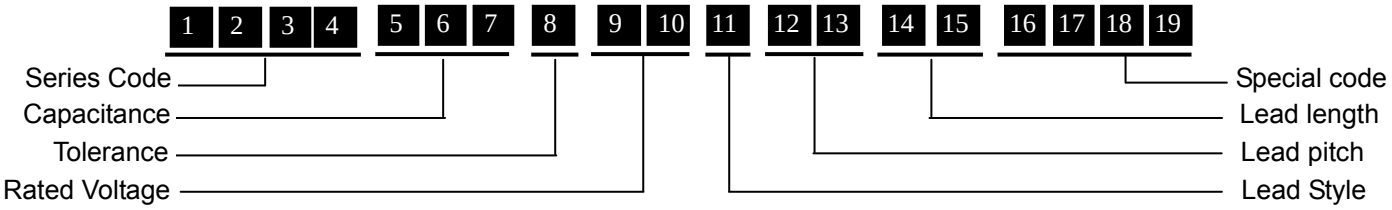
TYPE：MFC SPECIFICATION

Part Numbering System



Digit													
1~4	Type	MFC1	MFC2	MFC3	MFC4	MFC5	MFC6	MFC7	MFC8	MFC9	MFC0		
		MCB1	MCB2	MCB3	MCB4	MCB5	MCB6	MCB7	MCB8	MCB9	MCB0		
		MFA1	MFA2	MFA3	MFA4	MFA5	MFA6	MFA7	MFA8	MFA9	MFA0		

Digit 5~7	Digit 4~5 indicate the first two figures of the capacitance value and the 6th digit indicate the number of zero added to obtain the rated capacitance in pF. EX.102=1000pF=1nF=0.001μF

Digit 8	Code	F	G	H	J	K	M
	Tolerance	±1%	±2%	±3%	±5%	±10%	±20%

Digit 9~10		A	B	C	D	E	F	G	H	J	K	L	M	N
	1				20				50	63			1100	15
	2	100	125	160	200	250	315	400	500	630	800	120		150
	3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	1200	1400	1500
		P	Q	R	S	T	U	V	W	X	Y			
	1	240	300	330	440	540	600	700	850	900				
	2	275	305	350	450	520		760						
	3	280	310		480	550								
	Letter and then number indicate AC,but number and then Letter indicate DC. EX.2A=100VDC A2=100VAC													

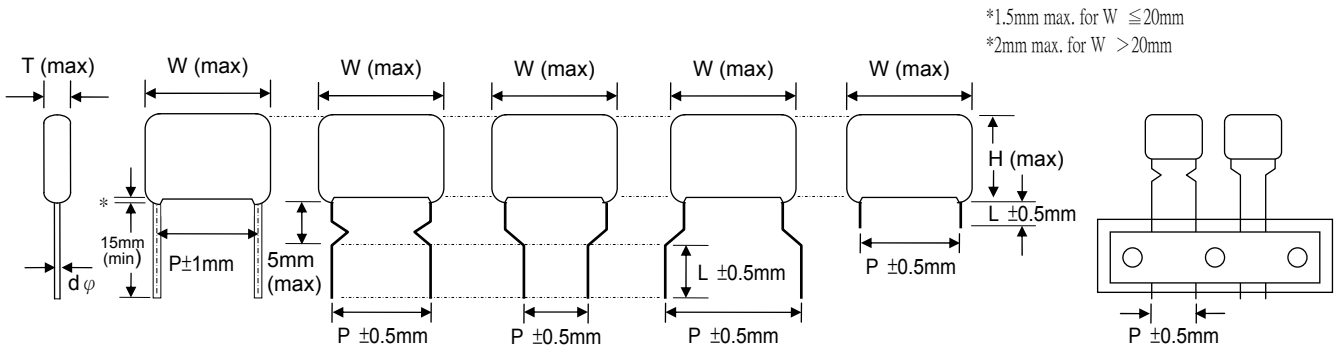
Digit 11	Code	A	B	C	D	X
	Lead style	Straight lead	Kink-Cutted	Inward forming	outward forming	straight lead Cutted
	Code	E	S	T	F	G
	Lead style	Taping (Ammo) (直腳 TP, P0=12.7mm)	Kink-Cutted (special)	Taping (Ammo) (同等彎 TP)	Taping (Ammo) (內彎 TP)	Taping (Ammo) (外彎 TP)

