## Features:

Double sides metallized polypropylene film
Low loss and small inherent temperature rise
Negative temperature coefficient of capacitance
Excellent active and passive flame resistant abilities

## Typical applications

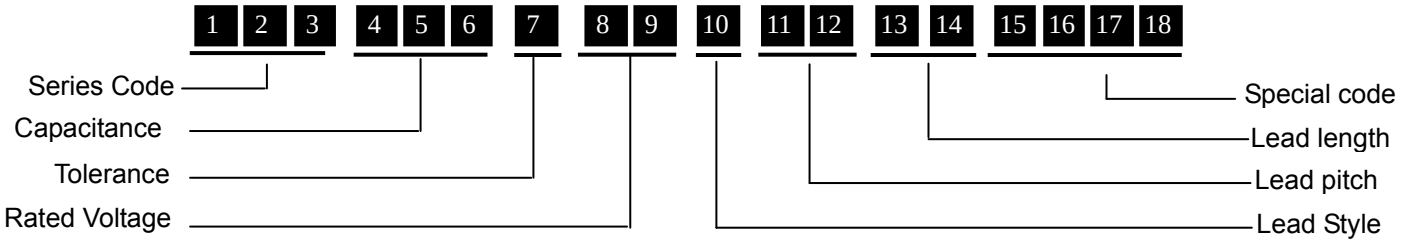
Widely used in high voltage ,high frequency and pulse circuit
Deflection circuits in TV-sets(s-correction and fly-back turning) and monitors
Lamp capacitor for electronic ballast and compact lamps
SNUBBER and SCR commutating circuits

## Specifications

| | | | | | |
|---|---|---|---|---|---|
| Reference Standard | GB/T 10190 ( IEC 60384-16) | | | | |
| Climatic Category | 40/105/56 | | | | |
| Rated Temperature | 85℃ for $V_R$(DC) | | | | |
| Operating Temperature Range | -40°C ～ +110°C<br>(+85℃ to110℃: decreasing Factor 1.25% per℃ for $V_R$(DC) | | | | |
| Rated Voltage | 1000VDC, 1200VDC, 1600VDC, 2000VDC | | | | |
| Capacitance Range | 0.0033μF ~ 1.0 μF | | | | |
| Capacitance Tolerance | ±2%(G). ±3%(H) ±5%(J) ±10%(K) ±20%(M) | | | | |
| Voltage Proof | 1.6 $V_R$ (5s) | | | | |
| Dissipation Factor | ≦0.1% (1KHz, 20℃) | | | | |
| If the working voltage(V) is lower than the rated voltage($V_R$), the capacitor can be worked at a higher dv/dt. In this case, the maximum allowed dv/dt is obtain by multiplying the right value with $V_R$/V. | $V_R$(V) | dv/dt | | | |
| | | P=10.0 | P=15.0 | P=22.5 | P=27.5 |
| | 1000 | 3000 | 2500 | 1500 | 900 |
| | 1200 | - | 3300 | 2100 | 1000 |
| | 1600 | - | 6000 | 3000 | 2000 |
| | 2000 | - | 9500 | 3500 | 2200 |

## TYPE：MPL SPECIFICATION

## ELECTRICAL CHARACTERISTICS




| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Digit 1~3 | Type | PEI | PEN | MEF | MEB | MET | MEA | MEM | MPX | EPI | MFT | MPM | MPC | MPL |
| | | PPI | PPN | MPP | MPB | MPT | MPF | MPH | MPA | PPS | MFP | MPN | MPS | MPK |
| | | MFA | MFB | MPQ | MPR | MET | MES | MFC | | | | | | |
| Digit 4~6 | 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 7 | Code | F | | G | | H | | J | | K | | M | | |
| | Tolerance | ±1% | | ±2% | | ±3% | | ±5% | | ±10% | | ±20% | | |

| Digit 8~9 | | 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 | | | | | | | | | |
| | Letter and then number indicate AC,but number and then Letter indicate DC. EX.2A=100VDC A2=100VAC | | | | | | | | | | | | | |

| Digit 10 | Code | A | B | C | D | X |
|---|---|---|---|---|---|---|
| | Lead style | Straight lead | Kink-Cutted | Inward forming | outward forming | straight lead Cutted |
| | Code | E | L | T | F | G |
| | Lead style | Taping (Ammo) (直腳 TP, P0=12.7mm) | Taping (Ammo) (直腳 TP, P0=15.0mm) | Taping (Ammo) ( 同等彎 TP) | Taping (Ammo) (內彎 TP) | Taping (Ammo) (外彎 TP) |

