

陶瓷電容器(RoHS compliant 產品)  
**CERAMIC CAPACITOR**

規格承認  
SPECIFICATION FOR APPROVAL

客戶

CUSTOMER Lomex Ltd.

機種名

MACHINERY

品名

DESCRIPTION

料號

PARTS NO.

貴公司承認印欄 APPROVED BY

貴公司承認印欄 APPROVED BY			
核准	主管	主管	檢驗

DATE：2018 年 12 月 19 日  
生宇企業股份有限公司



生宇企業股份有限公司

SHINY SPACE ENTERPRISE CO.,LTD.

服務專線: Tel: 886-2-22239090 代表號

Fax: 886-2-22237090

E-mail:sales@shinyspace.com

http://www.shinyspace.com

ISO 9001  
ISO14001



## PART NUMBER CODE

3J    14    F    472    M    L    0    2    N  
 1       2       3       4       5       6       7       8       9

### 1. Rated Voltage

Code	3D	3F	3G	3H	3J	3K	4A	4C
Rated Voltage	2K VDC	3K VDC	4K VDC	5K VDC	6K VDC	8K VDC	10K VDC	15K VDC

### 2. Body Diameter (mm)

Code	05	06	07	08	09	10	11	12	14	16	18	20
D max.	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	14.0	16.0	18.0	20.0

### 3. Temperature Characteristics

Code	B	R	E	F	Code	C (NPO)	SL
Cap. Change(%)	±10	±15	+22 -56	+22 -82	Temp. coeff. (ppm/°C)	0±60	+350~-1000

### 4. Capacitance

Code	Capacitance (pF)
010	1
1R5	1.5
100	10
101	100
102	1000
473	47000
104	100000
224	220000

### 5. Capacitance Tolerance

Code	Cap. Tol.
C	±0.25pF
D	±0.5pF
J	±5%
K	±10%
M	±20%
S	+50%~-20%
Z	+80%~-20%
P	+100%~-0%

### 6. Lead Shape Code

Code	Lead Configuration
K	INSIDE KINK
D	OUTSIDE KINK
Y	VERTICAL CRIMP
L	STRAIGHT

### 7. Lead Spacing Code (F)

Code	Dimension (mm)
1	12.5 ± 1.0
5	5.0 ± 1.0
6	6.35 ± 1.0
7	7.50 ± 1.0
0	10.0 ± 1.0

### 8. Lead Length Code (L)

Code	Dimension (mm)
2	25 Min
3	3.5 ± 1.0
5	5.0 ± 1.0
0	10.0 ± 1.0
T	TAPING BOX
R	TAPING REEL

### 9. Feed Hole Pitch

Code	Dimension (mm)
1	12.7
2	25.4
5	15
Nil	Bulk Type

### 10. Code : N RoHS Type

L Type (Straight)	Y Type (Vertical Crimp)
K Type (Inside Kink)	D Type (Outside Kink)

# High-Voltage Ceramic Capacitor NPO Serial (CLASS I / 2KV~15KVDC)

## General Specifications :

1. Capacitance( C ) : 3pF ~ 100pF measured at 25°C with 1±0.1KHz and 3Vrms max.
2. Quality Factor (Q) : 400+20\*Cr Min. (Cr≤30pF) at 25°C with 1±0.1KHz and 3Vrms max.  
1000 Min. (Cr>30pF) at 25°C with 1±0.1KHz and 3Vrms max.
3. Insulation Resistance (IR) : 10000MΩ Min. measured with DC500±50V within 60±5 sec of charging
4. Dielectric Strength : Apply DC Test Voltage W.V.(2~3KV is 200% , 5KV≥W.V.≥3KV is 175% ,  
W.V.>5KV is 150% ) for 1~5 sec (Charge/Discharge current≤50mA)
5. Temperature Characteristic (TC) : NPO (−25°C~85°C within 0±60ppm/°C)
6. Operating Temperature Range : −55°C~125°C
7. Coated with flame-retardant epoxy resin. (equivalent to UL94V-0 standards)
8. All capacitors are accord with RoHS standards.

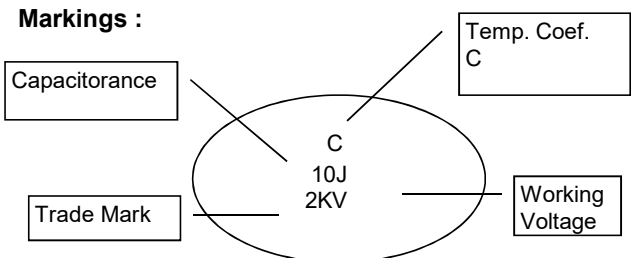
RATED VOLTAGE Edc : 2KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3D05C(030~100)J □□□□	3~10	5.5	5.0	C,D,J,K
3D07C120J □□□□	12	7.0	5.0	J,K
3D07C150J □□□□	15	7.0	5.0	J,K
3D07C180J □□□□	18	7.0	5.0	J,K
3D08C220J □□□□	22	8.0	5.0	J,K
3D08C270J □□□□	27	8.0	5.0	J,K
3D09C330J □□□□	33	9.0	5.0	J,K
3D10C390J □□□□	39	10.0	5.0	J,K
3D11C470J □□□□	47	11.0	5.0	J,K
3D12C560J □□□□	56	12.0	5.0	J,K
3D13C680J □□□□	68	13.0	5.0	J,K
3D15C820J □□□□	82	15.0	5.0	J,K
3D16C101J □□□□	100	16.0	5.0	J,K

