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Data Sheet

Customer: _____

Product : Metallized Polypropylene Film Capacitor for DC-Link application,
HDMP

Size: _____

Issued Date: 2023-06-12

Edition : _____

Record of change

Date	Ver.	Description	Page
2023-06-12	1.0		

VENDOR :

☐ **HITANO ENTERPRISE CORP.**

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MAKER :

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PRODUCT DIMENSIONS

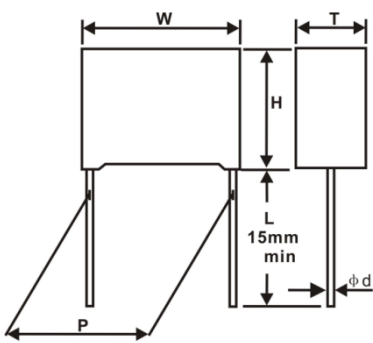


Fig.1

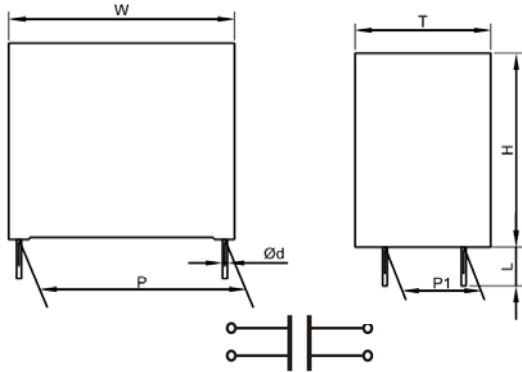


Fig.2

U_{N70°C}:500Vdc,U_{N85°C}:400Vdc

CAP. Capacitance(uF)	Dimensions in mm						dv/dt (V/us)	I _{PEAK} (A)	10KHz ESR (mΩ)	70°C 10KHz I _{rms} (A)
	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05				
2.2	26.5	16.5	7.0	22.5	--	0.8	62	136	19.2	2.8
3.0	26.0	17.0	8.5	22.5	--	0.8	62	185	14.1	3.5
4.0	26.5	19.0	10.0	22.5	--	0.8	62	247	10.5	4.3
4.0	32.0	18.0	9.0	27.5	--	0.8	42	167	17.9	3.2
5.0	26.0	20.0	11.0	22.5	--	0.8	62	309	8.4	5.0
6.0	31.4	19.5	10.8	27.5	--	0.8	42	251	11.9	4.3
7.0	26.5	23.0	13.0	22.5	--	0.8	62	433	6.0	6.7
8.5	32.0	22.0	12.0	27.5	--	0.8	42	355	8.4	5.6
11.0	31.0	25.0	14.0	27.5	--	0.8	42	459	6.5	6.8
12.0	32.0	25.5	16.0	27.5	--	0.8	42	501	5.9	7.5
14.0	32.0	30.0	15.0	27.5	--	0.8	42	585	5.1	8.5
19.0	31.0	33.0	18.0	27.5	--	0.8	42	794	3.7	10.8
23.0	41.5	30.0	17.0	37.5	--	1.0	24	545	6.7	7.8
27.0	42.0	33.5	18.5	37.5	10.2	1.0	24	639	5.7	8.8
57.0	41.5	41.0	27.5	37.5	10.2	1.0	24	1350	2.7	16.2
66.0	41.5	45.0	30.0	37.5	20.3	1.2	24	1563	2.3	18.6

