



# Film Capacitors

# XG-E

For Interference Suppression and Across-The-Line, Class X1



## DESCRIPTION

XG-E type is self-healing flat style capacitor, which is wound with polypropylene film dielectric, flame retardant plastic case and epoxy resin end seal. Following styles belong to this type :

- 1) XG-ES : Tinned Copper Clad Steel Wire Radial Leads
- 2) XG-EP : UL 1015 or UL 1007 AWG#20 ~ 22 Solid PVC Insulation Wire Radial Leads

This type especially is designed for radio interference suppression and across-the line capacitors :

- 1) Business Machines Appliances, such as : Typewriters, Adding Machines, Computer Displays and Monitors
- 2) Household Appliances, such as : Mixers, Fans, Coffee Grinders, Audio and TV Circuits
- 3) Thyristor and Triac Appliances, such as : Dimmers

## DIAGRAM OF DIMENSIONS

W	13.0	18.0	26.5	31.5	37.0
S	10.0	15.0	22.5	27.5	32.5
ød	0.6	0.8	0.8	0.8	0.8

W	PVC WIRE
18	AWG22#
≥ 26.5	AWG20#

## ELECTRICAL CHARACTERISTICS

Climate Category : In Accordance with DIN 40040 GPF

- (a) G = Minimum Limit Temperature : -40°C
- (b) P = Maximum Limit Temperature : +85°C
- (c) F = Humidity Category : Average Relative Humidity ≤ 75%, 95% for 30 Days Per Year, Continuously; 85% for the Remaining Days, Occasionally

Rated Voltage : 250 V.AC, 50 ~ 60 Hz

Capacitance Range : 0.0047 ~ 1.0μF

Capacitance Tolerance : J (±5%), K (±10%), M (±20%)

Withstand Voltage:

- (a) Between Terminals : 1500 V.AC, 60 Hz or 2200 V.DC 1Sec.
- (b) Between Terminals and Case : 2000 V.AC, 60 Hz 60 Sec.

Dissipation Factor :

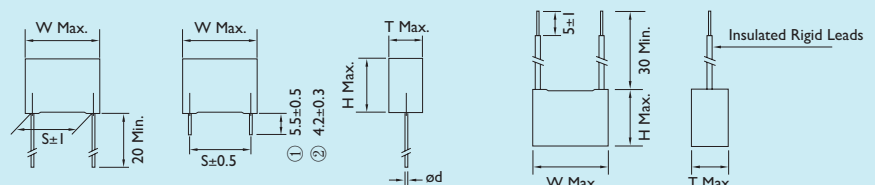
- (a) ≤ 0.1% at 1 KHz and 20°C
- (b) ≤ 0.3% at 10 KHz and 20°C

Insulation Resistance :

- (a) Between Terminals : ≥ 3 × 10<sup>4</sup> MΩ for C ≤ 0.33μF  
≥ 1 × 10<sup>4</sup> MΩ•μF for C > 0.33μF
- (b) Between Terminals and Case : ≥ 3 × 10<sup>4</sup> MΩ

Measured at 100 ± 15 V.DC, 60 Sec. and 20°C

Dimensions : mm



## APPROVAL DATA

COUNTRY	SPECIFICATIONS	FILE AND REF. NO.
UL = USA	UL 1414	E 81959 (N)
SEMKO = Sweden	SS 4430414	9108286
CSA = Canada	Class 2221 01	LR 57384-8
SEV = Switzerland	EN 132400 : 1994	97, 1 10043, 04

## SURGE VOLTAGE TEST

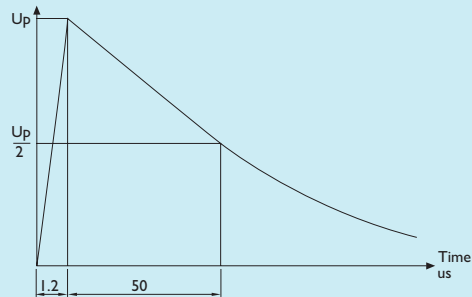
According to VDE 0565-1 and IEC 384-14 :