RATED VOLTAGE Edc : 3KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3F05C(030~100)J □□□□	3~10	5.5	6.0	C,D,J,K
3F07C120J □□□□	12	7.5	6.0	J,K
3F07C150J □□□□	15	7.5	6.0	J,K
3F07C180J □□□□	18	7.5	6.0	J,K
3F08C220J □□□□	22	8.5	6.0	J,K
3F08C270J □□□□	27	8.5	6.0	J,K
3F09C330J □□□□	33	9.5	6.0	J,K
3F10C390J □□□□	39	10.5	6.0	J,K
3F11C470J □□□□	47	11.5	6.0	J,K
3F12C560J □□□□	56	12.5	6.0	J,K
3F13C680J □□□□	68	13.5	6.0	J,K
3F15C820J □□□□	82	15.5	6.0	J,K
3F16C101J □□□□	100	15.5	6.0	J,K

RATED VOLTAGE Edc : 6KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3J05C(030~100)J □□□□	3~10	7.5	8.0	C,D,J,K
3J07C120J □□□□	12	7.5	8.0	J,K
3J07C150J □□□□	15	7.5	8.0	J,K
3J08C180J □□□□	18	8.5	8.0	J,K
3J09C220J □□□□	22	9.5	8.0	J,K
3J10C270J □□□□	27	10.5	8.0	J,K
3J11C330J □□□□	33	11.5	8.0	J,K
3J12C390J □□□□	39	12.5	8.0	J,K
3J12C470J □□□□	47	12.5	8.0	J,K

RATED VOLTAGE Edc : 10KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
4A12C(030~100)J □□□□	3~10	12.5	8.0	C,D,J,K
4A14C120J □□□□	12	14.5	8.0	J,K
4A14C150J □□□□	15	14.5	8.0	J,K
4A14C180J □□□□	18	14.5	8.0	J,K
4A14C220J □□□□	22	14.5	8.0	J,K
4A14C270J □□□□	27	14.5	8.0	J,K
4A16C330J □□□□	33	16.5	8.0	J,K
4A18C390J □□□□	39	18.5	8.0	J,K
4A18C470J □□□□	47	18.5	8.0	J,K

RATED VOLTAGE Edc : 15KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
4C14C(030~100)J □□□□	3~10	14.5	8.0	C,D,J,K
4C18C120J □□□□	12	18.5	8.0	J,K
4C18C150J □□□□	15	18.5	8.0	J,K
4C18C180J □□□□	18	18.5	8.0	J,K
4C18C220J □□□□	22	18.5	8.0	J,K
4C18C270J □□□□	27	18.5	8.0	J,K
4C20C330J □□□□	33	20.5	8.0	J,K
4C22C390J □□□□	39	22.5	8.0	J,K
4C22C470J □□□□	47	22.5	8.0	J,K



# High-Voltage Ceramic Capacitor SL Serial (CLASS I / 2KV~10KVDC)

## General Specifications :

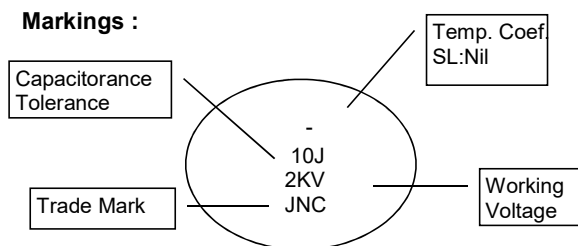
1. Capacitance ( C ) : 3pF ~ 470pF measured at 25°C with 1±0.1KHz and 3Vrms max.
2. Quality Factor ( Q ) : 400+20\*Cr Min. (Cr≤30pF) at 25°C with 1±0.1KHz and 3Vrms max.  
1000 Min. (Cr>30pF) at 25°C with 1±0.1KHz and 3Vrms max.
3. Insulation Resistance ( IR ) : 10000MΩ Min. measured with DC500±50V within 60±5 sec of charging
4. Dielectric Strength : Apply DC Test Voltage W.V.(2~3KV is 200% , 5KV ≥ W.V. ≥ 3KV is 175% ,  
W.V.>5KV is 150% ) for 1~5 sec (Charge/Discharge current ≤50mA)
5. Temperature Characteristic ( TC ) : SL ( -25°C~85°C within +350 to -1000ppm/°C)
6. Operating Temperature Range : -55°C~125°C
7. Coated with flame-retardant epoxy resin. (equivalent to UL94V-0 standards)
8. All capacitors are accord with RoHS standards.