Digit 12~13	Code	P2	P3	P4	P5	P6	P8	P9	PA	PB	PC	PD	PE
	Pitch	3.5	4.0	4.5	5.0	6.0	7.0	7.5	8.0	9.0	10.0	31.0	15.0
	Code	PF	PG	PH	PJ	PK	PL	PM	PN	PP	PQ	PR	PS
	Pitch	20.0	21.0	22.0	22.5	28.5	52.5	27.5	30.0	32.5	41.0	12.5	17.5
	Code	PT	PU	PV	PW	PX	PY	PZ	P0				
	Pitch	51.0	27.0	37.5	25.0	12.0	35.0	16.0	Axial				
Digit 14~15	Code	L1*	L2	L3	L4	L5	L6	L7*	L8	L9	LA	LB	LC
	Lengt	15.0	3.5	4.0	4.5	10.0	15.0	20.0	TP	2.7	8.0	5.0	6.0
	Code	LD*	LE	LF	LG	LH	LJ*	LK	LL	LM	LN	LP	LQ*
	Lengt	26.0	7.5	5.5	12.0	7.0	25.0	13.0	6.5	3.0	9.0	2.5	17.0
	Code	LR	LS*	LU*	LW*	LX	LY*	LZ*	LV	L0*	LT*	VL*	
	Lengt	3.8	24.0	27.0	40.0	16.0	30.0	32.0	3.2	Axial	22	33	

Notes: * Straight,length is minimum

Digit 16~17	Code	Explanation	Code	Explanation	Code	Explanation
	DT	The different size	HX	HF, The different size (T) & The different Wire	EE	Low ESR
	ZX	The different size (T) & The different Wire	EA	Low noise		
Digit 18~19	Special Number.					

