

用途 Applications

用作電源濾波、抑制電源電磁幹擾、初次級耦合、開關電源、電源適配器等。也用作直 - 交流隔離及無變壓器數據存取裝置的噪音吸收等。
Ideal for use as X/Y capacitors for AC line filter, electromagnetic interference suppression and primary-secondary coupling on switching power supplies and AC adapters. Ideal for use on D-A isolation and noise absorption for DAA modems without transformers.

產品有害物質法規符合性：產品符合ROHS; REACH; PAHS; HF; 鄰苯二甲酸鹽等法規。

Hazardous Substances Compliance: All products pass following compliance or standard: ROHS; REACH; PAHS; HF; and Phthalates-Phthalates Regulation.

技術指標 Specifications

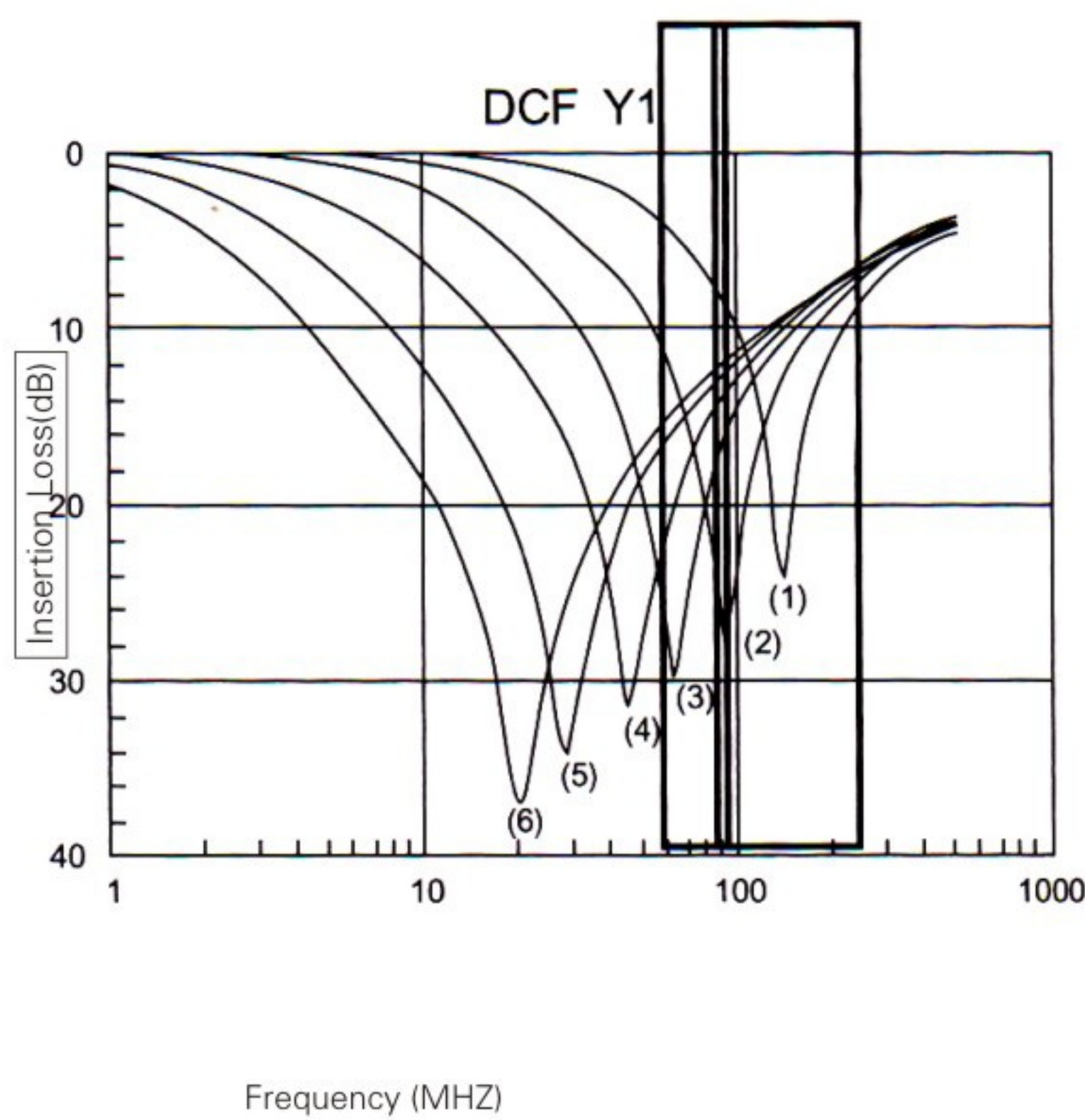
項目 Item	標準要求 Specification	
氣候類別 Climatic Category 阻燃等級 Passive Flammability Class	25/125/21/C	
使用溫度範圍 Operating Temperature	-25°C+125°C	
容量、損耗測試條件 Capacitance (C), Dissipation (tg δ) Testing at	1) 標準大氣環境 Standard atmospheric condition	
	2) 1Vr.m.s. 1KHz/ 100KHz	
介質損耗 Dissipation Factor (tg δ)	NP0、SL: ≤2.5‰ (CR ≥ 50pF); ≤5‰ (5pF ≤ CR < 50pF) Y5P、Y5U、Y5V : ≤2.5%	
系列產品容量範圍 Capacitance Range	5pf ~ 4700pF	
容量偏差 Capacitance Tolerance	J: ± 5%、K: ± 10%; M: ± 20%	
額定電壓 Rated Working Voltage	Series1 Y1/X1	Series2 Y1/X1
	250VAC/400VAC (50/60Hz)	400VAC/400VAC (50/60Hz)
端子間耐壓 Withstand Voltage Between	4000VAC	
絕緣電阻 Insulation Resistance (I.R)	≥ 10000MΩ (500VDC)	
溫度特性 Temperature Characteristic	NP0、SL、Y5P、Y5U、Y5V	
阻燃環氧樹脂封裝 Flame Retardant Epoxy Resin (coating)	符合 UL94V-0 標準 Conforming to UL94V-0 standards	