RATED VOLTAGE Edc : 2KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3D05SL(030~100)J □□□□	3~10	5.5	5.0	C,D,J,K
3D05SL120J □□□□	12	5.5	5.0	J,K
3D05SL150J □□□□	15	5.5	5.0	J,K
3D05SL180J □□□□	18	5.5	5.0	J,K
3D05SL220J □□□□	22	5.5	5.0	J,K
3D06SL270J □□□□	27	6.0	5.0	J,K
3D06SL330J □□□□	33	6.0	5.0	J,K
3D06SL390J □□□□	39	6.0	5.0	J,K
3D07SL470J □□□□	47	7.0	5.0	J,K
3D07SL560J □□□□	56	7.0	5.0	J,K
3D08SL680J □□□□	68	8.0	5.0	J,K
3D08SL820J □□□□	82	8.0	5.0	J,K
3D09SL101J □□□□	100	9.0	5.0	J,K
3D10SL121J □□□□	120	10.0	5.0	J,K
3D10SL151J □□□□	150	10.0	5.0	J,K
3D11SL181J □□□□	180	11.0	5.0	J,K
3D12SL221J □□□□	220	12.0	5.0	J,K
3D14SL271J □□□□	270	14.0	5.0	J,K
3D15SL331J □□□□	330	15.0	5.0	J,K
3D16SL391J □□□□	390	16.0	5.0	J,K
3D17SL471J □□□□	470	17.0	5.0	J,K

RATED VOLTAGE Edc : 3KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3F05SL(030~100)J □□□□	3~10	5.5	6.0	C,D,J,K
3F05SL120J □□□□	12	5.5	6.0	J,K
3F05SL150J □□□□	15	5.5	6.0	J,K
3F05SL180J □□□□	18	5.5	6.0	J,K
3F05SL220J □□□□	22	5.5	6.0	J,K
3F06SL270J □□□□	27	6.5	6.0	J,K
3F06SL330J □□□□	33	6.5	6.0	J,K
3F06SL390J □□□□	39	6.5	6.0	J,K
3F07SL470J □□□□	47	7.5	6.0	J,K
3F07SL560J □□□□	56	7.5	6.0	J,K
3F08SL680J □□□□	68	8.5	6.0	J,K
3F08SL820J □□□□	82	8.5	6.0	J,K
3F09SL101J □□□□	100	9.5	6.0	J,K
3F10SL121J □□□□	120	10.5	6.0	J,K
3F10SL151J □□□□	150	10.5	6.0	J,K
3F11SL181J □□□□	180	11.5	6.0	J,K
3F12SL221J □□□□	220	12.5	6.0	J,K
3F14SL271J □□□□	270	14.5	6.0	J,K
3F15SL331J □□□□	330	15.5	6.0	J,K
3F16SL391J □□□□	390	16.5	6.0	J,K
3F17SL471J □□□□	470	17.5	6.0	J,K

RATED VOLTAGE Edc : 6KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3J05SL(030~100)J □□□□	3~10	5.5	7.0	C,D,J,K
3J05SL120J □□□□	12	5.5	7.0	J,K
3J05SL150J □□□□	15	5.5	7.0	J,K
3J06SL180J □□□□	18	6.5	7.0	J,K
3J07SL220J □□□□	22	7.5	7.0	J,K
3J08SL270J □□□□	27	8.5	7.0	J,K
3J08SL330J □□□□	33	8.5	7.0	J,K
3J09SL390J □□□□	39	9.5	7.0	J,K
3J09SL470J □□□□	47	9.5	7.0	J,K

RATED VOLTAGE Edc : 10KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
4A08SL(030~100)J □□□□	3~10	8.5	8.0	C,D,J,K
4A10SL120J □□□□	12	10.0	8.0	J,K
4A10SL150J □□□□	15	10.0	8.0	J,K
4A10SL180J □□□□	18	10.0	8.0	J,K
4A10SL220J □□□□	22	10.0	8.0	J,K
4A10SL270J □□□□	27	10.0	8.0	J,K
4A10SL330J □□□□	33	10.0	8.0	J,K
4A12SL390J □□□□	39	12.0	8.0	J,K
4A12SL470J □□□□	47	12.0	8.0	J,K



## High-Voltage Ceramic Capacitor B Serial (CLASS II / 2KV~10KVDC)

### General Specifications :

1. Capacitance ( C ) : 100pF ~ 4700pF measured at 25°C with 1±0.1KHz and 3Vrms max.
2. Dissipation Factor (DF) : 2.5% Max. at 25°C with 1±0.1KHz and 3Vrms max.
3. Insulation Resistance (IR) : 10000MΩ Min. measured with DC500±50V within 60±5 sec of charging
4. Dielectric Strength : Apply DC Test Voltage W.V.(2~3KV is 200% , 5KV ≥ W.V. ≥ 3KV is 175% , W.V. > 5KV is 150% ) for 1~5 sec (Charge/Discharge current ≤ 50mA)
5. Temperature Characteristic (TC) : B ( - 25°C ~ 85°C within ±10%)
6. Operating Temperature Range : - 25°C ~ 125°C
7. Coated with flame-retardant epoxy resin. (equivalent to UL94V-0 standards)
8. All capacitors are accord with RoHS standards.