U _{N70℃} :600Vdc,U _{N85℃} :500Vdc										
Capacitance(uF)	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05	dV/dt	I _{PEAK} A	10KHz ESR mΩ	70℃ 10KHz Irms A
1.5	26.5	16.5	7.0	22.5	--	0.8	72	108	24.2	2.5
2.2	26.0	17.0	8.5	22.5	--	0.8	72	159	16.5	3.2
3.0	26.5	19.0	10.0	22.5	--	0.8	72	216	12.1	4.1
3.0	32.0	18.0	9.0	27.5	--	0.8	49	146	20.5	3.0
3.5	26.0	20.0	11.0	22.5	--	0.8	72	252	10.4	4.6
4.5	31.4	19.5	10.8	27.5	--	0.8	49	219	13.7	4.0
5.0	26.5	23.0	13.0	22.5	--	0.8	72	361	7.3	6.1
6.0	32.0	22.0	12.0	27.5	--	0.8	49	292	10.3	5.1
8.2	31.0	25.0	14.0	27.5	--	0.8	49	400	7.5	6.4
9.5	32.0	25.5	16.0	27.5	--	0.8	49	463	6.5	7.2
10.0	32.0	30.0	15.0	27.5	--	0.8	49	487	6.2	7.8
14.0	31.0	33.0	18.0	27.5	--	0.8	49	682	4.4	10.0
17.0	41.5	30.0	17.0	37.5	--	1.0	28	470	7.8	7.2
20.0	42.0	33.5	18.5	37.5	10.2	1.0	28	552	6.6	8.2
41.0	41.5	41.0	27.5	37.5	10.2	1.0	28	1133	3.2	14.8
48.0	41.5	45.0	30.0	37.5	20.3	1.2	28	1326	2.8	17.2

U _{N70℃} :800Vdc,U _{N85℃} :700Vdc										
Capacitance(uF)	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05	dV/dt	I _{PEAK} A	10KHz ESR mΩ	70℃ 10KHz Irms A
1.2	26.5	16.5	7.0	22.5	--	0.8	82	99	26.4	2.4
1.5	26.0	17.0	8.5	22.5	--	0.8	82	124	21.2	2.8
2.2	26.5	19.0	10.0	22.5	--	0.8	82	181	14.4	3.7
2.5	32.0	18.0	9.0	27.5	--	0.8	56	139	21.6	2.9
2.7	26.0	20.0	11.0	22.5	--	0.8	82	223	11.8	4.3
3.5	31.4	19.5	10.8	27.5	--	0.8	56	195	15.4	3.8
4.0	26.5	23.0	13.0	22.5	--	0.8	82	330	7.9	5.8
4.7	32.0	22.0	12.0	27.5	--	0.8	56	262	11.5	4.8
6.0	31.0	25.0	14.0	27.5	--	0.8	56	334	9.0	5.8
6.8	32.0	25.5	16.0	27.5	--	0.8	56	379	7.9	6.5
7.0	32.0	28.0	18.0	27.5	--	0.8	56	390	7.704	7.2
8.2	32.0	30.0	15.0	27.5	--	0.8	56	457	6.6	7.5
11.0	31.0	33.0	18.0	27.5	--	0.8	56	613	4.9	9.5
13.0	41.5	30.0	17.0	37.5	--	1.0	32	410	8.9	6.7
14.0	32.0	37.0	22.0	27.5	--	0.8	56	780	3.852	12.1
15.0	42.0	33.5	18.5	37.5	10.2	1.0	32	474	7.7	7.6
32.0	41.5	41.0	27.5	37.5	10.2	1.0	32	1010	3.6	14.0
37.0	41.5	45.0	30.0	37.5	20.3	1.2	32	1168	3.1	16.1
70.0	57.5	50.0	35.0	52.5	20.3	1.2	19	1312	3.3	18.1

U_{N70°C}:900Vdc,U_{N85°C}:760Vdc

Capacitance (uF)	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05	dV/dt	I _{PEAK} A	10KHz ESR mΩ	70°C 10KHz Irms A
1.0	26.5	16.5	7.0	22.5	--	0.8	100	100	25.9	2.4
1.2	26.0	17.0	8.5	22.5	--	0.8	100	120	21.6	2.8
1.5	26.5	19.0	10.0	22.5	--	0.8	100	150	17.2	3.4
1.8	32.0	18.0	9.0	27.5	--	0.8	66	119	24.9	2.7
2.0	26.0	20.0	11.0	22.5	--	0.8	100	199	12.9	4.1
2.0	31.4	19.5	10.8	27.5	--	0.8	66	166	17.9	3.5
2.5	31.4	19.5	10.8	27.5	--	0.8	66	166	17.9	3.5
3.0	26.5	23.0	13.0	22.5	--	0.8	100	299	8.6	5.6
3.3	32.0	22.0	12.0	27.5	--	0.8	66	219	13.6	4.4
4.7	31.0	25.0	14.0	27.5	--	0.8	66	311	9.5	5.7
5.0	32.0	25.5	16.0	27.5	--	0.8	66	331	9.0	6.2
6.0	32.0	30.0	15.0	27.5	--	0.8	66	398	7.5	7.1
8.0	31.0	33.0	18.0	27.5	--	0.8	66	530	5.6	8.9
10.0	41.5	30.0	17.0	37.5	--	1.0	37	369	9.8	6.4
11.0	42.0	33.5	18.5	37.5	10.2	1.0	37	406	8.9	7.0
24.0	41.5	41.0	27.5	37.5	10.2	1.0	37	886	4.1	13.1
28.0	41.5	45.0	30.0	37.5	20.3	1.2	37	1033	3.5	15.2
55.0	57.5	50.0	35.0	52.5	20.3	1.2	21	1160	3.8	17.0