TYPE ：MFC SPECIFICATION	DIMENSION

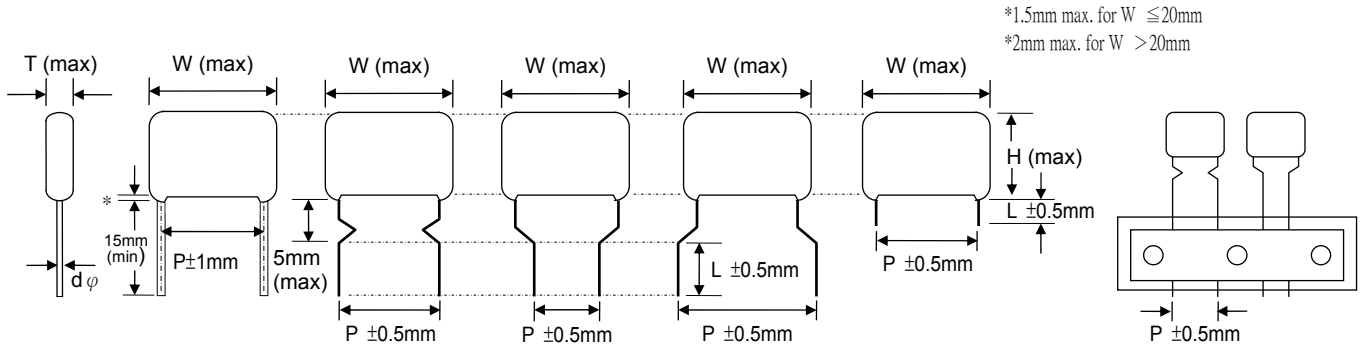


[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

CAP. (uF)	VOLT. (VDC)	TOL. ±%	DIMENSION unit:mm					SCC P/N
			W	H	T	P	dφ ±0.05	
0.47	450	10	13.0	12.0	5.0	10.0	0.6	MFCB474K2S*PC**DT03
0.68	450	10	13.0	12.0	6.0	10.0	0.6	MFCB684K2S*PC**DT05
1.0	450	10	13.0	15.0	6.5	10.0	0.6	MFCB105K2S*PC**DT07
1.5	450	10	13.0	17.5	8.0	10.0	0.6	MFCB155K2S*PC**DT11
2.2	450	10	13.0	19.0	10.5	10.0	0.6	MFCB225K2S*PC**DT17
0.68	450	10	18.0	10.0	5.5	15.0	0.6	MFCB684K2S*PE**ZX04
0.68	450	10	18.0	11.0	5.5	15.0	0.6	MFCB684K2S*PE**ZX04
0.82	450	10	18.0	11.0	5.5	15.0	0.6	MFCB824K2S*PE**ZX04
1.0	450	10	18.0	11.0	6.0	15.0	0.6	MFCB105K2S*PE**ZX05
1.5	450	10	18.0	12.5	7.0	15.0	0.8	MFCB155K2S*PE**DT08
2.2	450	10	18.0	16.0	8.0	15.0	0.8	MFCB225K2S*PE**DT11

