# MLC99P0M

## Dry,rectangular,thermo-plastic box,metallized polyester AC film capacitors for electrical appliances

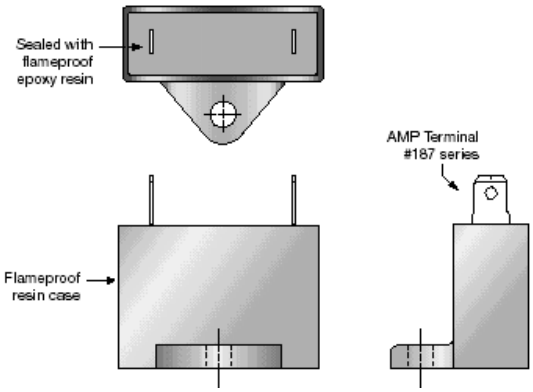
### [1] Features

1 Cost efficient
2 Small and compact
3 Self-healing property avoiding short circuit.
4 Dry technology no leakage risk.
5 The plastic case eliminates any risk of dents or corrosion,no need for grounding.

### [2]Typical applications

Particularly suitable requiring reduced dimensions;
1 Single phase AC induction(Small fractional horse power,Fan,refrigerator fan,)motor run.
2 General 50/60Hz application,but not be used at higher frequency or in applications higher frequency harmonics are present.

### [3]Construction




1 **Winding :**non-inductively wound self-healing metallized polyester film.
2 **Style :**The winding is sealed in a rectangular thermo-plastic box with epoxy fill.
The box and the epoxy are flame proof,self-extinguishing(UL 94V).
3 **Terminal :**AMP187,AMP250,insulated or un-insulated lead wire available with or without mounting tab.
AMP187 terminal style A with mounting tab standard.

### [4]Specifications

1 **General data**

| | |
|---|---|
| **Applicable standard** | IEC60252,JIS C4908 |
| **Rated voltage(URAC)** | 220VAC,250VAC,330VAC,400VAC |
| **Capacitance range** | 1.5uF~30.0uF |
| **Capacitance tolerance** | ＋10~ -5%(U),±10%(K),±5%(J) |
| **Max. permissible temperature** | +70℃ |
| **Min. ambient temperature** | -25℃ |
| **Life expectancy** | 25D(25,000h) |

2 **Electrical data**

| | | | |
|---|---|---|---|
| **AC withstand voltage** | between | terminals | 1.75URAC for 10sec. |
| | | the collected terminals and case | 2,000 VAC for 60sec. |
| **Dissipation factor(DF)** | 0.35% max. at 20℃,50/60hz,URAC | | |
| **Rated frequency** | 50/60hz. | | |
| **Insulation resistance** | ≥2,000MΩ at 20℃,between the collected terminals and the case. 500VDC,1 min. | | |
| **Max. permissible voltage** | 1.1 URAC | | |
| **Max. permissible current** | 1.3 rated current | | |
| **Max. permissible VA** | 1.35 rated VA | | |

*rated current(A)= $2\pi f(hz)C(uF)U_{RAC}(VAC) \times 10^{-6}$
*rated VA(Var)=$2\pi f(hz)C(uF)U_{RAC}^2(VAC) \times 10^{-6}$

3 **Environmental test data**

| Item | Test conditions | Test criteria |
|---|---|---|
| **Damp heat test** | 40±3℃,R.H.:90~95% for 500±12 hours | ①Rins:≥0.5 x specified value in 2Electrical data.<br>②Increase in DF at 75±3℃:≤0.05%<br>③ $\frac{\Delta C}{C}$ :≤±5% of initial value |
| **Endurance test** | 70±3℃ applying 1.25URAC for 800 hours | ①Increase in DF at 75±3℃:≤0.05%<br>② $\frac{\Delta C}{C}$ :≤±5% of initial value |

### [5]Marking

URAC,Capacitance & tolerance are marked on the capacitor.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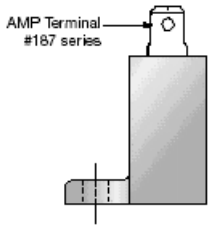
## [6]Ordering/part number information