U_{N70°C}:1000Vdc,U_{N85°C}:850Vdc

Capacitance (uF)	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05	dV/dt	I _{PEAK} A	10KHz ESR mΩ	70°C 10KHz Irms A
1.0	26.0	17.0	8.5	22.5	--	0.8	111	111	23.3	2.7
1.2	26.5	19.0	10.0	22.5	--	0.8	111	133	19.4	3.2
1.5	32.0	18.0	9.0	27.5	--	0.8	74	110	26.9	2.6
1.5	26.0	20.0	11.0	22.5	--	0.8	111	166	15.5	3.7
2.2	31.4	19.5	10.8	27.5	--	0.8	74	162	18.4	3.5
2.2	26.5	23.0	13.0	22.5	--	0.8	111	244	10.6	5.0
2.5	32.0	22.0	12.0	27.5	--	0.8	74	184	16.2	4.1
3.5	31.0	25.0	14.0	27.5	--	0.8	74	258	11.5	5.1
4.0	32.0	25.5	16.0	27.5	--	0.8	74	294	10.1	5.8
5.0	32.0	30.0	15.0	27.5	--	0.8	74	368	8.1	6.8
6.5	31.0	33.0	18.0	27.5	--	0.8	74	479	6.2	8.4
8.0	41.5	30.0	17.0	37.5	--	1.0	41	328	11.1	6.1
9.5	42.0	33.5	18.5	37.5	10.2	1.0	41	390	9.3	6.9
19.0	41.5	41.0	27.5	37.5	10.2	1.0	41	779	4.7	12.3
23.0	41.5	45.0	30.0	37.5	20.3	1.2	41	943	3.9	14.5
45.0	57.5	50.0	35.0	52.5	20.3	1.2	23	1054	4.2	16.2

U_{N70°C}:1100Vdc,U_{N85°C}:900Vdc

Capacitance (uF)	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05	dV/dt	I _{PEAK} A	10KHz ESR mΩ	70°C 10KHz I _{rms} A
1.0	26.5	19.0	10.0	22.5	--	0.8	122	122	21.2	3.1
1.2	32.0	18.0	9.0	27.5	--	0.8	81	97	30.6	2.4
1.2	26.0	20.0	11.0	22.5	--	0.8	122	146	17.6	3.5
1.8	31.4	19.5	10.8	27.5	--	0.8	81	146	20.4	3.3
2.0	26.5	23.0	13.0	22.5	--	0.8	122	244	10.6	5.0
2.2	32.0	22.0	12.0	27.5	--	0.8	81	178	16.7	4.0
3.0	31.0	25.0	14.0	27.5	--	0.8	81	243	12.2	5.0
3.3	32.0	25.5	16.0	27.5	--	0.8	81	267	11.1	5.5
4.0	32.0	30.0	15.0	27.5	--	0.8	81	324	9.2	6.4
5.6	31.0	33.0	18.0	27.5	--	0.8	81	453	6.6	8.2
6.5	41.5	30.0	17.0	37.5	--	1.0	45	293	12.4	5.7
7.0	42.0	33.5	18.5	37.5	10.2	1.0	45	316	11.5	6.2
16.0	41.5	41.0	27.5	37.5	10.2	1.0	45	722	5.0	11.9
19.0	41.5	45.0	30.0	37.5	20.3	1.2	45	857	4.2	13.9
37.0	57.5	50.0	35.0	52.5	20.3	1.2	26	953	4.6	15.4