Note:针对 Coating 产品,产品脚长不能超出 35.0mm

TYPE ：MFC SPECIFICATION	DIMENSION

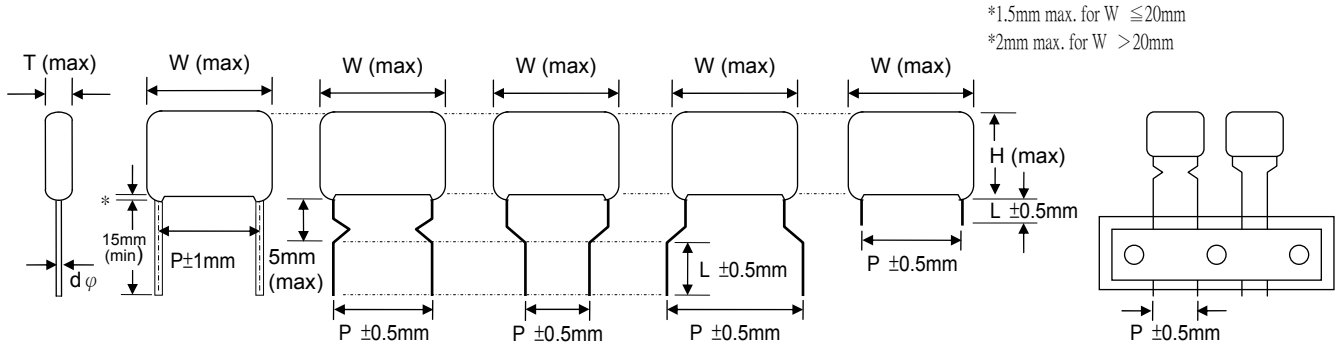


[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

CAP. (uF)	VOLT. (VDC)	TOL. ±%	DIMENSION unit:mm					SCC P/N
			W	H	T	P	dφ ±0.05	
0.01	450	10	13.0	9.0	5.0	10.0	0.6	MFC2103K2S*PC**DT03
0.015	450	10	13.0	9.0	5.0	10.0	0.6	MFC0153K2S*PC**DT03
0.022	450	10	13.0	9.0	5.0	10.0	0.6	MFC8223K2S*PC**DT03
0.027	450	10	13.0	9.0	5.0	10.0	0.6	MFC8273K2S*PC**DT03
0.033	450	10	13.0	9.0	5.0	10.0	0.6	MFC7333K2S*PC**DT03
0.047	450	10	13.0	9.0	5.0	10.0	0.6	MFC6473K2S*PC**DT03
0.056	450	10	13.0	9.0	5.0	10.0	0.6	MFC5563K2S*PC**DT03
0.068	450	10	13.0	10.5	5.0	10.0	0.6	MFC6683K2S*PC**DT03
0.082	450	10	13.0	10.0	5.5	10.0	0.6	MFC5823K23*PC**DT04
0.1	450	10	13.0	11.0	5.0	10.0	0.6	MFC5104K2S*PC**DT03
0.15	450	10	13.0	10.0	5.0	10.0	0.6	MFC4154K2S*PC**DT03
0.22	450	10	13.0	10.0	5.5	10.0	0.6	MFC1224K2S*PC**DT04
0.33	450	10	13.0	11.5	6.5	10.0	0.6	MFC1334K2S*PC**DT07
0.47	450	10	13.0	15.0	6.0	10.0	0.6	MFC1474K2S*PC**DT05
1.0	450	10	13.0	18.0	9.5	10.0	0.6	MFC1105K2S*PC**DT15
0.47	450	10	18.0	13.0	6.0	15.0	0.6	MFC4474K2S*PE**ZX05
0.68	450	10	18.0	15.5	7.0	15.0	0.6	MFC4684K2S*PE**DT08
1.0	450	10	18.0	15.0	7.5	15.0	0.8	MFC1105K2S*PE**DT09
1.5	450	10	18.0	18.5	8.0	15.0	0.8	MFC1155K2S*PE**DT11
2.2	450	10	18.0	19.0	11.5	15.0	0.8	MFC1225K2S*PE**DT20
1.5	450	10	25.5	15.0	9.5	22.5	0.8	MFC4155K2S*PJ**DT15
2.2	450	10	26.5	16.0	9.0	22.5	0.8	MFC1225K2S*PJ**DT14
3.3	450	10	26.5	19.5	10.5	22.5	0.8	MFC1335K2S*PJ**DT17