| Digit 11~12 | 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 | | | | |

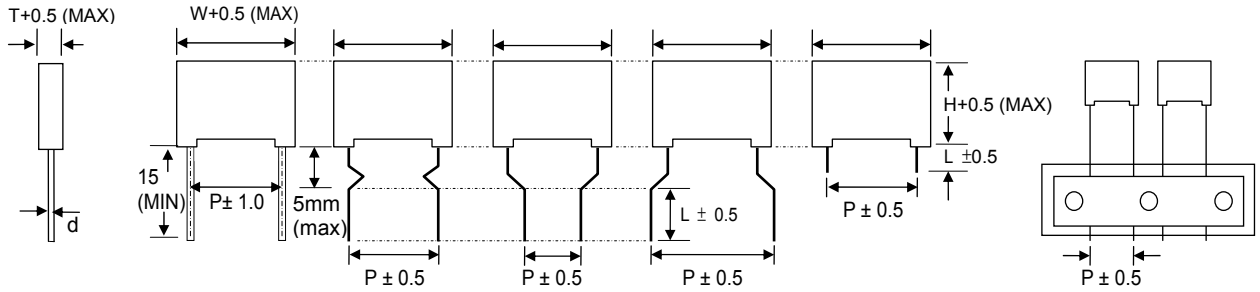
| Digit 13~14 | Code | L1* | L2 | L3 | L4 | L5 | L6 | L7* | L8 | L9 | LA | LB | LC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Length | 15.0 | 3.5 | 4.0 | 4.5 | 10.0 | 15.0 | 20.0 | TP | 2.7 | 8.0 | 5.0 | 6.0 |
| | Code | LD* | LE | LF | LG | LH | LJ* | LK | LL | LM | LN | LP | LQ* |
| | Length | 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* | |
| | Length | 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 15~16 | Code | Explanation | Code | Explanation | Code | Explanation |
|---|---|---|---|---|---|---|
| | CT | The different color,The different size (T) | CW | The different color & The different size (W) | EL | Low noise |
| | HD | HF,The different color | CH | The different color& The different size (H) | EE | Low ESR |
| | TH | Humidity Bias Test | EA | Low noise, The different color | ED | Low ESR. The different size (H) |
| Digit 17~18 | Special Number. | | | | | |