*Standard atmospheric condition is as follows:

- 1) Temperature: 25 ± 2°C
- 2) Relative humidity: 45-75%
- 3) Atmospheric pressure 86~106kPa (860~1060 mbar)

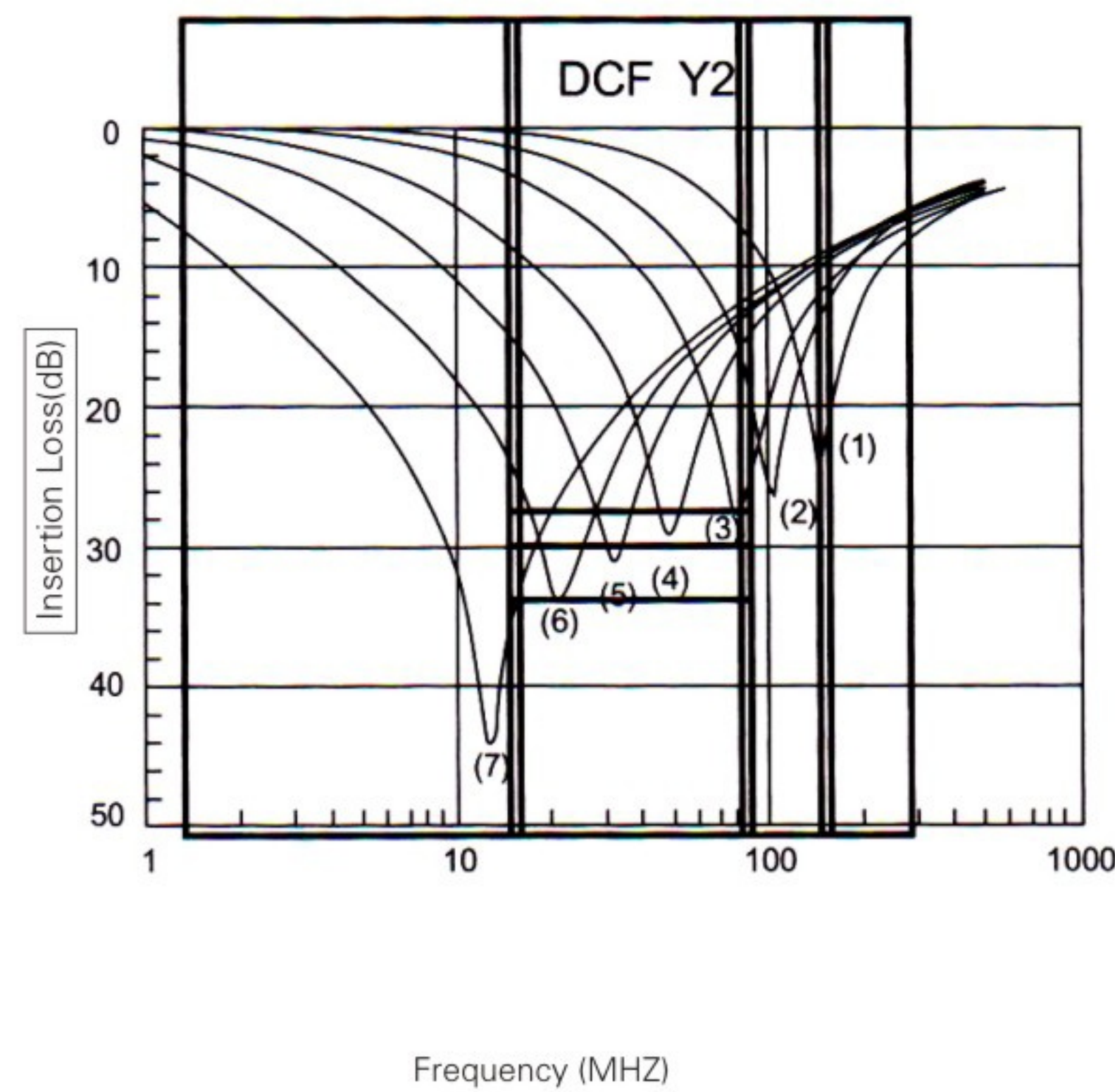
瓷介電容

Insertion Losses-Frequency Characteristics



Signal power: 1mW
AC240V(r.m.s)/60Hz is applied on the capacitor.