Note:针对 Coating 产品,产品脚长不能超出 35.0mm

TYPE ：MFC SPECIFICATION	DIMENSION

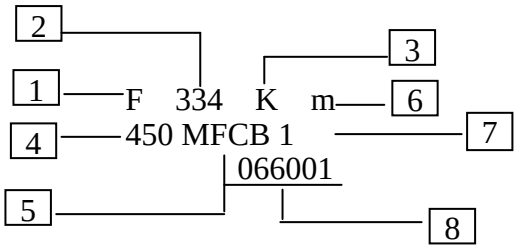


[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

CAP. (uF)	VOLT. (VDC)	TOL. ±%	DIMENSION unit:mm					SCC P/N
			W	H	T	P	dφ ±0.05	
0.01	630	10	13.0	9.0	5.0	10.0	0.6	MFC2103K2J*PC**DT03
0.012	630	10	13.0	9.5	5.5	10.0	0.6	MFC2123K2J*PC**DT04
0.015	630	10	13.0	10.0	5.5	10.0	0.6	MFC2153K2J*PC**DT04
0.018	630	10	13.0	11.0	5.5	10.0	0.6	MFC2183K2J*PC**DT04
0.022	630	10	13.0	10.0	5.5	10.0	0.6	MFC0223K2J*PC**DT04
0.027	630	10	13.0	11.0	6.0	10.0	0.6	MFC0273K2J*PC**DT05
0.033	630	10	13.0	10.0	5.5	10.0	0.6	MFC8333K2J*PC**DT04
0.039	630	10	13.0	11.0	5.5	10.0	0.6	MFC8393K2J*PC**DT04
0.047	630	10	13.0	10.0	5.5	10.0	0.6	MFC7473K2J*PC**DT04
0.056	630	10	13.0	10.0	5.5	10.0	0.6	MFC6563K2J*PC**DT04
0.068	630	10	13.0	11.0	5.5	10.0	0.6	MFC6683K2J*PC**DT04
0.082	630	10	13.0	11.5	6.0	10.0	0.6	MFC6823K2J*PC**DT05
0.1	630	10	13.0	12.0	6.5	10.0	0.6	MFC6104K2J*PC**DT07
0.12	630	10	13.0	12.5	7.5	10.0	0.6	MFC6124K2J*PC**DT09
0.15	630	10	13.0	14.0	8.0	10.0	0.6	MFC6154K2J*PC**DT11
0.18	630	10	13.0	15.0	8.0	10.0	0.6	MFC6184K2J*PC**DT11
0.22	630	10	18.0	12.0	7.0	15.0	0.6	MFC6224K2J*PE**ZX08
0.27	630	10	18.0	13.5	7.5	15.0	0.6	MFC6274K2J*PE**ZX09
0.33	630	10	18.0	14.5	8.0	15.0	0.8	MFC6334K2J*PE**DT11
0.39	630	10	18.0	15.0	8.5	15.0	0.8	MFC6394K2J*PE**DT12
0.47	630	10	18.0	16.5	9.0	15.0	0.8	MFC6474K2J*PE**DT14
0.56	630	10	18.0	18.0	9.5	15.0	0.8	MFC6564K2J*PE**DT15
0.68	630	10	18.0	19.5	10.5	15.0	0.8	MFC6684K2J*PE**DT17
0.82	630	10	26.5	17.0	9.5	15.0	0.8	MFC6824K2J*PJ**DT15
1.0	630	10	26.5	18.5	10.0	15.0	0.8	MFC6105K2J*PJ**DT16
1.2	630	10	26.5	20.0	11.0	15.0	0.8	MFC6125K2J*PJ**DT18
1.5	630	10	26.5	22.0	12.0	15.0	0.8	MFC6125K2J*PJ**DT23

Note:针对 Coating 产品,产品脚长不能超出 35.0mm

Marking



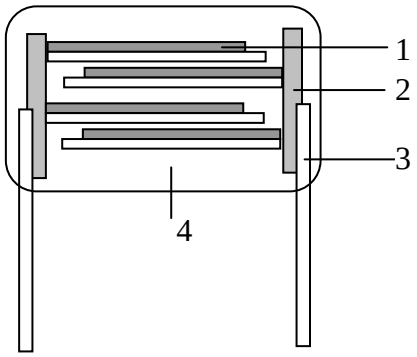
1	：Company symbol	2	：Capacitance	3	：Tolerance	4	：Rated voltage
5	：Type name	6	：Year / Month	7	：Week	8	：Production batch number (P≧10.0mm,H≧13.0mm)

Year	Month	Mark	Year	Month	Mark	Year	Month	Mark	Year	Month	Mark
	1	A		1	N		1	a		1	n
	2	B		2	P		2	b		2	p
	3	C		3	Q		3	c		3	q
	4	D		4	R		4	d		4	r
	5	E		5	S		5	e		5	s
2021	6	F	2022	6	T	2023	6	f	2024	6	t
2025	7	G	2026	7	U	2027	7	g	2028	7	u
	8	H		8	V		8	h		8	v
	9	J		9	W		9	j		9	w
	10	K		10	X		10	k		10	x
	11	L		11	Y		11	l		11	y
	12	M		12	Z		12	m		12	z

周期 4 年一個輪迴,如 CODE:A,代表:2017 年 1 月,2021 年 1 月,2025 年 1 月,2029 年 1 月,2033 年 1 月…

CODE:B,代表:2017 年 2 月,2021 年 2 月,2025 年 2 月,2029 年 2 月,2033 年 2 月…

Construction



1：Metallized polypropylene film(Al/zn)

2：Metal spray(Zn+Tin/Zn)

3：Lead wire(CP Wire)

4：Epoxy resin (UL94V-0、B)