RATED VOLTAGE Edc : 2KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3D06B101K □□□□	100	6.5	5.0	K,M
3D06B151K □□□□	150	6.5	5.0	K,M
3D06B221K □□□□	220	6.5	5.0	K,M
3D06B331K □□□□	330	6.5	5.0	K,M
3D07B471K □□□□	470	7.5	5.0	K,M
3D07B561K □□□□	560	7.5	5.0	K,M
3D07B681K □□□□	680	7.5	5.0	K,M
3D09B102K □□□□	1000	9.5	5.0	K,M
3D09B152K □□□□	1500	9.5	5.0	K,M
3D10B222K □□□□	2200	10.5	5.0	K,M
3D10B332K □□□□	3300	10.5	5.0	K,M
3D14B472K □□□□	4700	14.5	5.0	K,M

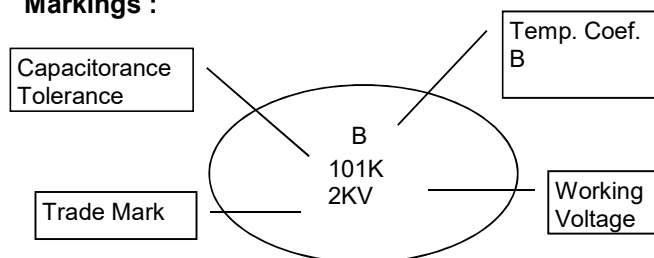
RATED VOLTAGE Edc : 3KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3F06B101K □□□□	100	6.5	6.5	K,M
3F06B151K □□□□	150	6.5	6.5	K,M
3F06B221K □□□□	220	6.5	6.5	K,M
3F06B331K □□□□	330	6.5	6.5	K,M
3F07B471K □□□□	470	7.5	6.5	K,M
3F07B561K □□□□	560	7.5	6.5	K,M
3F08B681K □□□□	680	8.5	6.5	K,M
3F09B102K □□□□	1000	9.5	6.5	K,M
3F11B152K □□□□	1500	11.5	6.5	K,M
3F12B222K □□□□	2200	12.5	6.5	K,M
3F15B332K □□□□	3300	15.5	6.5	K,M
3F19B472K □□□□	4700	19.5	6.5	K,M

RATED VOLTAGE Edc : 6KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3J09B101K □□□□	100	9.5	8.0	K,M
3J09B151K □□□□	150	9.5	8.0	K,M
3J09B221K □□□□	220	9.5	8.0	K,M
3J09B331K □□□□	330	9.5	8.0	K,M
3J10B471K □□□□	470	10.5	8.0	K,M
3J10B561K □□□□	560	10.5	8.0	K,M
3J11B681K □□□□	680	11.5	8.0	K,M
3J13B102K □□□□	1000	13.5	8.0	K,M
3J16B152K □□□□	1500	16.5	8.0	K,M

RATED VOLTAGE Edc : 8KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3K10B101K □□□□	100	10.0	9.0	K,M
3K10B151K □□□□	150	10.0	9.0	K,M
3K11B221K □□□□	220	11.0	9.0	K,M
3K11B331K □□□□	330	11.0	9.0	K,M
3K12B471K □□□□	470	12.5	9.0	K,M
3K13B561K □□□□	560	13.0	9.0	K,M
3K14B681K □□□□	680	14.0	9.0	K,M
3K16B102K □□□□	1000	16.0	9.0	K,M
3K19B152K □□□□	1500	19.0	9.0	K,M

RATED VOLTAGE Edc : 10KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
4A11B101K □□□□	100	11.0	10.0	K,M
4A11B151K □□□□	150	11.0	10.0	K,M
4A11B221K □□□□	220	11.0	10.0	K,M
4A11B331K □□□□	330	11.5	10.0	K,M
4A13B471K □□□□	470	13.0	10.0	K,M
4A13B561K □□□□	560	13.5	10.0	K,M
4A14B681K □□□□	680	14.5	10.0	K,M
4A17B102K □□□□	1000	17.0	10.0	K,M
4A21B152K □□□□	1500	21.0	10.0	K,M

### Markings :



# High-Voltage Ceramic Capacitor E Serial (CLASS II / 2KV~10KVDC)

## General Specifications :

1. Capacitance( C ) : 1000pF ~ 10000pF measured at 25°C with 1±0.1KHz and 3Vrms max.
2. Dissipation Factor (DF) : 2.5% Max. at 25°C with 1±0.1KHz and 3Vrms max.
3. Insulation Resistance (IR) : 10000MΩ Min. measured with DC500±50V within 60±5 sec of charging
4. Dielectric Strength : Apply DC Test Voltage W.V.(2~3KV is 200% , 5KV ≥ W.V. ≥ 3KV is 175% , W.V. > 5KV is 150% ) for 1~5 sec (Charge/Discharge current ≤ 50mA)
5. Temperature Characteristic (TC) : E ( -25°C ~ 85°C within +22/-56%)
6. Operating Temperature Range : -25°C ~ 125°C
7. Coated with flame-retardant epoxy resin. (equivalent to UL94V-0 standards)
8. All capacitors are accord with RoHS standards.