- (1) 101 Y5P
- (2) 221 Y5P
- (3) 471 Y5P
- (4) 102 Y5U
- (5) 222 Y5U
- (6) 472 Y5U



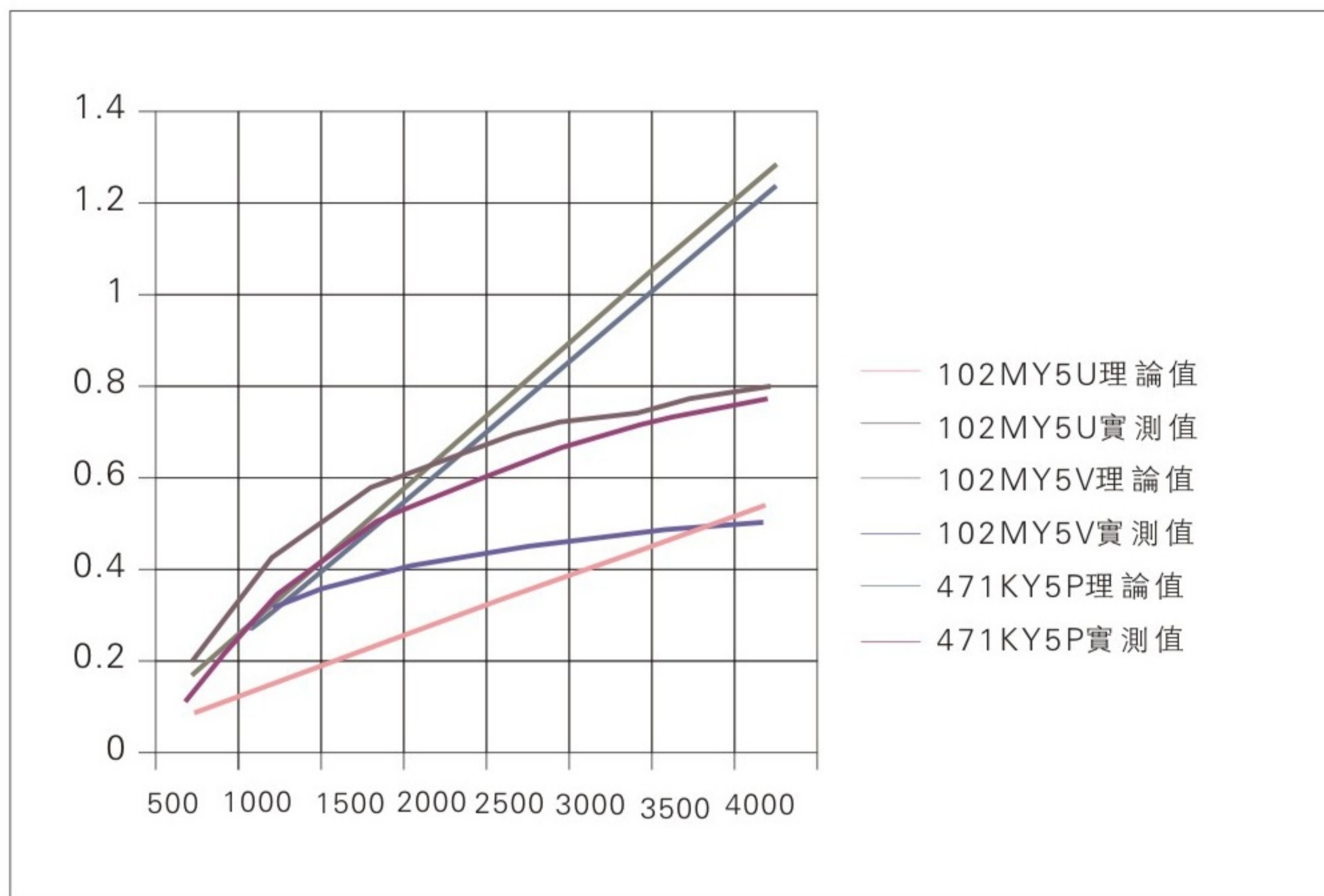
Signal power: 1mW
AC240V(r.m.s)/60Hz is applied on the capacitor.

- (1) 101 Y5P
- (2) 221 Y5P
- (3) 471 Y5P
- (4) 102 Y5U
- (5) 222 Y5U
- (6) 472 Y5U
- (7) 103 Y5V

Leakage Current Characteristics

理論上，在純電容電路中，電流、電量、施加電壓的關係為 $I = 2\pi fcu$ ，但陶瓷電容器在電場中晶體結構變化會導致K值變化，致使施加電壓時電容器實際電容量和其靜態容量出現顯著差異。用戶在選用電容器時，應該充分考慮這種差異。典型規格圖示如下：

In theory, the relationship between current, capacitance and applied voltage is $I = 2\pi fcu$ in pure capacitor circuit. But the crystal structure of ceramic capacitor would change in electric field, which leads to the change of K value. So it has a significant difference between the actual capacitance and its static capacitance when applying voltage. User should take a full consideration of the difference when choosing capacitors. Ideal format shown below:



標準及認證 Approval, Standard, Rated Voltage and File No.

DCF- X1/Y1 安規認證 (X1/Y1=400VAC/250VAC)

安規機構 Safety Organization	標準編號 Standard No.	證書編號 File No.	額定電壓 Rated Voltage	安規符號及國家(地區) Approved Monogram	
UL/CUL	UL 60384-14	E252221	Y1 400VAC/250VAC X1 440VAC/400VAC		USA/Canada
CQC	GB/T6314.14-2015	CQC04001011968	Y1 400VAC/250VAC X1 440VAC/400VAC		China
VDE	EN 60384-14(VDE 0565-1-1):2014-04 EN60384-14:13-08 1EC60384-14(ed.4)	40022942	Y1 400VAC X1 400VAC		Germany
ENEC					European Economic Community
ESTI	EN60384-14:13	16.0311	Y1 400VAC X1 400VAC		Switzerland
DEMKO	EN60384-14:2013	D-05351	Y1 400VAC/250VAC X1 440VAC/400VAC		Denmark
NEMKO	EN60384-14:2013	P11213665	Y1 400VAC/250VAC X1 440VAC/400VAC		Norway
SEMKO	EN60384-14:2013	1616558	Y1 400VAC/250VAC X1 440VAC/400VAC		Sweden
FIMKO	EN60384-14:2013	NCS/FI 29418	Y1 400VAC X1 400VAC		Finland