U_{N70°C}:1200Vdc,U_{N85°C}:1000Vdc

Capacitance (uF)	W ±0.5	H ±0.5	T ±0.5	P ±0.5	P1 ±0.5	φd ±0.05	dV/dt	I _{PEAK} A	10KHz ESR mΩ	70°C 10KHz I _{rms} A
1.0	32.0	18.0	9.0	27.5	--	0.8	88	88	33.6	2.3
1.2	26.0	20.0	11.0	22.5	--	0.8	133	160	16.2	3.6
1.5	31.4	19.5	10.8	27.5	--	0.8	88	133	22.4	3.2
1.5	26.5	23.0	13.0	22.5	--	0.8	133	199	12.9	4.6
2.0	32.0	22.0	12.0	27.5	--	0.8	88	177	16.8	4.0
2.5	31.0	25.0	14.0	27.5	--	0.8	88	221	13.5	4.8
3.0	32.0	25.5	16.0	27.5	--	0.8	88	265	11.2	5.5
3.3	32.0	30.0	15.0	27.5	--	0.8	88	292	10.2	6.1
4.7	31.0	33.0	18.0	27.5	--	0.8	88	415	7.2	7.8
5.6	41.5	30.0	17.0	37.5	--	1.0	49	276	13.2	5.5
6.5	42.0	33.5	18.5	37.5	10.2	1.0	49	320	11.4	6.2
13.0	41.5	41.0	27.5	37.5	10.2	1.0	49	640	5.7	11.2
16.0	41.5	45.0	30.0	37.5	20.3	1.2	49	787	4.6	13.3
31.0	57.5	50.0	35.0	52.5	20.3	1.2	28	871	5.0	14.7

PRODUCT CODE COMPARATIVE TABLE

TYPE: HDMP

Product coding

HDMP	B	1 0 6	K	3J	L	Q	X	L	X
1	2	3 4 5	6	7 8	9	10	11	12	13
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

① Type of capacitor

Type or class	HDMP
Code	HDMP

② Shape category or other

Describe	Box
Code	B

③ Capacitance code (EIA Code)

Code	Capacitance			Code	Capacitance			Code	Capacitance		
101	100pF	0.1nF	0.0001uF	104	100,000pF	100nF	0.1uF	107	100,000,000pF	100,000nF	100uF
102	1,000pF	1nF	0.001uF	105	1,000,000pF	1,000nF	1uF				
103	10,000pF	10nF	0.01uF	106	10,000,000pF	10,000nF	10uF				

④ Tolerance (EIA Code)

Tol.	±1%	±2%	±3%	±5%	±10%	±20%	-10%~ 0%	0%~+10%	-5%~+10%	10%~+5%	0%~+20%	+0%~-5%	±4%
Code	F	G	I	J	K	M	L	P	U	V	W	S	H

⑤ Rated Voltage

Voltage	4.0	6.3	10	12	15	16	25	35	50	63	75	80	100	120	125	140	150	160	180	200	250	300	310	350	400	450	500	520	600	630	650
Code	0G	0J	1A	1M	1N	1C	1E	1V	1H	1J	1D	1K	2A	2M	2B	3T	2N	2C	2X	2D	2E	2F	1B	2V	2G	2W	2H	2Q	2T	2J	2Z
Voltage	700	750	760	800	820	850	875	900	920	1000	1100	1200	1250	1300	1350	1500	1600	1700	1800	1900	2000	2100	2500	2800	3000	3500	4000	5000	6000	15K	
Code	2S	2L	2Y	2K	2R	2U	3Y	2P	3X	3A	3J	3M	3B	3K	3P	3N	3C	3W	3Q	3R	3D	3S	3E	3L	3F	3V	3G	3U	3H	4A	

⑥ Lead Configuration

Lead Type													
Code	L	M	N	B	C	D	E	K	T	U	W	R (2Pin 以上) (Above 2Pin)	A

Note: The wire and the other foot type with the "X"

**** If you have any request not find from above datas, please contact our sales for further information, we may do our best to meet your request.**