TYPE：MFC SPECIFICATION	ELECTRICAL CHARACTERISTICS

No	項目 Item		性能 Performance		條件 Test Conditions	參考標准 Reference Standard
1	使用溫度範圍 Operating Temperature Range		-40°C ～ +110°C (+85℃ to 110℃:decreasing Factor1.25% per℃ for VR(DC))			IEC 60384-16 **2.1.12.2.5**
2	額定電壓 Rated Voltage		450VDC,520VDC,630VDC			IEC 60384-16 2.2.3
3	耐電壓 Withstand Voltage	端子間 Between Terminals	無 Short現象.		Rated voltage x 150% 10 sec Charge and discharge current shall not exceed 10 mA	IEC 60384-16 4.2.1
		端子外裝間 Between Terminals & Enclosure				
4	絕緣阻抗 Insulation Resistance		C≦0.33μF	VR＞100V 25,000MΩ min VR≦100V 12,500MΩ min	Charge time: 60 ±5sec. Charge voltage: V_R < 100VDC: 50VDC V_R < 500VDC: 100VDC V_R ≧ 500VDC. 500VDC Test Temp: 20°C	IEC 60384-16 4.2.4
			C＞0.33μF	VR＞100V 7,500MΩ*μF min VR≦100V 3,750MΩ*μF min		
5	靜電容量 Capacitance		於指定範圍內 Within specified tolerance		at 1 KHz ±10% Measure voltage at 1 Vrms Test temp: 20°C	IEC 60384-16 4.2.2
6	散逸因數 Dissipation Factor		0.1% max at 1KHz		Measure voltage at 1 Vrms Test temp: 20°C	IEC 60384-16 4.2.3
7	端子強度 Terminal Strength	抗拉強度 Pull Strength	端子不鬆斷 No cutting or slack of terminals		Wire diameter: 0.6&0.8mm Load: 1 kg, time: 10 sec. Wire diameter: 1.0 mm Load: 2 kg, time: 20 sec.	IEC 60384-16 4.3
		扭轉強度 Bending Strength			Wire diameter:0.6&0.8 mm 1.0&1.2 mm 90° x 4 time	
8	耐震性 Vibration Proof		無明顯異常 No abnormality of the appearance		Frequency range 10-55-10-55 Hz Amplitude: 0.75 mm, 2 hrs/direction for 3 directions	IEC 60384-16 4.7
9	焊錫附著性 Solder ability		導線浸入後的表面至少需附著95%的新焊錫 At least 95% of the surface of the lead wire dipped into is covered with new solder.		Solder temp: 245℃ ±5°C Immersion time: 2±0.5sec. Solder: SnAgCu (Sn:96.5% Ag:3% Cu:0.5%)	IEC 60384-16 4.5
10	耐寒性 Cold Resistance	靜電容量变化率 Capacitance Change	△C/C≦±5% Within ±5%		Temperature: -40 ±2°C Duration: 96±4 hrs	IEC 60384-16 4.10.4