DCF- X1/Y1 安規認證 (X1/Y1=400VAC/250VAC)

安規機構 Safety Organization	標準編號 Standard No.	證書編號 File No.	額定電壓 Rated Voltage	安規符號及國家(地區) Approved Monogram	
UL/CUL	UL 60384-14	E252221	Y1 400VAC/250VAC X1 440VAC/400VAC		USA/Canada
CQC	GB/T6314.14-2015	CQC04001011968	Y1 400VAC/250VAC X1 440VAC/400VAC		China
VDE	EN 60384-14(VDE 0565-1-1):2014-04 EN60384-14:13-08 1EC60384-14(ed.4)	40022942	Y1 400VAC X1 400VAC		Germany
ENEC					European Economic Community

DCF-Y1/X1標準品規格表 Normal Specification Form of DCF-Y1/X1

本表僅列G額定電壓系列規格,K系列規格僅額定電壓值不同(下表同)。

The table lists only G rated voltage series, K series shares all the features except the rated voltage.(also applies to the following table)

產品代碼 P/N	額定容量 Rated Capacitance (pf)	溫度特性 Temperature Characteristic	容量誤差 Capacitance Tolerance	素子尺寸 Plate Size	尺寸 Dimension(mm)		間距 Spacing F (mm)	線徑 Diameter d (mm)
					直徑 D max	厚度 T max		
DCF101KY5PG0	100	Y5P	K	48210	7.0	5.5	10.0	0.56
DCF151KY5PG0	150		K	48200	7.0	5.5	10.0	0.56
DCF181KY5PG0	180		K	48200	7.0	5.5	10.0	0.56
DCF221KY5PG0	220		K	48200	7.0	5.5	10.0	0.56
DCF271KY5PG0	270		K	48200	7.0	5.5	10.0	0.56
DCF331KY5PG0	330		K	58200	8.0	5.5	10.0	0.56
DCF391KY5PG0	390		K	58200	8.0	5.5	10.0	0.56
DCF471KY5PG0	470		K	62200	9.0	5.5	10.0	0.56
DCF561KY5PG0	560		K	68200	9.5	5.5	10.0	0.56
DCF681KY5PG0	680		K	76210	10.0	5.5	10.0	0.56
DCF102KYSPG0	1000		K	90200	11.0	5.5	10.0	0.56
DCF122KY5PG0	1200		K	10021	12.0	5.5	10.0	0.56
DCF152KY5PG0	1500		K	11521	13.5	5.5	10.0	0.56
DCF222KY5PG0	2200		K	14020	16.0	5.5	10.0	0.56
DCF471KY5UG0	470		Y5U	K	48220	7.5	5.5	10.0
DCF681KY5UG0	680	K		52200	7.5	5.5	10.0	0.56
DCF102MY5UG0	1000	M		58200	9.0	5.5	10.0	0.56
DCF122MY5UG0	1200	M		68200	9.5	5.5	10.0	0.56
DCF152MY5UG0	1500	M		73200	10.0	5.5	10.0	0.56
DCF182MY5UG0	1800	M		82200	10.0	5.5	10.0	0.56
DCF222MY5UG0	2200	M		82190	11.0	5.5	10.0	0.56
DCF272MY5UG0	2700	M		95200	11.5	5.5	10.0	0.56
DCF332MY5UG0	3300	M		10020	13.0	5.5	10.0	0.56
DCF392MY5UG0	3900	M		11520	13.5	5.5	10.0	0.56
DCF472MY5UG0	4700	M		12020	15.0	5.5	10.0	0.56