PRODUCT CODE COMPARATIVE TABLE

Product coding

TYPE: HDMP

⑦ Lead Space

Lead Space	52.5	55.0	57.5	95.0	5.0	31.0	6.0	7.0	7.5	10.0	10.5	12.5	14.7	15.0	17.5	20.0/20.5	22.5
Code	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H
Lead Space	25.0	27.5	30.0/30.5	31.5	32.5	35.0	37.5	47.5	51.5	9.5	12.0	13.5	42.0/42.5	45.0/46.0	22.0		
Code	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y		

Note: not a common pin pitch using "Z",a font and wire type using "O"

⑧ Lead Forming or Vice-Lead(P1) Pitch

Forming	5.0	7.5	10.0	10.2	12.5	12.7	15.0	17.5	20.0	20.3	22.5	24.0	25.0	25.4	27.5	30.0	35.0	37.5	47.5	Others
Code	A	H	B	J	G	Q	C	M	D	N	W	P	E	K	F	U	V	Z	R	X

Note: X for wires and ⑥pin forming the "L, B, U"

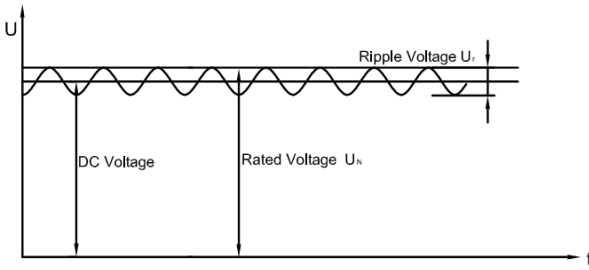
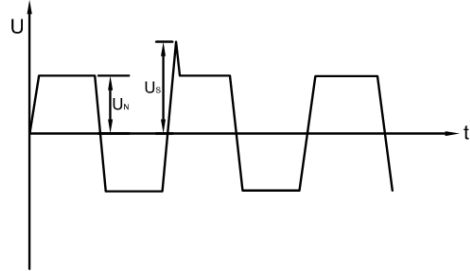
⑨ Lead Length (unit: mm)

Length	2.5	3.0	3.2	3.4	3.5	3.6	3.8	4.0	4.5	4.7	5.0	5.5	6.0
Code	M	1	G	K	2	N	X	3	4	W	5	I	6
Length	7.0	7.5	8.0	9.0	10.0	11.0	13.0	15.0	20.0/22.0	25.0	27.0	30.0	33.0
Code	7	R	8	9	A	P	J	Z	B	C	F	D	S
Length	35.0	38.0	40.0	45.0	47.0							Taping	N/A
Code	Q	Y	E	U	H							T	L

Note: L for wire and ⑥ pin forming the "L",Use V for uncommon foot length

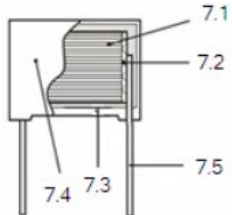
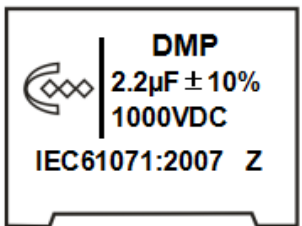
⑩Accessories Yards

NO.	Descriptions
1	Each specification first edit with" X"
2	The same specifications appearance and size differ with non-simultaneous 1, 2, 3 to distinguish
3	The same specification is not the same as the processing method (electrical characteristics) with A, B, C to distinguish
4	The last code show" *",which is temporary P/N. The offical P/N will be released during the mass production.

NO.	ITEM	DESCRIPTIONS
1	SCOPE	This specifications cover the requirements of HITANO.● Metallized Polypropylene Film Capacitor, Power Electronic Capacitors.
2	BASIC INFORMATION	Power electronic capacitors (PEC) are specially designed for DC-voltage and for non-sinusoidal waveforms of voltages and currents.
3	FEATURES	• low stray inductance • Extremely low losses at high frequencies • Low ESR • Highest RMS current rating up to 100KA • High impulse discharge current capability • Resistance to heavy-duty shock and vibration • High reliability and life expectancy > 180 000 h/100 FIT • Non-polar dielectric
4	DC APPLICATION	DC capacitors are periodically charged and discharged. This capacitor type is used to reduce the AC component of a DC voltage. Supporting or DC-filter capacitors are used for energy storage.  Definitions: • Rated voltage U_N Maximum operating peak voltage of either polarity of a reversing or non reversing voltage. • Ripple voltage U_r Peak to peak alternating component of the unidirectional Voltage
5	AC APPLICATION	AC APPLICATION AC capacitors are periodically recharged during operation. AC capacitors serve as damping or snubber capacitors for suppression of undesirable voltage spikes. Communication capacitors quench the conductive state of thyristors.  Definitions: • Rated voltage U_N Maximum operating peak voltage of either polarity of a reversing or non reversing voltage. • Non recurrent surge voltage U_s Peak voltage induced by a switching or any other disturbance of the system which is allowed for a limited number of times and for durations shorter than the basic period.