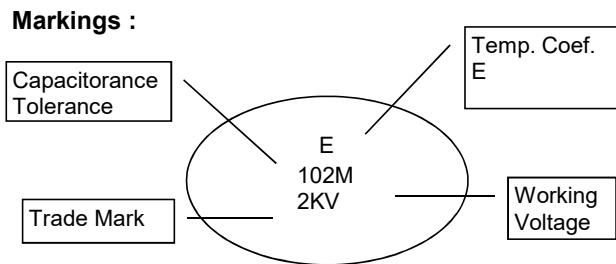
RATED VOLTAGE Edc : 2KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3D07E102M □□□□	1000	7.5	5.0	M,Z
3D08E152M □□□□	1500	8.5	5.0	M,Z
3D08E222M □□□□	2200	8.5	5.0	M,Z
3D10E332M □□□□	3300	10.5	5.0	M,Z
3D12E472M □□□□	4700	12.5	5.0	M,Z
3D13E562M □□□□	5600	13.5	5.0	M,Z
3D13E682M □□□□	6800	13.5	5.0	M,Z
3D14E103M □□□□	10000	14.5	5.0	M,Z

RATED VOLTAGE Edc : 3KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3D07E102M □□□□	1000	7.5	5.0	M,Z
3D08E152M □□□□	1500	8.5	5.0	M,Z
3D08E222M □□□□	2200	8.5	5.0	M,Z
3D10E332M □□□□	3300	10.5	5.0	M,Z
3D12E472M □□□□	4700	12.5	5.0	M,Z
3D13E562M □□□□	5600	13.5	5.0	M,Z
3D13E682M □□□□	6800	13.5	5.0	M,Z
3D14E103M □□□□	10000	14.5	5.0	M,Z

RATED VOLTAGE Edc : 6KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3J10E102M □□□□	1000	10.0	8.0	M,Z
3J11E152M □□□□	1500	11.5	8.0	M,Z
3J13E222M □□□□	2200	13.0	8.0	M,Z
3J15E332M □□□□	3300	15.5	8.0	M,Z
3J16E472M □□□□	4700	16.0	8.0	M,Z
3J19E562M □□□□	5600	19.0	8.0	M,Z
3J20E682M □□□□	6800	20.5	8.0	M,Z

RATED VOLTAGE Edc : 8KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3K11E102M □□□□	1000	11.5	9.0	M,Z
3K13E152M □□□□	1500	13.5	9.0	M,Z
3K15E222M □□□□	2200	15.5	9.0	M,Z
3K17E332M □□□□	3300	17.5	9.0	M,Z
3K21E472M □□□□	4700	21.0	9.0	M,Z

RATED VOLTAGE Edc : 10KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
4A12E102M □□□□	1000	12.5	10.0	M,Z
4A14E152M □□□□	1500	14.5	10.0	M,Z
4A17E222M □□□□	2200	17.0	10.0	M,Z
4A19E332M □□□□	3300	19.0	10.0	M,Z
4A22E472M □□□□	4700	22.5	10.0	M,Z



## High-Voltage Ceramic Capacitor F Serial (CLASS II / 2KV~10KVDC)

### General Specifications :

1. Capacitance ( C ) : 1000pF ~ 10000pF measured at 25°C with 1±0.1KHz and 3Vrms max.
2. Dissipation Factor (DF) : 2.5% Max. at 25°C with 1±0.1KHz and 3Vrms max.
3. Insulation Resistance (IR) : 10000MΩ Min. measured with DC500±50V within 60±5 sec of charging
4. Dielectric Strength : Apply DC Test Voltage W.V.(2~3KV is 200% , 5KV ≥ W.V. ≥ 3KV is 175% , W.V. > 5KV is 150% ) for 1~5 sec (Charge/Discharge current ≤ 50mA)
5. Temperature Characteristic (TC) : F ( - 25°C ~ 85°C within +22/-82%)
6. Operating Temperature Range : - 25°C ~ 125°C
7. Coated with flame-retardant epoxy resin. (equivalent to UL94V-0 standards)
8. All capacitors are accord with RoHS standards.

RATED VOLTAGE Edc : 2KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3D06F102M □□□□	1000	6.5	5.0	M,Z
3D07F152M □□□□	1500	7.5	5.0	M,Z
3D07F222M □□□□	2200	7.5	5.0	M,Z
3D08F332M □□□□	3300	8.5	5.0	M,Z
3D09F472M □□□□	4700	9.5	5.0	M,Z
3D10F562M □□□□	5600	10.5	5.0	M,Z
3D11F682M □□□□	6800	11.5	5.0	M,Z
3D12F103M □□□□	10000	12.5	5.0	M,Z

