



HITANO ENTERPRISE CORP.

7F-7, No. 3, Wu Chuan 1st Road, New Taipei
 Industrial Park, New Taipei City, TAIWAN, R.O.C.
 Tel: +886 2 2299 1331 Fax: +886 2 2298 2466

Data Sheet

Customer: _____

Product : Double sided metallized polypropylene film capacitor,
 HPMD(IGBT)

Size: _____

Issued Date: 2023-06-19

Edition : _____

Record of change

Date	Ver.	Description	Page
2023-06-19	1.0		

VENDOR :

HITANO ENTERPRISE CORP.

7F-7,NO.3,WUCHUAN1ST ROAD,
 NEW TAIPEI INDUSTRIAL PARK,
 NEW TAIPEI CITY, TAIWAN, R.O.C.
 TEL:+886222991331(REP.)
 FAX:+886222982466



MAKER :

CHIEFCON ELECTRONICS CO.,LTD.

NO.23,HER-CHENG RD,BA-DE
 DISTRIC CITY TAO YUAN CITY, 334 TAIWAN.R.O.C
 Tel: +886-3-3623092&3641144
 Fax: +886-3-3623273



PRODUCT DIMENSIONS

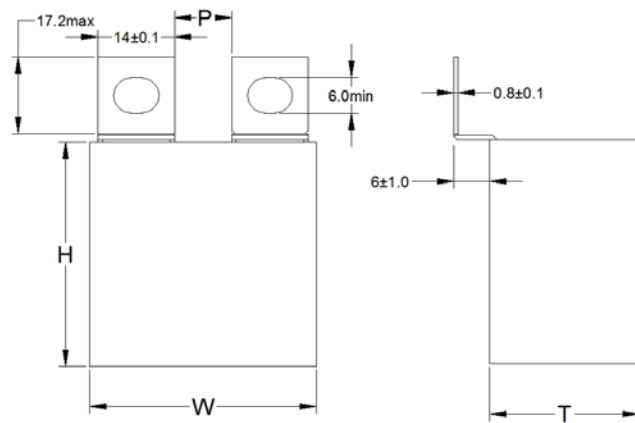


Fig1

HITANO P/N	CAP.(uF)	Symbol	Tol.±%	R.V.(DC)	Dimensions in mm						dV/dt (V/uS)	Ipeak (A)	70°C 100KHz ΔT≤15°C I _{rms} (A)	Fig.	Notes
					W ±0.5	H ±0.5	T ±0.5	P ±0.5	S ±0.5	端子					
HPMDG155K2UAAXLX	1.5	155	10	850	42.0	40.0	20.0	10.0	NA	M6	750	1125	18.5	1	Gary
HPMDG205K2UAAXLX	2.0	205	10	850	42.0	40.0	20.0	10.0	NA	M6	750	1500	19	1	Gary
HPMDG225K2UAAXLX	2.2	225	10	850	42.0	40.0	20.0	10.0	NA	M6	750	1650	19.5	1	Gary
HPMDG255K2UAAXLX	2.5	255	10	850	42.5	44.0	24.0	10.0	NA	M6	750	1875	20	1	Gary
HPMDG305K2UAAXLX	3.0	305	10	850	42.5	44.0	24.0	10.0	NA	M6	750	2250	21	1	Gary
HPMDG335K2UAAXLX	3.3	335	10	850	41.5	45.0	30.0	10.0	NA	M6	750	2475	21.5	1	Gary
HPMDG475K2UAAXLX	4.7	475	10	850	57.5	45.0	30.0	10.0	NA	M6	450	2115	24.5	1	Gary
HPMDG505K2UAAXLX	5.0	505	10	850	57.5	45.0	30.0	10.0	NA	M6	450	2250	25	1	Gary
HPMDG605K2UAAXLX	6.0	605	10	850	57.5	50.0	35.0	10.0	NA	M6	450	2700	26	1	Gary
HPMDG655K2UAAXLX	6.5	655	10	850	57.5	50.0	35.0	10.0	NA	M6	450	2925	27	1	Gary
HPMDG125K3AAAXLX	1.2	125	10	1000	42.0	40.0	20.0	10.0	NA	M6	850	1020	16	1	Gary
HPMDG155K3AAAXLX	1.5	155	10	1000	42.5	44.0	24.0	10.0	NA	M6	850	1275	16	1	Gary
HPMDG205K3AAAXLX	2.0	205	10	1000	42.5	44.0	24.0	10.0	NA	M6	850	1700	17	1	Gary
HPMDG225K3AAAXLX	2.2	225	10	1000	42.5	44.0	24.0	10.0	NA	M6	850	1870	20	1	Gary
HPMDG255K3AAAXLX	2.5	255	10	1000	41.5	45.0	30.0	10.0	NA	M6	850	2125	21	1	Gary
HPMDG305K3AAAXLX	3.0	305	10	1000	41.5	45.0	30.0	10.0	NA	M6	850	2550	21.5	1	Gary
HPMDG335K3AAAXLX	3.3	335	10	1000	57.5	45.0	30.0	10.0	NA	M6	500	1650	20	1	Gary
HPMDG405K3AAAXLX	4.0	405	10	1000	57.5	45.0	30.0	10.0	NA	M6	500	2000	21	1	Gary
HPMDG475K3AAAXLX	4.7	475	10	1000	57.5	50.0	35.0	10.0	NA	M6	500	2350	22	1	Gary
HPMDG505K3AAAXLX	5.0	505	10	1000	57.5	50.0	35.0	10.0	NA	M6	500	2500	23	1	Gary