SPECIFICATIONS

TYPE: **HDMP**

6	Technical data	
NO.	Item	Characteristics
6.1	Climatic Category	40/85/56 (IEC 61071)
6.2	Operating Temperature	-40°C ~105°C (+85°C to +105°C: decreasing factor 1.35% per °C for Un, 85°C)
6.3	Storage Temperature	-40 ~ +85 °C
6.4	Series Inductance	L_s (typ.) ≤ 30 nH (20 °C)
6.5	Max. Overvoltage	1,1 * U_{RDC} (30 % of time under load)
		1,15 * U_{RDC} (30 min. per day)
		1,2 * U_{RDC} (5 min. per day)
		1,3 * U_{RDC} (1 min. per day)
		1,5 * U_{RDC} (max. 30 ms, 100ms per day)
6.6	Life Time Expectancy	≥ 100.000 h, Failure Rate ≤ 100 FIT (70 °C)
6.7	Reference Standard	IEC 61071:2007, REACH, RoHS, UL94-V0 compliant
7	CONSTRUCTION	
7.1	DIELECTRIC	Metallized Polypropylene Film
7.2	METAL SPRAY	Special Solder
7.3	EPOXY RESIN	UL 94V-0
7.4	PLASTIC CASE	UL 94V-0
7.5	LEAD WIRE	LEAD WIRE DIAMETER 0.8/1.0/1.2mm
		
8	MARKING	
8.1	MANUFACTURER'S SYMBOL	 CHIEFCON ELECTRONICS CO., LTD" Manufacturer
8.2	TYPE OR MATERIAL	"DMP" stands for "DMP" type.
8.3	NOMINAL CAPACITANCE	Capacitance μ F
8.4	CAPACITANCE TOLERANCE	J ($\pm 5\%$) , K ($\pm 10\%$) , M ($\pm 20\%$)
8.5	RATED VOLTAGE	1000VDC / 85°C
8.6	STANDARD	IEC61071:2007
8.7	DATE CODE	Z
example 		

SPECIFICATIONS

TYPE: **HDMP**

9	ELECTRICAL CHARACTERISTICS			
NO.	ITEM		PERFORMANCE	TEST CONDITIONS
9.1	Capacitance(CAP)		Within the tolerance specified.	Measuring Frequency : 1KHz +/-10% Measuring Voltage : <=1 Vrms.
9.2	Voltage Proof (Ur)	Between Terminals	Shall be no abnormality	Apply 150% of Ur for 10 +/-5sec.
		Between Terminals & Enclosure	Shall be no abnormality	Apply 2times of rated voltage for 2 to 5 sec.
9.3	Insulation Resistance (I.R.)		$\geq 0000 \text{ MOhm} \cdot \mu\text{F/C}$	DC voltage specified below shall be applied for 60 sec., after which measurement shall be made. R.V. of 100 to 500V: 100+/-15V, R.V. of $\geq 630\text{V}$: 500+/-50V
9.4	Dissipation Factor (DF)		$< 10\mu\text{F} < 0.001(0.1\%)$ at 1 KHz $\geq 10\mu\text{F} \leq 0.002(0.2\%)$ at 1 KHz $\geq 40\mu\text{F} \leq 0.003(0.3\%)$ at 1 KHz	Measuring Frequency : +/-2% Measuring Voltage : <=1 Vrms.
9.5	Solderability		More than 90% of circumferential surface of lead wire shall be covered with new solder.	Soldering temperature : +260+/-5°C Immersion duration : 2+/-0.5sec.
10	MECHANICAL CHARACTERISTICS			
10.1	Terminal strength	Tensile	Shall be no abnormality	Apply 1.0Kg (10N) for 10+/-2 sec to the terminal in the axial direction and acting in a direction away from the body.
		Bending	Shall be no abnormality	Apply 0.5Kg (5N) for 2 cycles Each cycle includes: 90° once, return to its initial position for 2-3 sec, and then to the opposite direction once.