| TYPE ：MPL SPECIFICATION | DIMENSION |
|---|---|

*unit:*mm

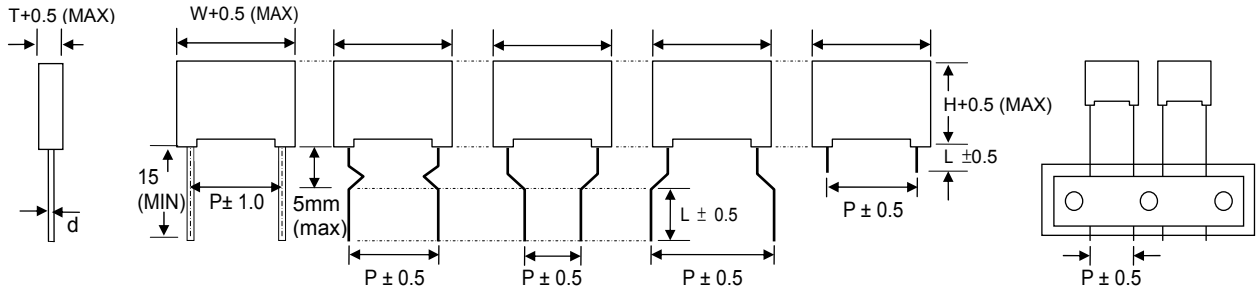



[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

| CAP. *(uF)* | VOLT. *(VDC)* | TOL. ±% | DIMENSION unit:mm | | | | | SCC *P/N* |
|---|---|---|---|---|---|---|---|---|
| | | | *W* | *H* | *T* | *P* | *dφ* ±0.05 | |
| 0.0047 | 1000 | 5 | 13.0 | 9.0 | 4.0 | 10.0 | 0.6 | MPL472J3A*PC**CT01 |
| 0.0056 | 1000 | 5 | 13.0 | 9.0 | 4.0 | 10.0 | 0.6 | MPL562J3A*PC**CT01 |
| 0.0068 | 1000 | 5 | 13.0 | 9.0 | 4.0 | 10.0 | 0.6 | MPL682J3A*PC**CT01 |
| 0.0082 | 1000 | 5 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 | MPL822J3A*PC**CT03 |
| 0.01 | 1000 | 5 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 | MPL103J3A*PC**CT03 |
| 0.012 | 1000 | 5 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 | MPL123J3A*PC**CT03 |
| 0.015 | 1000 | 5 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 | MPL153J3A*PC**CT05 |
| 0.018 | 1000 | 5 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 | MPL183J3A*PC**CT05 |
| 0.022 | 1000 | 5 | 13.0 | 13.0 | 7.0 | 10.0 | 0.6 | MPL223J3A*PC**CT08 |
| 0.027 | 1000 | 5 | 13.0 | 13.0 | 7.0 | 10.0 | 0.6 | MPL273J3A*PC**CT08 |
| 0.033 | 1000 | 5 | 13.0 | 14.0 | 8.0 | 10.0 | 0.6 | MPL333J3A*PC**CT11 |
| 0.047 | 1000 | 5 | 13.0 | 17.0 | 8.0 | 10.0 | 0.6 | MPL473J3A*PC**CT11 |
| 0.010 | 1000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL103J3A*PE**CT03 |
| 0.012 | 1000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL123J3A*PE**CT03 |
| 0.015 | 1000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL153J3A*PE**CT03 |
| 0.018 | 1000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL183J3A*PE**CT03 |
| 0.022 | 1000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL223J3A*PE**CT03 |
| 0.027 | 1000 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL273J3A*PE**CT05 |
| 0.033 | 1000 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL333J3A*PE**CT05 |
| 0.039 | 1000 | 5 | 18.0 | 13.0 | 7.0 | 15.0 | 0.8 | MPL393J3A*PE**CT08 |
| 0.047 | 1000 | 5 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MPL473J3A*PE**CT09 |
| 0.056 | 1000 | 5 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MPL563J3A*PE**CT09 |
| 0.068 | 1000 | 5 | 18.0 | 15.5 | 8.0 | 15.0 | 0.8 | MPL683J3A*PE**CT11 |
| 0.082 | 1000 | 5 | 18.0 | 15.5 | 8.0 | 15.0 | 0.8 | MPL823J3A*PE**CT11 |
| 0.1 | 1000 | 5 | 18.0 | 16.0 | 10.0 | 15.0 | 0.8 | MPL104J3A*PE**CT16 |
| 0.12 | 1000 | 5 | 18.0 | 18.5 | 11.0 | 15.0 | 0.8 | MPL124J3A*PE**CT18 |
| 0.15 | 1000 | 5 | 18.0 | 19.2 | 11.2 | 15.0 | 0.8 | MPL154J3A*PE**CT19 |