No	項 目 Item		性 能 Performance	條 件 Test Conditions	參考標准 Reference Standard
11	焊錫耐熱性 Resistance to Soldering heat	外 觀 Appearance	無明顯異常 No abnormality on appearance	Solder temp: 265 ±5°C Immersion time: 10±0.5sec.	IEC 60384-16 4.4
		耐電壓 Withstand Voltage	依項目3 Comply with item 3		
		靜電容量變化率 Capacitance Change	△C/C≦±3% Within ±3%		
		散逸因數 Dissipation Factor	於項目6範圍以內 Within spec of item 7 above.		
		絕緣阻抗 Insulation Resistance	Same as the spec of item 6 above		
12	耐熱性 Dry Heat Resistance	絕 緣 阻 抗 Insulation Resistance	50% of minimum specified value	Temperature: +85 ±2°C Duration: 96±4 hrs	IEC 60384-16 4.10.2
		靜電容量變化率 Capacitance Change	△C/C≦±5% Within±5%		
13	溫度循環 Temperature Cycle	外 觀 Appearance	無明顯異常 No abnormality on appearance	Total: 5 cycle Step / Temp / Time 1 / -40±2°C / 30 ±1min 2 / +25±2°C / 3min max 3 / +85±2°C / 30 ±1min 4 / +25±2°C / 3min max	IEC 60384-16 **4.6**
		耐電壓 Withstand Voltage	依項目3 Comply with item 3		
		絕 緣 阻 抗 Insulation Resistance	50% of minimum specified value		
		靜電容量變化率 Capacitance Change	△C/C≦±5% Within±5%		
		散 逸 因 數 Dissipation Factor Change	△DF≦ 0.3%max at 1KHz(20°C)		
14	充放電 Charging and discharging	靜電容量變化率 Capacitance Change	△C/C≦±5% Within±5%	Times:10 000 Duration of charging:0.5s Duration of discharging : 0.5s Charging voltage: rated voltage Charging resistance:220/CR(Ω) Discharging resistance: R=10/ CR(Ω) or 20(whichever is the greater) CR: rated capacitance (μF)	IEC 60384-16 4.13
		散逸因數變化量 Dissipation Factor Change	△DF≦0.5%(1KHZ)		
		絕 緣 阻 抗 Insulation Resistance	IR: ≧50%of rated value		
15	穩態濕熱試驗 Damp heat , Steady state	外 觀 Appearance	無明顯異常 No abnormality on appearance 印字可辨識 Marking to be legible	Humidity: 90~95% RH Temperature: +40 ±2°C Duration:504 ± 1hrs Measure after exposing at normal state for 1.5±0.5hrs.	IEC 60384-16 4.11
		耐 電 壓 Withstand Voltage	依項目3 Comply with item 3		
		絕 緣 阻 抗 Insulation Resistance	50% of minimum specified value		
		靜電容量變化率 Capacitance Change	△C/C≦±5% Within ±5%		
		散逸因數變化量 Dissipation Factor Change	△DF≦0.1%max at 1KHz(20°C)		

TYPE ：MFC SPECIFICATION			*ELECTRICAL CHARACTERISTICS*		
No	**項 目 Item**		**性 能 Performance**	**條 件 Test Conditions**	**參考標准 Reference Standard**
16	高溫負荷 Endurance Test	外 觀 Appearance	無明顯異常 No abnormality on appearance 印字可辨識 Marking to be legible	Temperature: +85 ±2°C Applied Voltage 125% x V_{RDC} Duration:1,000 +48/-0 hrs through series resistor of (0.022/C_R)Ω to the Capacitor Measure after exposing at normal state for 4 hrs.	IEC 60384-16 4.12
		耐 電 壓 Withstand Voltage	依項目 3 Comply with item 3		
		絕緣 阻 抗 Insulation Resistance	50% of minimum specified value		
		靜電容量變化率 Capacitance Change	△C/C≦±5% Within ±5%		
		散逸因數變化量 Dissipation Factor Change	△DF≦0.2%max at 1KHz(20°C)		
17	高濕/負荷試驗 Humidity Bias Test	耐 電 壓 Withstand Voltage	依項目 3 Comply with item 3	Humidity:90~95%RH Temperature:40±2℃ Applied Voltage100%×V_{RDC} Duration:1000±24hrs Through series resistor of 20~1000Ω/V to the Capacitor Measure after exposing at Normal state for 4 hrs	AEC-Q200
		絕緣 阻 抗 Insulation Resistance	50% of minimum specified value		
		靜電容量變化率 Capacitance Change	△C/C≦±10% Within ±10%		
		散逸因數變化量 Dissipation Factor Change	△DF≦0.5%max at 1KHz(20°C)		

電容儲存條件:

溫度: +5 ~ +35℃

濕度: ≦ 75% RH

電容儲存時間:

依周期計算有效期: 兩年. (超出兩年產品電氣特性需重新選別及檢查產品外觀)