SPECIFICATIONS

 TYPE: **HDMP**

NO.	ITEM		PERFORMANCE	TEST CONDITIONS
10.2	Vibration Resistance	Connection strength	Shall be no open or short-circuiting. The connection shall be stable	Frequency Change: 10-55-10Hz Vibration Distance: 1.5 mm. Test Direction: X, Y, Z Test Duration: 2 +1/-0 hrs each direction
		Appearance	Shall be no mechanial damage	
11	ENDURANCE CHARACTERISTICS			
11.1	Temperature cycle	Appearance	Shall be no remarkable change	Test Temperature Cycle : Total 5 cycles. Each cycle includes : 1. +20 +/-2°C for 3 min. 2. -40 +0/-3°C for 30 min. 3. +20 +/-2°C for 3 min. 4. +85+3/-0°C for 30min. 5. +20 +/-2°C for 3 min.
		Withstand Voltage	Shall satisfy NO.9.2	
		Capacitance Change Rate (ΔC/C)	Within ±2% of the value before test	
		Dissipation Factor	Tan a: ≤0.0150 (10KHz) Tan a: ≤0.0150 (10KHz)	
11.2	Surge discharge test	Appearance	Shall be no remarkable change	1.1 x UNDC □ Number of discharges: 5 □ Time lapse: every 2 min (10 min total)
		Withstand Voltage	Shall satisfy NO.9.2	
		Capacitance Change Rate (ΔC/C)	Within ±1% of the value before test	
		Dissipation Factor	Tan a : ≤1.2 initial tana + 0.0001(10KHz) □	

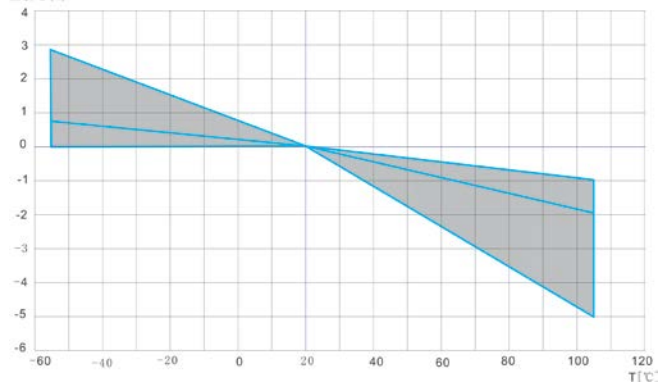
SPECIFICATIONS

NO.	ITEM		PERFORMANCE	TEST CONDITIONS
11.3	Thermal stability test under □ overload conditions	Appearance	Shall be no remarkable change	Natural cooling $T_{amb} \pm 5^{\circ}\text{C}$ □ $1.21 \times P_{max.} = (U_2/2) \times W_2 \times C \times \tan \square$ $= 121 \times (I_{max.}^2 / W_2 \times c) \times \tan a_2$ with □ $W_2 = 2 \times p \times f_2$ for $I_{max.}$ □ (see specific reference data) □ $f_2 = 10 \text{ kHz}$ □ Duration 48 h □
		Withstand Voltage	Shall satisfy NO.9.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 2\%$ of the value before test	
		Dissipation Factor (DF)	$\tan a \leq 1.2 \times \text{initial} + 0.0150 (10\text{KHz})$	
11.4	Humidity Resistance	Appearance	Shall be no remarkable change	Test Temperature: $+40 \pm 2^{\circ}\text{C}$. Test Humidity: 90% to 95% R.H. Test Duration: 56 day After test, allow it stay alone for 4 Hrs at standard temperature and humidity before making measurements.
		Withstand Voltage	Shall satisfy NO.9.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 2\%$ of the value before test	
		Dissipation Factor	$\tan a: \leq 0.0150 (10\text{KHz})$ $\tan a: \leq 0.0150 (10\text{KHz})$	
11.5	Self healing test	Appearance	Shall be no remarkable change	$1.5 \times U_{NDC}$ Duration 10 s □ Number of clearings ≤ 5 □ Clearing = voltage drop of 5 % □ increase the voltage at 100 V/s till 5 clearings occur □ with a max. of $2.5 \times U_{NDC}$ □ for a duration of 10s
		Withstand Voltage	Shall satisfy NO.9.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 0.5\%$ of the value before test	
		Dissipation Factor (DF)	$\tan a: \leq 1.2 \text{ initial } \tan + 0.0001$	