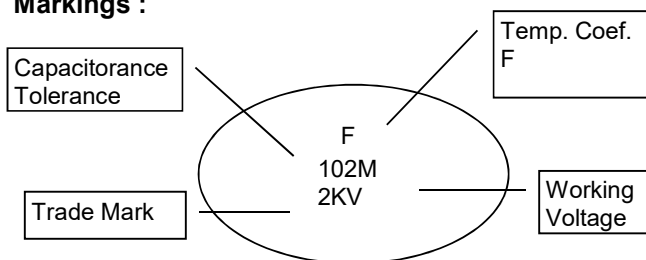
RATED VOLTAGE Edc : 3KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3F06F102M □□□□	1000	6.5	6.5	M,Z
3F07F152M □□□□	1500	7.5	6.5	M,Z
3F07F222M □□□□	2200	7.5	6.5	M,Z
3F09F332M □□□□	3300	9.5	6.5	M,Z
3F10F472M □□□□	4700	10.5	6.5	M,Z
3F12F562M □□□□	5600	12.5	6.5	M,Z
3F12F682M □□□□	6800	12.5	6.5	M,Z
3F14F103M □□□□	10000	14.5	6.5	M,Z

RATED VOLTAGE Edc : 6KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3J09F102M □□□□	1000	9.0	8.0	M,Z
3J10F152M □□□□	1500	10.0	8.0	M,Z
3J11F222M □□□□	2200	11.0	8.0	M,Z
3J13F332M □□□□	3300	13.5	8.0	M,Z
3J14F472M □□□□	4700	14.5	8.0	M,Z
3J16F562M □□□□	5600	16.0	8.0	M,Z
3J17F682M □□□□	6800	17.5	8.0	M,Z
3J21F103M □□□□	10000	21.0	8.0	M,Z

RATED VOLTAGE Edc : 8KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
3K10F102M □□□□	1000	10.0	9.0	M,Z
3K11F152M □□□□	1500	11.5	9.0	M,Z
3K13F222M □□□□	2200	13.0	9.0	M,Z
3K15F332M □□□□	3300	15.0	9.0	M,Z
3K17F472M □□□□	4700	17.0	9.0	M,Z
3K19F562M □□□□	5600	19.0	9.0	M,Z
3K20F682M □□□□	6800	20.0	9.0	M,Z

RATED VOLTAGE Edc : 10KV				
Part No.	Cap (pF)	Dia(mm) Max.	T(mm) Max.	Cap. Tol.
4A11E102M □□□□	1000	11.0	10.0	M,Z
4A12E152M □□□□	1500	12.0	10.0	M,Z
4A14E222M □□□□	2200	14.0	10.0	M,Z
4A16E332M □□□□	3300	16.0	10.0	M,Z
4A19E472M □□□□	4700	19.0	10.0	M,Z
4A20E562M □□□□	5600	20.0	10.0	M,Z
EA22E682M □□□□	6800	22.0	10.0	M,Z