| TYPE ：MPL SPECIFICATION | DIMENSION |
|---|---|

*unit:*mm

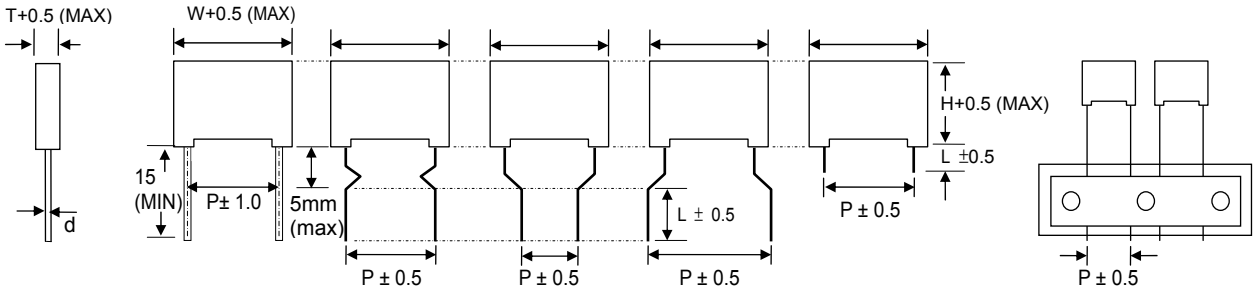



[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

| CAP. *(uF)* | VOLT. *(VDC)* | TOL. *±%* | DIMENSION unit:mm | | | | | SCC *P/N* |
|---|---|---|---|---|---|---|---|---|
| | | | *W* | *H* | *T* | *P* | *dφ* ±0.05 | |
| 0.033 | 1000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL333J3A*PJ**CT05 |
| 0.039 | 1000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL393J3A*PJ**CT05 |
| 0.047 | 1000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL473J3A*PJ**CT05 |
| 0.056 | 1000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL563J3A*PJ**CT05 |
| 0.068 | 1000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL683J3A*PJ**CT05 |
| 0.082 | 1000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL823J3A*PJ**CT05 |
| 0.10 | 1000 | 5 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MPL104J3A*PJ**CT08 |
| 0.12 | 1000 | 5 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MPL124J3A*PJ**CT08 |
| 0.15 | 1000 | 5 | 26.5 | 17.0 | 8.5 | 22.5 | 0.8 | MPL154J3A*PJ**CT12 |
| 0.18 | 1000 | 5 | 26.5 | 17.0 | 9.0 | 22.5 | 0.8 | MPL184J3A*PJ**CT14 |
| 0.22 | 1000 | 5 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 | MPL224J3A*PJ**CT16 |
| 0.27 | 1000 | 5 | 26.5 | 20.0 | 11.0 | 22.5 | 0.8 | MPL274J3A*PJ**CT18 |
| 0.33 | 1000 | 5 | 26.5 | 21.5 | 12.0 | 22.5 | 0.8 | MPL334J3A*PJ**CT23 |
| 0.39 | 1000 | 5 | 26.5 | 24.0 | 13.5 | 22.5 | 0.8 | MPL394J3A*PJ**CT21 |
| 0.47 | 1000 | 5 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MPL474J3A*PM**CT20 |
| 0.56 | 1000 | 5 | 32.0 | 23.5 | 14.0 | 27.5 | 0.8 | MPL564J3A*PM**CT24 |
| 0.68 | 1000 | 5 | 32.0 | 25.5 | 16.0 | 27.5 | 0.8 | MPL684J3A*PM**CT32 |
| 0.82 | 1000 | 5 | 32.0 | 26.0 | 18.0 | 27.5 | 0.8 | MPL824J3A*PM**CT25 |
| 1.0 | 1000 | 5 | 32.0 | 33.0 | 18.0 | 27.5 | 0.8 | MPL105J3A*PM**CT25 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| TYPE ：MPL SPECIFICATION | DIMENSION |
|---|---|