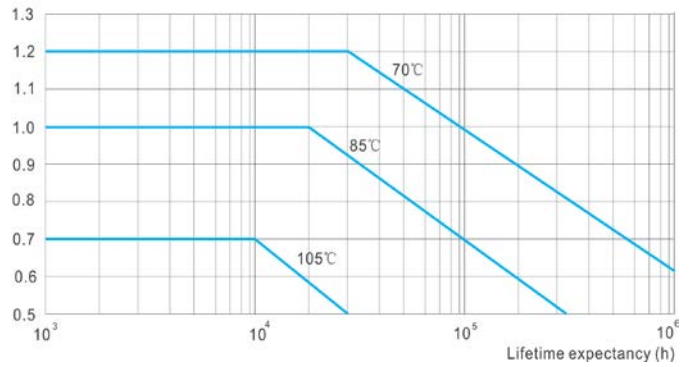
SPECIFICATIONS

NO.	ITEM		PERFORMANCE	TEST CONDITIONS
11.6	Endurance test between terminals	Appearance	Shall be no remarkable change	Sequence □ 1.4 x U_{NDC} at $T_{max.} = 85^{\circ}C$ □ 1.4 x U_{OPDC} at $105^{\circ}C$ □ Duration 250 h □ 1000 x discharge at 1.4 x I (maximum repetitive peak current in continuous operation) □ 1.4 x U_{NDC} at $T_{max.} = 85^{\circ}C$ □ 1.4 x U_{OPDC} at $105^{\circ}C$ □ Duration 250h
		Withstand Voltage	Shall satisfy NO.9.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 3\%$ of the value before test	
		Dissipation Factor (DF)	Tan a: ≤ 0.0150 (10KHz) Tan a: ≤ 0.0150 (10KHz)	
11.7	Soldering Heat Resistance	Appearance	Shall be no remarkable change. The marking shall be legible.	Preheat temp. 100~120°C Preheat Duration: 60 sec. max Temperature increase by 3°C/sec. max. Soldering Temperature: +260 +/-5°C Immersion Duration: 10 +/-1sec. Immersion Depth: 4 +/-0.8mm from roots. After test, allow it stay alone for 1.5+/-0.5 hrs. at standard temperature and humidity before making measurements.
		Withstand Voltage Between Terminals	Shall satisfy NO.9.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 0.5\%$ of the value before test	
		Dissipation Factor	Increase of tan a < 0.0050 (10KHz)	
		Connection of Element	Shall be stable	

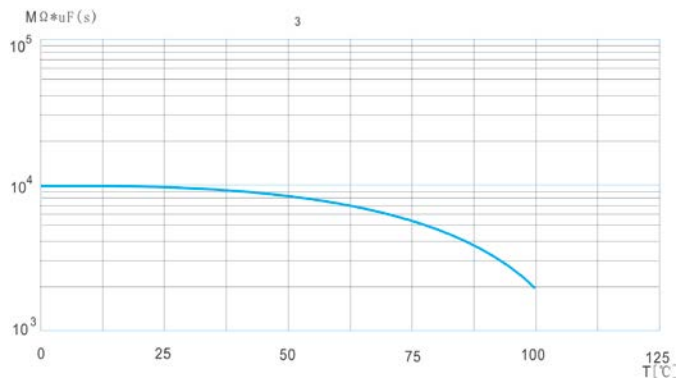
容量變化
Capacitance change
 $\Delta C/C(\%)$



Lifetime expectancy
使用時長
 U_{OPDC}/U_{NDC}



絕緣阻抗
Insulation Resistance



Maximum I_{RMS} current in function of the ambient temperature
最大電流有效值與環境溫度