### Markings :





**SPECIFICATION AND TEST METHOD**

ITEM		SPECIFICATION	TEST METHOD AND TEST CONDITION																
1. OPERATING TEMPERATURE RANGE		CLASS I: -55°C ~ +125°C CLASS II: -25°C ~ +85°C (B.E.F) -55°C ~ +125°C (X7R) CLASS III: -25°C ~ +85°C																	
2. CAPACITANCE		SATISFIES WITHIN SPECIFIED TOLERANCE	MEASURING FREQUENCY AND VOLTAGE : CLASS 1 : 1±0.1 MHz AND 3 Vrms max , at 25±2°C CLASS 2 : 1±0.1 MHz AND 3 Vrms max , at 25±2°C CLASS 3 : 1±0.1 MHz AND 0.1 Vrms max , at 25±2°C																
3. DF/Q		CLASS 1 : 30PF AND OVER : Q ≥ 1000 UNDER 30PF : Q ≥ 400+20C CLASS 2 : Char B , D and E : 2.5% max Char F : 5.0% max CLASS 3 : 16V ≤ 7% 25V , 50V ≤ 5%	SAME CONDITION AS THE CAPACITANCE																
4. INSULATION RESISTANCE (I.R.)		CLASS 1 : ≥ 10000MΩ CLASS 2 : C ≤ 0.02UF : 10000MΩ min 0.02UF < C < 0.1UF : 7500MΩ min CLASS 3 : 16V > 100MΩ 25V , 50V > 1000MΩ	THE I.R. SHALL BE MEASURED WITH THE RATED VOLTAGE ±3% WITHIN 60±5 SEC. OF CHARGING																
5. DIELECTRIC STRENGTH	BETWEEN LEAD WIRES	NO FAILURE	CLASS 1 , CLASS 2 : APPLY A DC VOLTAGES 250% OF THE RATED VOLTAGE (500V~2KV IS 200% , 3KV~5KV IS 175% , 6~15KV IS 150%) BETWEEN THE LEAD WIRES FOR 1 TO 5 SEC. CHARGE/ DISCHARGE CURRENT ≤ 50mA. CLASS 3 : THE CAPACITORS SHALL NOT BE DAMAGED WHEN DC VOLTAGES OF 200% OR 150% OF THE RATED VOLTAGE ARE APPLIED FOR 1~5 SEC. (CHARGE/DISCHARGE CURRENT ≤ 10mA.)																
	BODY INSULATION	NO FAILURE	WHEN THE CAPACITOR IS PLACED IN THE CONTAINER WITH METAL BALLS DIAMETER 1mm SO THAT EACH LEAD WIRE , SHORT-CIRCUITED IS KEPT APPROXIMATELY 2mm OFF THE BALLS AS SHOWN IN THE FIGURE , AND DC VOLTAGES OF 250% (1KV~6KV IS 130%) OF THE RATED VOLTAGE IS APPLIED FOR 1 TO 5 SEC BETWEEN CAPACITOR LEADS WIRES AND SMALL METALS.																
6. TEMPERATURE CHARACTERISTIC	TEMPERATURE COEFFICIENT	CLASS 1 : SATISFIES WITHIN SPECIFIED TOLERANCE (TABLE A) CLASS 2 : B : ±10%                      R : ±15% E : +22/-56%                F : +22/-82% CLASS 3 : B : ±10%                      D : +22/-33% E : +22/-56%                F : +22/-82%	THE CAPACITANCE MEASUREMENT SHALL BE MADE AT EACH STEP SPECIFIED IN TABLE. CAPACITANCE CHANGE FROM THE VALUE OF STEP 3 SHALL NOT EXCEED THE LIMIT SPECIFIED																
			<table border="1"> <thead> <tr> <th>STEP</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>CLASS 1/2/3</td> <td>25±2°C</td> <td>-25±2°C</td> <td>25±2°C</td> <td>85±2°C</td> <td>25±2°C</td> </tr> <tr> <td>R</td> <td>25±2°C</td> <td>-55±2°C</td> <td>25±2°C</td> <td>125±2°C</td> <td>25±2°C</td> </tr> </tbody> </table>	STEP	1	2	3	4	5	CLASS 1/2/3	25±2°C	-25±2°C	25±2°C	85±2°C	25±2°C	R	25±2°C	-55±2°C	25±2°C
STEP	1	2	3	4	5														
CLASS 1/2/3	25±2°C	-25±2°C	25±2°C	85±2°C	25±2°C														
R	25±2°C	-55±2°C	25±2°C	125±2°C	25±2°C														
7. VIBRATION RESISTANCE	APPEARANCE	NO MARKED DEFECT	THE CAPACITOR SHALL FIRMLY BE SOLDED TO THE SUPPORTING TERMINAL AND VIBRATION WHICH IS 10 TO 55 HZ IN THE VIBRATION FREQUENCY RANGE 1.5 MM IN TOTAL AMPLITUED AND ABOUT 1mm IN THE RATE OF VIBRATION CHANGE FROM 10HZ TO 55HZ AND BACK TO 10HZ IS APPLIED FOR A TOTAL OF 6 HOURS : 2 HOURS EACH IN THREE MUTUALLY PERPENDICULAR DIRECTIONS.																
	CAPACITANCE	SATISFIES WITHIN SPECIFIED TOLERANCE																	
	Q/D.F.	SATISFIES WITHIN INITIAL																	

**SPECIFICATION AND TEST METHOD**

ITEM		SPECIFICATION	TEST METHOD AND TEST CONDITION
8. SOLDERING EFFECT	APPEARANCE	NO MARKED DEFECT	THE LEAD WIRE SHALL BE IMMERSERD INTO THE MELTED SOLDER OF 350±10℃ (BODY DIAMETER 5.0mm Max 270±5℃) UP TO ABOUT 2.0 TO 2.5mm FROM THE MAIN BODY FOR 3+1/-0 SEC. (BODY DIAMETER 5.0mm max 5±0.5 SEC) AND THE SPECIFIED ITEMS SHALL BE MEASURED AFTER LEAVING FOR 4 TO 24 HOURS.
	CAPACITANCE CHANGE	CLASS 1 : WITHIN ±2.5% OR ±0.25PF WHICHEVER IS GRATER CLASS 2 , 3 : B : ±5%                      R: ±10% E : ±15%                     F : ±20%	
	DIELECTRIC STRENGTH (BETWEEN LEAD WIRES)	NO FAILURE	
9. HUMIDITY (UNDER STEADY STATE)	APPEARANCE	NO MARKED DEFECT	SET THE CAPACITOR FOR 500+24/-0 HOURS AT 40±2℃ , IN 90 TO 95% RELATIVE HUMIDITY AFTER TREATMENT SET THE CAPACITOR FOR 1 TO 2 HOURS AT ROOM TEMPERATURE , THE SPECIFIED ITEMS CAN BE MEASURED.
	CAPACITANCE CHANGE	CLASS 1 : WITHIN ±5% OR ±0.5PF WHICHEVER IS GREATER CLASS 2 : B : ±5%                      R: ±10% E : ±15%                     F : ±20% CLASS 3 : B : ±10%                     D: ±15% E : ±20%                     F : ±30%	
	Q/D.F.	CLASS 1 : 30PF AND OVER : Q ≥ 350 10PF TO 30PF : Q ≥ 275+5/2C UNDER 10PF : Q ≥ 200+10C CLASS 2 : Char B , R and E : 5% max Char F : 7.5% max CLASS 3 : 16V < 10% 25V , 50V < 7.5%	
	I.R.	CLASS 1 , 2 : ≥ 10000MΩ CLASS 3 : 16V > 50MΩ 25V , 50V > 500MΩ	
	DIELECTRIC STRENGTH (BETWEEN LEAD WIRES)	NO FAILURE	
10. HUMIDITY LOADING	APPEARANCE	NO MARKED DEFECT	APPLY RATED VOLTAGE FOR 500+24/-0 HOURS AT 40±2℃ IN 90 TO 95% RH (CHARGE/DISCHARGE CURRENT ≤ 50Ma. AFTER TREATMENT , SET THE CAPACITOR FOR 1 TO 2 HOURS AT ROOM TEMPERATURE , THE SPECIFIED THEN CAN BE MEASURED.
	CAPACITANCE CHANGE	CLASS 1 : WITHIN ±7.5% OR ±0.75PF WHICHEVER IS GREATER CLASS 2 , 3 : B : ±10%                     R: ±15% E : ±20%                     F : ±30%	
	Q/D.F.	CLASS 1 : 30PF AND OVER : Q ≥ 200 UNDER 30PF : Q ≥ 100+10C CLASS 2 : Char B , R and E : 5% max Char F : 7.5% max CLASS 3 : 16V < 10% 25V , 50V < 7.5%	
	I.R.	CLASS 1 , 2 : ≥ 500MΩ CLASS 3 : 16V > 25MΩ 25V , 50V > 250MΩ	
	DIELECTRIC STRENGTH (BETWEEN LEAD WIRES)	NO FAILURE	