HITANO P/N	CAP.(uF)	Symbol	Tol.±%	R.V.(DC)	Dimensions in mm						dV/dt (V/uS)	Ipeak (A)	Irms 100KHz (A)	Fig.	Notes
					W ±0.5	H ±0.5	T ±0.5	P ±0.5	S ±0.5	端子					
HPMDG824K3MAAXLX	0.82	824	10	1200	42.0	40.0	20.0	10.0	NA	M6	950	779	14.5	1	Gary
HPMDG105K3MAAXLX	1.0	105	10	1200	42.0	40.0	20.0	10.0	NA	M6	950	950	16	1	Gary
HPMDG125K3MAAXLX	1.2	125	10	1200	42.5	44.0	24.0	10.0	NA	M6	950	1140	19	1	Gary
HPMDG155K3MAAXLX	1.5	155	10	1200	42.5	44.0	24.0	10.0	NA	M6	950	1425	19.5	1	Gary
HPMDG205K3MAAXLX	2.0	205	10	1200	41.5	45.0	30.0	10.0	NA	M6	950	1900	20	1	Gary
HPMDG225K3MAAXLX	2.2	225	10	1200	57.5	45.0	30.0	10.0	NA	M6	600	1320	20	1	Gary
HPMDG255K3MAAXLX	2.5	255	10	1200	57.5	45.0	30.0	10.0	NA	M6	600	1500	21	1	Gary
HPMDG305K3MAAXLX	3.0	305	10	1200	57.5	45.0	30.0	10.0	NA	M6	600	1800	22	1	Gary
HPMDG335K3MAAXLX	3.3	335	10	1200	57.5	50.0	35.0	10.0	NA	M6	600	1980	23	1	Gary
HPMDG405K3MAAXLX	4.0	405	10	1200	57.5	50.0	35.0	10.0	NA	M6	600	2400	24	1	Gary
HPMDG684K3CAAXLX	0.68	684	10	1600	42.0	40.0	20.0	10.0	NA	M6	1250	850	16	1	Gary
HPMDG824K3CAAXLX	0.82	824	10	1600	42.5	44.0	24.0	10.0	NA	M6	1250	1025	19	1	Gary
HPMDG105K3CAAXLX	1.0	105	10	1600	41.5	45.0	30.0	10.0	NA	M6	1250	1250	19.5	1	Gary
HPMDG125K3CAAXLX	1.2	125	10	1600	41.5	45.0	30.0	10.0	NA	M6	1250	1500	20	1	Gary
HPMDG155K3CAAXLX	1.5	155	10	1600	57.5	45.0	30.0	10.0	NA	M6	750	1125	22	1	Gary
HPMDG205K3CAAXLX	2.0	205	10	1600	57.5	50.0	35.0	10.0	NA	M6	750	1500	24	1	Gary
HPMDG474K3DAAXLX	0.47	474	10	2000	42.0	40.0	20.0	10.0	NA	M6	1300	611	15.5	1	Gary
HPMDG564K3DAAXLX	0.56	564	10	2000	42.5	44.0	24.0	10.0	NA	M6	1300	728	18	1	Gary
HPMDG684K3DAAXLX	0.68	684	10	2000	42.5	44.0	24.0	10.0	NA	M6	1300	884	18.5	1	Gary
HPMDG824K3DAAXLX	0.82	824	10	2000	41.5	45.0	30.0	10.0	NA	M6	1300	1066	19	1	Gary
HPMDG105K3DAAXLX	1.0	105	10	2000	57.5	45.0	30.0	10.0	NA	M6	850	850	24	1	Gary
HPMDG125K3DAAXLX	1.2	125	10	2000	57.5	45.0	30.0	10.0	NA	M6	850	1020	23	1	Gary
HPMDG155K3DAAXLX	1.5	155	10	2000	57.5	50.0	35.0	10.0	NA	M6	850	1275	24	1	Gary

