%	-1.1%

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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5. Reliability Test Results of the Changed Product

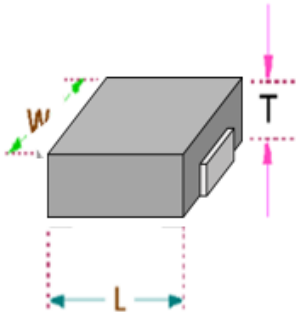
Metal Composite Inductors METCOM

MPEV1D1040L470

Qualification per Q-200 Rev. D and Results Summary

		Initial Readings		Post Test Readings			
		Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Inductance, uH (at 100kHz,1mA)	Rdc, mΩ	Delta Inductance, %	Delta Rdc, %
Resistance to Soldering Heat	Limits	37.6 - 56.4	182.6 max.	37.6 - 56.4	182.6 max.	± 15	± 15
Condition K, Peak @255(250±5)	AVG	44.09	160.53	43.99	160.32	-0.2%	-0.1%
	STD	1.310	1.309	1.237	1.356	---	---
	Max	45.4	162.7	45.1	162.8	0.8%	1.0%
	Min	40.9	158.0	41.0	158.1	-1.0%	-1.2%
Mechanical Shock / Vibration	Limits	37.6 - 56.4	182.6 max.	37.6 - 56.4	182.6 max.	± 15	± 15
Method 213: Figure 1, Condition C	AVG	44.18	160.44	44.12	159.87	-0.1%	-0.4%
Method 204: 5gs for 20 min, 12 cycles	STD	1.026	1.092	1.020	1.125	---	---
	Max	45.5	163.0	45.5	162.2	0.8%	1.1%
	Min	42.2	157.9	42.1	158.2	-1.0%	-1.1%

Other Mechanical / Performance Results		
ESD, per AEC-Q200-002	Class	2



	Dimensions, mm		
	Length	Width	Thickness
Limits	10.5 - 11.1	9.8 - 10.2	4.0 max.
AVG	10.91	9.97	3.83
STD	0.030	0.014	0.029
Max	10.98	9.99	3.89
Min	10.85	9.95	3.79

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Regarding the Change of Magnetic Powder Binder for the MPEV1D Series

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6. Environmental Compliance Results

RoHS compliance has been verified for the changed product.

7. Change Schedule

Until November 30, 2026: Sample request acceptance period

From December 1, 2026: Samples available upon request

From May 1, 2027: Implementation in mass production is scheduled *

* The current binder inventory is expected to be sufficient for approximately six months (through March 2027).
However, as the change will be implemented upon depletion of the existing binder inventory,
the timing of mass production implementation may vary depending on demand fluctuations.
Thank you for your understanding.

8. Other Information

Should you have any questions regarding this notification, please contact our sales representative.

Unless we receive any objection by March 2027, this change will be considered accepted.

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