**SPECIFICATION AND TEST METHOD**

ITEM		SPECIFICATION	TEST METHOD AND TEST CONDITION
11. LIFE	APPEARANCE	NO MARKED DEFECT	APPLY DC VOLTAGE OF 200% (1KV~6KV IS 150%) OF THE RATED VOLTAGE FOR 1000+48/-0 HOURS AT 85±2°C. (CHARGE/ DISCHARGE CURRENT ≤50mA. AFTER TREATMENT, SET THE CAPACITOR FOR 1 TO 2 HOURS AT ROOM TEMPERATURE, THE SPECIFIED THEN MEASURED THE SPECIFIED ITEMS.
	CAPACITANCE CHANGE	CLASS 1 : WITHIN ±3% OR ±0.3PF WHICHEVER IS GREATER CLASS 2, 3 : B : ±10%            R: ±15% E : ±20%            F : ±30%	
	Q/D.F.	CLASS 1 : 30PF AND OVER : Q ≥ 350 10PF TO 30PF : Q ≥ 275+5/2C UNDER 10PF : Q ≥ 200+10C CLASS 2 : Char B, R and E : 5% max Char F : 7.5% max CLASS 3 : 16V < 10% 25V, 50V < 7.5%	
	I.R.	CLASS 1, 2 : ≥ 10000MΩ CLASS 3 : 16V ≥ 50MΩ 25V, 50V ≥ 500MΩ	
	DIELECTRIC STRENGTH (BETWEEN LEAD WIRES)	NO FAILURE	
12. STRENGTH OF LEAD	PULL	LEAD WIRE SHALL NOT CUT OFF CAPACITOR SHALL NOT BE BROKEN	AS A FIGURE FIX THE BODY OF CAPACITOR, APPLY A TENSILE WEIGHT GRADUALLY TO EACH LEAD IN THE RADIAL DIRECTION OF CAPACITOR UP TO 1.0Kgf, (LEAD DIAMETER 0.5mm Max. 0.5Kgf) AND KEEP IT FOR 1 TO 5 SEC.
	BENDING		EACH LEAD WIRE SHALL BE SUBJECTED TO 0.5Kgf (LEAD DIAMETER 0.5 Max 0.25Kgf) WEIGHT AND THEN A 90° BEND, AT THE POINT OF EGRESS, IN ONE DIRECTION, RETURN TO ORIGINAL POSITION, AND THEN A 90° BEND IN THE OPPOSITE DIRECTION AT THE RATE OF ONE BEND IN 5 SECONDS.
13. SOLDER ABILITY OF LEADS		LEAD WIRE SHALL BE SOLDERED WITH UNIFORMLY COATED ON THE AXIAL DIRECTION OVER 95% OF THE CIRCUMFERENTIAL DIRECTION	THE LEAD WIRE OF A CAPACITOR SHALL BE DIPPED INTO A 25% METHANOL SOLUTION OF ROSIN AND THEN INTO MOLTEN SOLDER OF 240±10°C FOR 2±0.5 sec. IN BOTH CASES THE DEPTH OF DIPPED IS UP TO ABOUT 2 TO 2.5mm FROM THE ROOT OF LEAD WIRES.



**生宇企業股份有限公司**  
**SHINY SPACE ENTERPRISE CO., LTD.**

23585 新北市中和區錦和路 126 號

No.126, Jinhe Rd., Zhonghe Dist.,

New Taipei City 23585, Taiwan

Phone: 886-2-22239090

Fax: 886-2-22237090

Email: sales@shinyspace.com

Website: <http://www.shinyspace.com>