PRODUCT CODE COMPARATIVE TABLE

TYPE: HPMD(IGBT)

Product coding

HPMD	G	1 0 4	K	3D	L	K	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	HPMD
Code	HPMD

② Shape category or other

Describe	Box	Dististyle	Box Halogen free	AEC-Q200 Box AEC-Q200	85 AEC-Q200 Box Double 85 AEC-Q200
Code	B	G	H	K	T

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

TYPE: HPMD(IGBT)

Product coding

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 ⑥ pin 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

⑩ Accessories Yards

NO.	Descriptions
1	"X" 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 official P/N will be released during the mass production.

PRODUCT SPECIFICATIONS

TYPE: **HPMD(IGBT)**

NO.	ITEM	DESCRIPTIONS
1	SCOPE	This specifications cover the requirements of HITANO Double sided metallized polypropylene film capacitor, Type :HPMD
2	STANDARD ATMOSPHERIC CONDITIONS FOR MAKING MEASUREMENTS	
2.1	AMBIENT TEMPERATURE	15°C to 35°C (If there is any doubt on the results, the measurements shall be made at $+20 \pm 5^\circ\text{C}$)
2.2	RELATIVE HUMIDITY(R.H.)	45%to 75% (If there is any doubt on the results, the measurements shall be made at 60% to 70%)
2.3	AIR PRESSURE	86 kpa to 106 kpa
2.4	OPERATING TEMPERATURE RANGE	-40°C to +105°C. (+85°C to +105°C : Decreasing factor 1.25% per °C for Ur)
3	CONSTRUCTION	
3.1	DIELECTRIC	Metallized Polypropylene Film
3.2	METAL SPRAY	Special Solder
3.3	LEAD terminals	Cu lug terminals
3.4	EPOXY RESIN	UL 94V-0
3.5	PLASTIC CASE	UL 94V-0
4	MARKING	
4.1	TYPE OR MATERIAL	“PMD” stands for “PMD” type.
4.2	NOMINAL CAPACITANCE	In EIA 3-digit code. (Reference Product code comparative table)
4.3	CAPACITANCE TOLERANCE	In EIA 1- letter code. (Reference Product code comparative table)
4.4	RATED VOLTAGE	in VDC rating, unless otherwise indicated.
4.5	DATE CODE	d
<p style="text-align: center;">example</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p style="font-size: 1.2em; margin: 0;">CK PMD 3</p> <p style="font-size: 1.2em; margin: 0;">155K850 d</p> </div>		

PRODUCT SPECIFICATIONS

TYPE: **HPMD(IGBT)**

5 ELECTRICAL CHARACTERISTICS				
NO.	ITEM		PERFORMANCE	TEST CONDITIONS
5.1	Capacitance(CAP)		Within the tolerance specified.	Measuring Frequency : 1KHz +/-10% Measuring Voltage : <=1 Vrms.
5.2	Voltage Proof (Ur)	Between Terminals	Shall be no abnormality	1.5 times of Ur for 10 sec.
		Between Terminals & Enclosure	Shall be no abnormality	Apply 2000VAC for 2 to 5 sec.
5.3	Insulation Resistance (I.R.)		$\geq 100000 \text{ Mohm (C} \leq 0.33\mu\text{f)}$ $\geq 30000 \text{ Mohm} \cdot \mu\text{F/C (C} > 0.33\mu\text{f)}$	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
5.4	Dissipation Factor (DF)		$\leq 0.001(0.1\%)$ at 1 KHz	Measuring Frequency : +/-2% Measuring Voltage : <=1 Vrms.
5.5	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.
6 MECHANICAL CHARACTERISTICS				
6.1	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.