DCF102MY5VG0	1000	Y5V	M	48220	7.0	5.5	10.0	0.56
DCF152MY5VG0	1500		M	58220	9.0	5.5	10.0	0.56
DCF182MY5VG0	1800		M	62220	9.0	5.5	10.0	0.56
DCF222MY5VG0	2200		M	65210	10.0	5.5	10.0	0.56
DCF272MY5VG0	2700		M	78220	10.0	5.5	10.0	0.56
DCF332MY5VG0	3300		M	82210	12.0	5.5	10.0	0.56
DCF392MY5VG0	3900		M	88210	12.5	5.5	10.0	0.56
DCF472MY5VG0	4700		M	96210	13.0	5.5	10.0	0.56

DCF-Y1/X1小型化產品規格表
Reduce Specification Form of DCF-Y1/X1

產品代碼 P/N	額定容量 Rated Capacitance (pf)	溫度特性 Temperature Characteristic	容量誤差 Capacitance Tolerance	素子尺寸 Plate Size	尺寸 Dimension(mm)		間距 Spacing F (mm)	綫徑 Diameter d (mm)
					直徑 D max	厚度 T max		
DCF101KY5PG0	100	Y5P	K	48120	7.0	5.5	10.0	0.56
DCF221KY5PG0	220		K	48170	7.0	5.5	10.0	0.56
DCF331KY5PG0	330		K	52170	8.0	5.5	10.0	0.56
DCF471KY5PG0	470		K	58155	9.0	5.5	10.0	0.56
DCF681KY5PG0	680		K	72170	10.0	5.5	10.0	0.56
DCF102KY5PG0	1000		K	82170	11.0	5.5	10.0	0.56
DCF152MY5VG0	1500	Y5V	M	52180	7.0	5.5	10.0	0.56
DCF222MY5VG0	2200		M	58180	10.0	5.5	10.0	0.56
DCF332MY5VG0	3300		M	72180	12.0	5.5	10.0	0.56
DCF472MY5VG0	4700		M	88190	13.0	5.5	10.0	0.56

本表產品僅為滿足(1)部分客戶因受產品安裝空間限制及(2)部分追求較低採購單價的客戶而設計,相對標準產品,小型化產品安全邊際有限,對質量要求較高的客戶不建議使用。

The products in the above table are designed only for customers that are (1) limited by the room of product installation; (2) after lower purchasing unit price. Compared with the standardized products, reduce specification products have limited safety margin. Therefore, customers who have higher demand in quality are not recommended to refer to it.

更高可靠性的DCF-Y1/X1系列電容器規格表
Higher Reliability Specification Form of DCF-Y1/X1

產品代碼 P/N	額定容量 Rated Capacitance (pf)	溫度特性 Temperature Characteristic	容量誤差 Capacitance Tolerance	素子尺寸 Plate Size	尺寸 Dimension(mm)		間距 Spacing F (mm)	綫徑 Diameter d (mm)
					直徑 D max	厚度 T max		
DCF101KY5PG0--(LY)	100	Y5P	K	52240	8.0	7.0	10.0	0.56
DCF221KY5PG0--(LY)	220	Y5P	K	48220	7.5	7.0	10.0	0.56
DCF331KY5PG0--(LY)	330	Y5P	K	58220	8.5	7.0	10.0	0.56
DCF471KY5PG0--(LY)	470	Y5P	K	68210	9.5	7.0	10.0	0.56
DCF681KY5UG0--(LY)	680	Y5U	K	58260	8.5	7.0	10.0	0.56
DCF102MY5UG0--(LY)	1000	Y5U	M	65260	9.5	7.0	10.0	0.56
DCF222MY5UG0--(LY)	2200	Y5U	M	95250	12.5	7.0	10.0	0.56
DCF222MY5VG0--(LY)	2200	Y5V	M	73260	10.0	7.0	10.0	0.56

為了滿足客戶對電容器更高抗衝擊性能要求(能通過6KV浪涌實驗)及抗電強度(耐壓6KVAC)要求,我們設計製造該系列安規電容器。

To meet customer's requirements for higher shock resistance which could pass the surge test of 6KV and higher dielectric strength(6KVAC withstand voltage), we design and manufacture the series of safety capacitor.