

## **SERIE MP3 POLYPROPYLENE FILM CAPACITORS**

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1.- **Application** : Used in electronic lighting (i. e. car headlamp and ballast)

### **2.- Construction:**

- 1.Polypropylene film & Double sided metallized polyester film.
- 2.Metal spray : Special solder.
- 3.Lead wire : Tinned clad copper wire.
- 4.Inner coating : Epoxy resin.
- 5.Outer coating : Plastic case (UL-94V-0 Standard)

### **3. Electrical characteristics**

A.- . Rated Voltage ( $V_R$ ): 300VAC ( 800VDC), 400VAC (1000VDC), 500VAC (1200VDC), 700VAC (1600VDC) , 900VAC (2000VDC).

B.- Category voltage ( $V_c$ ): 1.Up to 85°C,  $V_c = V_R$ (DC)  
2.Up to 105 C  $V_c = V_R$  (AC)

For temperature between +85°C and +105°C a decreasing factor of 1.25% per degree C on the nominal voltage  $V_R$ (DC) has to be applied.

C.- Operating temperature range: - 40 C to +105 C.

## MP3

D.- Dissipation factor (DF) :

$\tan\delta \times 10^{-4}$  at  $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$

KHZ	$C < 0.01\mu\text{F}$	$0.01 \leq C \leq 0.1\mu\text{F}$
1	$\leq 5$	$\leq 5$
10	$\leq 6$	$\leq 8$
100	$\leq 10$	$\leq 10$

E.- Insulation resistance: Under a temperature of  $25^{\circ} \pm 5^{\circ}\text{C}$  and during 1 minute a 100Vdc, the capacitor has a performance of  $\geq 50000\text{M}\Omega$

F.- Test voltage between termination:  $1.6 \times V_R$  applied for 2 sec , at  $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$

G.- MAX. Pulse rise time (dv/dt)

$V_R$ (ac)	Lead Spacing	
	15m/m	22.5m/m
300	3000 V/ $\mu\text{s}$	1500 V/ $\mu\text{s}$
400	3400 V/ $\mu\text{s}$	2200 V/ $\mu\text{s}$
500	5000 V/ $\mu\text{s}$	3000 V/ $\mu\text{s}$
700	9500 V/ $\mu\text{s}$	5000 V/ $\mu\text{s}$
900	-----	10000 V/ $\mu\text{s}$

H.- Electrical endurance : (Testing method IEC 60384-17)  
 125% of rated voltage (AC 60HZ) shall be applied to the capacitor at a temperature of  $105 \pm 2^{\circ}\text{C}$  for 2000 hours. And then the capacitor shall be subjected to standard atmospheric conditions for 1 to 2 hours, after which measurement shall be made.

Performance:

Capacitance change  $\Delta C / C$ :  $\leq \pm 3\%$

DF change  $\Delta \tan\delta$  :  $\leq 0.1\%$  at 1KHZ

Insulation resistance  $\geq 50\%$  of limit value.