PRODUCT SPECIFICATIONS

TYPE: **HPMD(IGBT)**

NO.	ITEM		PERFORMANCE	TEST CONDITIONS
6.2	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 mechanical damage	
7 ENDURANCE CHARACTERISTICS				
7.1	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.5.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test	
		Dissipation Factor	Tan: 0.11% max. (1KHz)	
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3	
7.2	Dry Heat Resistance	Appearance	Shall be no remarkable change	Test Temperature: +85 +/-2°C Test Duration: 16 +1/-0 hrs.
		Withstand Voltage	Shall satisfy NO.5.2	
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test	
		Dissipation Factor	Tan: 0.11% max. (1KHz)	
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3	

PRODUCT SPECIFICATIONS

TYPE: **HPMD(IGBT)**

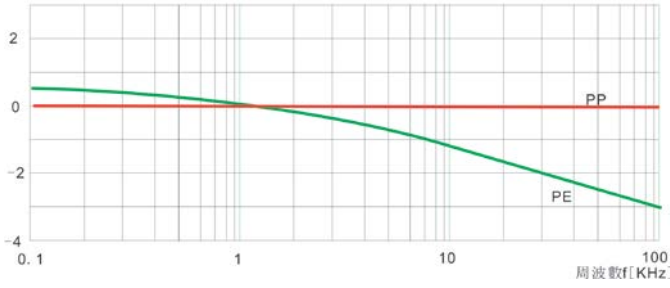
NO.	ITEM	PERFORMANCE	TEST CONDITIONS
7.3	Cold Resistance	Appearance	Shall be no remarkable change
		Withstand Voltage	Shall satisfy NO.5.2
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test
		Dissipation Factor	Tan: 0.11% max. (1KHz)
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3
7.4	Humidity Resistance	Appearance	Shall be no remarkable change
		Withstand Voltage	Shall satisfy NO.5.2
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test
		Dissipation Factor	Tan: 0.11% max. (1KHz)
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3
7.5	High Temperature Loading	Appearance	Shall be no remarkable change
		Withstand Voltage	Shall satisfy NO.5.2
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test
		Dissipation Factor	Tan: 0.11% max. (1KHz)
		Insulation Resistance 絶	$\geq 50\%$ of the limit value of NO.5.3
Test Temperature: $+40 \pm 2^\circ\text{C}$. Test Humidity: 90% to 95% R.H. Test Duration: 500 + 24/-0 Hrs After test, allow it stay alone for 4 Hrs at standard temperature and humidity before making measurements.			
Test Temperature: $+85 \pm 2^\circ\text{C}$ Apply 1.25times of rated voltage for 1,000 + 24/-0 hrs After test, allow it stay alone for 4hrs at standard temperature and humidity before making measurements.			