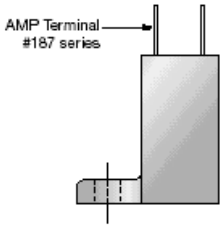
| MLC | 99 | P0 | M | 25 | 455 | K | A | - | - | X |
|---|---|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |

(1)AC capacitor for electrical appliance
(2)Shape of capacitor(rectangular,plastic box)
(3)Safety class:without PSI
(4)Operating temperature:-25℃~+70℃
(5)URAC:expressed in tens of volts of AC,for example 25=250VAC
(6)Capacitance in pF:first 2 figures indicating the pF,last figure indicating numbers of zeros to be added to the pF.
The letter D indicates ½uF for capacitors 10.5uF and above.
For example: 4,500,000pF= 4,500nF= 4.5uF=455
12,500,000pF=12,500nF=12.5uF=12D
(7)Capacitance tolerance:±10%
(8)Terminal style:A
(9)internal use
(10)internal use
(11)Without mounting tab:X
No code for with mounting tab

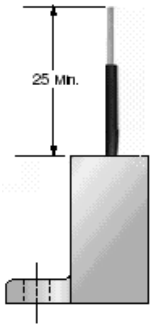
【Terminal style】



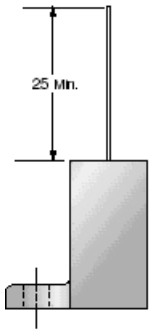

〈A:Single fast-on〉




〈B:Dual fast-on〉

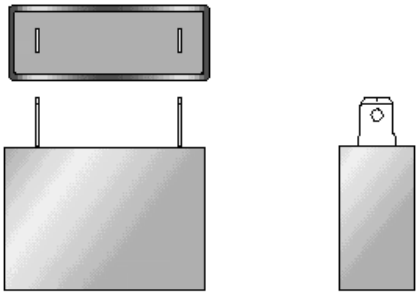



〈C:Insulated lead wire〉

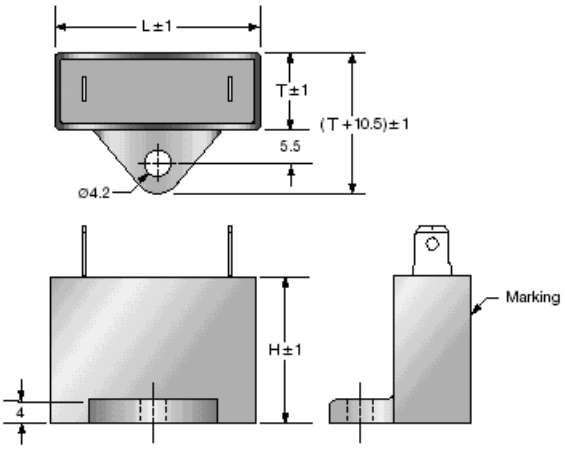



〈D:lead wire〉

【Without mounting tab】:add code X



## [7]Dimensions in mm





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**URAC:220Vrms(50/60Hz)**

| uF | L | H | T |
|---|---|---|---|
| **1.5** | 33.0 | 23.0 | 12.5 |
| **2.0** | 33.0 | 23.0 | 12.5 |
| **2.5** | 33.0 | 23.0 | 12.5 |
| **3.0** | 33.0 | 23.0 | 12.5 |
| **3.5** | 33.0 | 28.0 | 16.0 |
| **4.0** | 33.0 | 28.0 | 16.0 |
| **4.5** | 33.0 | 28.0 | 16.0 |
| **5.0** | 33.0 | 28.0 | 16.0 |
| **6.0** | 38.0 | 29.0 | 16.5 |
| **7.0** | 38.0 | 29.0 | 16.5 |
| **8.0** | 38.0 | 31.0 | 17.5 |
| **9.0** | 38.0 | 33.0 | 19.5 |
| **10.0** | 38.0 | 33.0 | 19.5 |
| **12.0** | 48.0 | 31.5 | 19.5 |
| **14.0** | 48.0 | 31.5 | 19.5 |
| **16.0** | 58.0 | 31.5 | 19.5 |
| **18.0** | 58.0 | 31.5 | 19.5 |
| **20.0** | 58.0 | 34.0 | 22.0 |
| **22.0** | 58.0 | 34.0 | 22.0 |
| **25.0** | 58.0 | 36.5 | 24.5 |
| **30.0** | 58.0 | 40.0 | 28.0 |