$$U_p = 4KV \text{ for } C \leq 0.33\mu F$$

$$U_p = 4KV [e^{(0.33-c)}] \text{ for } C > 0.33\mu F$$

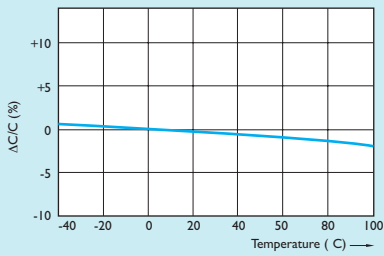
According to SEV TT502

$$U_p = 3KV$$

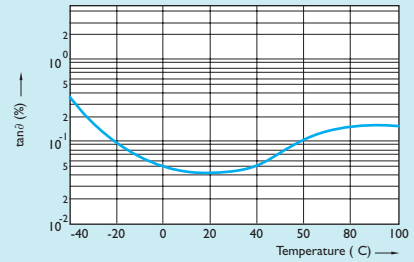


## TEMPERATURE AND FREQUENCY CHARACTERISTICS

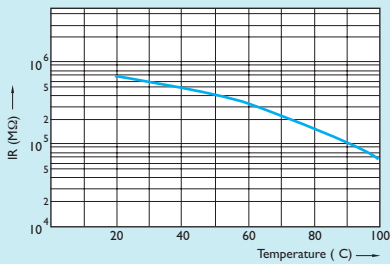
Capacitance Change vs. Temperature (Typical Values)



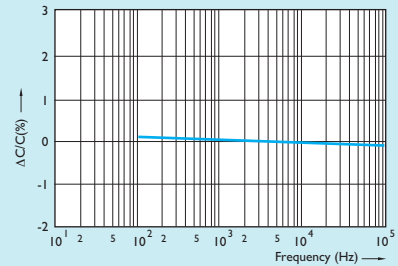
Dissipation Factor vs. Temperature at 10 KHz (Typical Values)



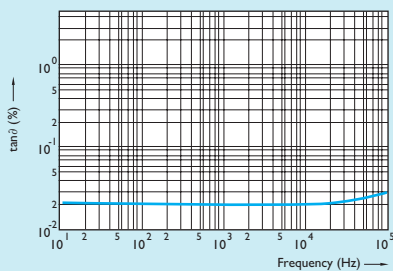
Insulation Resistance vs. Temperature (Typical Values)



Capacitance Change vs. Frequency (Typical Values)



Dissipation Factor vs. Temperature (Typical Values)





## CASE SIZE OF STANDARD PRODUCTS

Dimensions : mm

CAPACITANCE ( $\mu$ F)	RATED VOLTAGE (V.AC)	W	H	T
0.0047	250	13.0	11.0	5.0
0.0056		13.0	11.0	5.0
0.0068		13.0	11.0	5.0
0.0082		13.0	11.0	5.0
0.01		13.0	11.0	5.0
0.012		13.0	11.0	5.0
0.015		13.0	11.0	5.0
0.018		13.0	11.0	5.0
0.022		13.0	11.0	5.0
0.027		13.0	11.0	5.0
0.027		13.0	12.0	6.0
0.033 @		13.0	11.0	5.0
0.033		13.0	12.0	6.0
0.039		18.0	11.0	5.0
0.047		18.0	11.0	5.0
0.056		18.0	11.0	5.0
0.056		18.0	12.0	6.0
0.068		18.0	12.0	6.0
0.082		18.0	12.0	6.0
0.082		18.0	13.5	6.0
0.1 @		18.0	12.0	6.0
0.1 #		18.0	13.5	6.0
0.1		18.0	13.5	7.5
0.1		26.5	15.0	6.0
0.12 *		18.0	13.5	6.0
0.12		18.0	13.5	7.5
0.12		26.5	15.0	6.0
0.15 *		18.0	13.5	7.5
0.15		18.0	14.5	8.5
0.15		26.5	15.0	6.0
0.15		26.5	16.0	7.0
0.18		18.0	14.5	8.5
0.18	26.5	15.0	6.0	

## CASE SIZE OF STANDARD PRODUCTS

Dimensions : mm

CAPACITANCE ( $\mu$ F)	RATED VOLTAGE (V.AC)	W	H	T
0.18	250	26.5	16.0	7.0
0.22		18.0	16.5	8.5
0.22 @		26.5	15.0	6.0
0.22		26.5	16.0	7.0
0.27		26.5	16.0	7.0
0.27		26.5	17.0	8.5
0.33		26.5	17.0	8.5
0.33		31.5	17.0	9.0
0.39		26.5	17.0	8.5
0.39		26.5	19.0	10.0
0.39		31.5	17.0	9.0
0.47 *		26.5	17.5	9.5
0.47		26.5	19.0	10.0
0.47 *		31.5	17.0	9.0
0.47		31.5	18.5	10.5
0.56 *		26.5	19.0	10.0
0.56		26.5	20.0	10.5
0.56		31.5	20.0	11.0
0.60		31.5	18.5	10.5
0.60		31.5	20.0	11.0
0.68 @		31.5	18.5	10.5
0.68		31.5	20.0	11.0
0.82 @		31.5	20.0	11.0
0.82		31.5	22.5	13.0
1.0		31.5	22.5	13.0
1.0		31.5	25.0	14.0
1.0		37.0	24.0	13.5

Dim. Code # Only Apply for XG-ES

Dim. Code \* Only Apply for XG-ES, Toc. : " K ", " M "

Dim. Code @ Only Apply for XG-ES, Toc. : " M "