PRODUCT SPECIFICATIONS

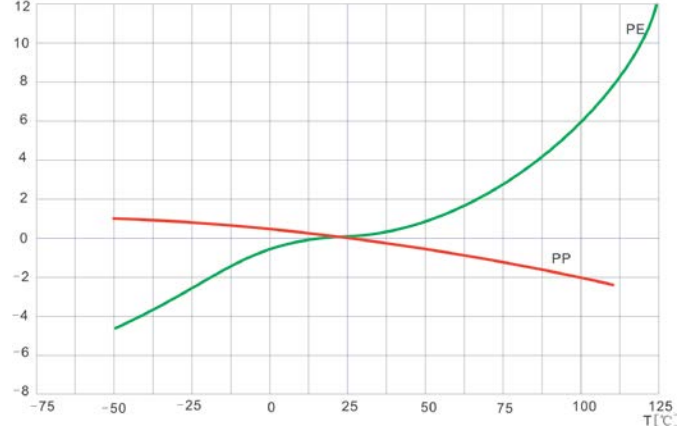
TYPE: **HPMD(IGBT)**

NO.	ITEM	PERFORMANCE	TEST CONDITIONS
7.6	Rapid Temperature Change	Appearance	Shall be no remarkable change
		Withstand Voltage	Shall satisfy NO.5.2
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test
		Dissipation Factor	Tan: 0.11% max. (1KHz)
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3
Temperature Cycle: Total 5 cycles High Temperature: $+85 \pm 5^\circ\text{C}$ Low Temperature: $-25 \pm 5^\circ\text{C}$ 30 min $\pm 10\%$ for each temperature			
7.7	Damp Heat Loading	Appearance	Shall be no remarkable change
		Withstand Voltage	Shall satisfy NO.5.2
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 5\%$ of the value before test
		Dissipation Factor	Tan: 0.11% max. (1KHz)
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3
Test Temperature: $+40 \pm 2^\circ\text{C}$. Test Humidity: 90% to 95% R.H. Test voltage: Rated Voltage. Test Duration: 500 + 24/-0 Hrs After test, allow it stay alone for 4 Hrs at standard temperature and humidity before making measurements.			
7.8	Soldering Heat Resistance	Appearanc	Shall be no remarkable change. The marking shall be legible.
		Withstand Voltage Between Terminals	Shall satisfy NO.5.2
		Capacitance Change Rate ($\Delta C/C$)	Within $\pm 3\%$ of the value before test
		Dissipation Factor	Tan: 0.11% max. (1KHz)
		Insulation Resistance	$\geq 50\%$ of the limit value of NO.5.3
		Connection of Element	Shall be stable
Preheat temp. $100\sim 120^\circ\text{C}$ Preheat Duration: 60 sec. max Temperature increase by $3^\circ\text{C}/\text{sec}$. max. Soldering Temperature: $+260 \pm 5^\circ\text{C}$ Immersion Duration: 10 ± 1 sec. Immersion Depth: 4 ± 0.8 mm from roots. After test, allow it stay alone for 1.5 ± 0.5 hrs. at standard temperature and humidity before making measurements.			

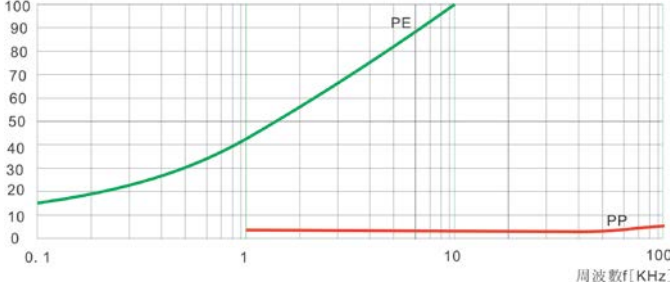
容量變化
Capacitance change
 $\Delta C/C$ (%)



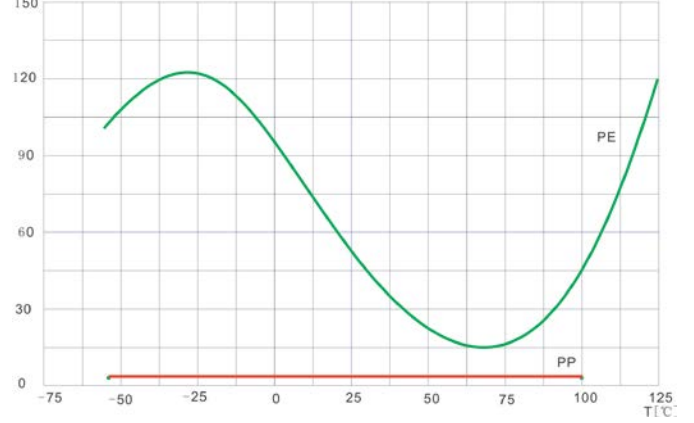
容量變化
Capacitance change
 $\Delta C/C$ (%)



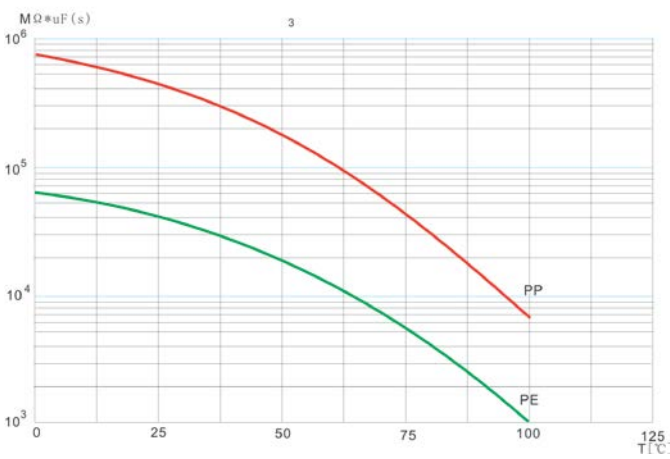
誘電正切
Dissipation Factor
 $tg \times 10^{-4}$



誘電正切
Dissipation Factor
 $tg \times 10^{-4}$



絕緣阻抗
Insulation Resistance



額定電壓
Rated Voltage
Vr %