**URAC:250Vrms(50/60Hz)**

| uF | L | H | T |
|---|---|---|---|
| **1.5** | 33.0 | 23.0 | 12.5 |
| **2.0** | 33.0 | 23.0 | 12.5 |
| **2.5** | 33.0 | 23.0 | 12.5 |
| **3.0** | 33.0 | 28.0 | 16.0 |
| **3.5** | 33.0 | 28.0 | 16.0 |
| **4.0** | 33.0 | 28.0 | 16.0 |
| **4.5** | 33.0 | 28.0 | 16.0 |
| **5.0** | 38.0 | 29.0 | 16.5 |
| **6.0** | 38.0 | 31.0 | 17.5 |
| **7.0** | 38.0 | 33.0 | 19.5 |
| **8.0** | 48.0 | 31.5 | 19.5 |
| **9.0** | 48.0 | 31.5 | 19.5 |
| **10.0** | 48.0 | 31.5 | 19.5 |
| **12.0** | 58.0 | 31.5 | 19.5 |
| **14.0** | 58.0 | 34.0 | 22.0 |
| **16.0** | 58.0 | 34.0 | 22.0 |
| **18.0** | 58.0 | 36.5 | 24.5 |
| **20.0** | 58.0 | 36.5 | 24.5 |
| **22.0** | 58.0 | 40.0 | 28.0 |
| **25.0** | 58.0 | 40.0 | 28.0 |
| **30.0** | 58.0 | 43.0 | 31.0 |

**URAC:330Vrms(50/60Hz)**

| uF | L | H | T |
|---|---|---|---|
| **1.5** | 33.0 | 23.0 | 12.5 |
| **2.0** | 33.0 | 28.0 | 16.0 |
| **2.5** | 33.0 | 28.0 | 16.0 |
| **3.0** | 38.0 | 29.0 | 16.5 |
| **3.5** | 38.0 | 29.0 | 16.5 |
| **4.0** | 38.0 | 29.0 | 16.5 |
| **4.5** | 38.0 | 31.0 | 17.5 |
| **5.0** | 38.0 | 33.0 | 19.5 |
| **6.0** | 48.0 | 31.5 | 19.5 |
| **7.0** | 48.0 | 31.5 | 19.5 |
| **8.0** | 58.0 | 31.5 | 19.5 |
| **9.0** | 58.0 | 31.5 | 19.5 |
| **10.0** | 58.0 | 34.0 | 22.0 |
| **12.0** | 58.0 | 36.5 | 24.5 |
| **14.0** | 58.0 | 40.0 | 28.0 |
| **16.0** | 58.0 | 40.0 | 28.0 |
| **18.0** | 58.0 | 40.0 | 28.0 |
| **20.0** | 58.0 | 43.0 | 31.0 |

**URAC:400Vrms(50/60Hz)**

| uF | L | H | T |
|---|---|---|---|
| **1.0** | 33.0 | 23.0 | 12.5 |
| **1.5** | 33.0 | 28.0 | 16.0 |
| **2.0** | 38.0 | 29.0 | 16.5 |
| **2.5** | 38.0 | 31.0 | 17.5 |
| **3.0** | 38.0 | 33.0 | 19.5 |
| **3.5** | 48.0 | 31.5 | 19.5 |
| **4.0** | 48.0 | 31.5 | 19.5 |
| **4.5** | 58.0 | 31.5 | 19.5 |
| **5.0** | 58.0 | 34.0 | 22.0 |
| **6.0** | 58.0 | 36.5 | 24.5 |
| **7.0** | 58.0 | 40.0 | 28.0 |
| **8.0** | 58.0 | 40.0 | 28.0 |
| **10.0** | 58.0 | 43.0 | 31.0 |
| **12.0** | 58.0 | 43.0 | 31.0 |
| **14.0** | 58.0 | 45.0 | 33.5 |

*For further details,refer to General technical information of AC film capacitors for electrical appliances


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