*unit:*mm



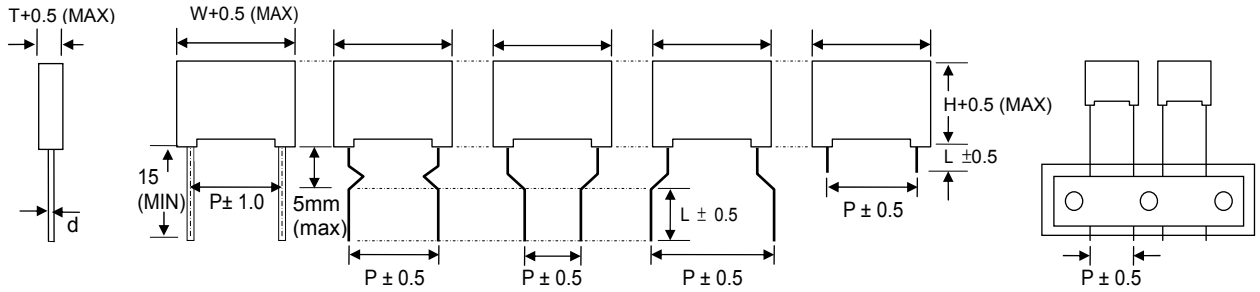

[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

| CAP. *(uF)* | VOLT. *(VDC)* | TOL. *±%* | DIMENSION unit:mm | | | | | SCC *P/N* |
|---|---|---|---|---|---|---|---|---|
| | | | *W* | *H* | *T* | *P* | *dφ* ±0.05 | |
| 0.010 | 1200 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL103J3LAPEL1CT03 |
| 0.012 | 1200 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL123J3LAPEL1CT03 |
| 0.015 | 1200 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL153J3LAPEL1CT03 |
| 0.018 | 1200 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL183J3LAPEL1CT05 |
| 0.022 | 1200 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL223J3LAPEL1CT05 |
| 0.027 | 1200 | 5 | 18.0 | 13.0 | 7.0 | 15.0 | 0.8 | MPL273J3LAPEL1CT08 |
| 0.033 | 1200 | 5 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MPL333J3LAPEL1CT09 |
| 0.039 | 1200 | 5 | 18.0 | 14.0 | 8.0 | 15.0 | 0.8 | MPL393J3LAPEL1CT11 |
| 0.047 | 1200 | 5 | 18.0 | 15.5 | 8.0 | 15.0 | 0.8 | MPL473J3LAPEL1CT11 |
| 0.056 | 1200 | 5 | 18.0 | 16.0 | 10.0 | 15.0 | 0.8 | MPL563J3LAPEL1CT16 |
| 0.068 | 1200 | 5 | 18.0 | 18.5 | 11.0 | 15.0 | 0.8 | MPL683J3LAPEL1CT18 |
| 0.082 | 1200 | 5 | 18.0 | 18.5 | 11.0 | 15.0 | 0.8 | MPL823J3LAPEL1CT18 |
| 0.047 | 1200 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL473J3LAPJL1CT05 |
| 0.056 | 1200 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL563J3LAPJL1CT05 |
| 0.068 | 1200 | 5 | 26.5 | 17.0 | 7.0 | 22.5 | 0.8 | MPL683J3LAPJL1CT08 |
| 0.082 | 1200 | 5 | 26.5 | 17.0 | 7.0 | 22.5 | 0.8 | MPL823J3LAPJL1CT08 |
| 0.10 | 1200 | 5 | 26.5 | 17.0 | 8.5 | 22.5 | 0.8 | MPL104J3LAPJL1CT12 |
| 0.12 | 1200 | 5 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 | MPL124J3LAPJL1CT16 |
| 0.15 | 1200 | 5 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 | MPL154J3LAPJL1CT16 |
| 0.18 | 1200 | 5 | 26.5 | 20.0 | 11.0 | 22.5 | 0.8 | MPL184J3LAPJL1CT18 |
| 0.22 | 1200 | 5 | 26.5 | 21.5 | 12.5 | 22.5 | 0.8 | MPL224J3LAPJL1CT26 |
| 0.27 | 1200 | 5 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MPL274J3LAPML1CT20 |
| 0.33 | 1200 | 5 | 32.0 | 23.5 | 14.0 | 27.5 | 0.8 | MPL334J3LAPML1CT24 |
| 0.39 | 1200 | 5 | 32.0 | 24.5 | 15.0 | 27.5 | 0.8 | MPL394J3LAPML1CT36 |
| 0.47 | 1200 | 5 | 32.0 | 25.5 | 16.0 | 27.5 | 0.8 | MPL474J3LAPML1CT32 |
| 0.56 | 1200 | 5 | 32.0 | 28.0 | 17.0 | 27.5 | 0.8 | MPL564J3LAPML1CT40 |
| 0.68 | 1200 | 5 | 32.0 | 33.0 | 18.0 | 27.5 | 0.8 | MPL684J3LAPML1CT25 |
| 0.82 | 1200 | 5 | 32.0 | 31.0 | 22.0 | 27.5 | 0.8 | MPL824J3LAPML1CT45 |

STRONG COMPONENTS CO.,LTD

| TYPE ：MPL SPECIFICATION | DIMENSION |
|---|---|

*unit:*mm

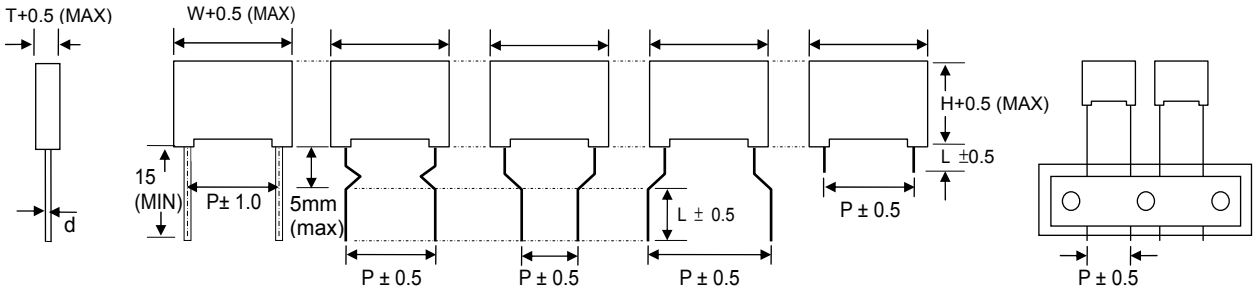



[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

| CAP. *(uF)* | VOLT. *(VDC)* | TOL. ±% | DIMENSION unit:mm | | | | | SCC *P/N* |
|---|---|---|---|---|---|---|---|---|
| | | | *W* | *H* | *T* | *P* | *dφ* ±0.05 | |
| 0.0068 | 1600 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL682J3CAPEL1CT03 |
| 0.0082 | 1600 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL822J3CAPEL1CT05 |
| 0.010 | 1600 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL103J3CAPEL1CT05 |
| 0.012 | 1600 | 5 | 18.0 | 13.0 | 7.0 | 15.0 | 0.8 | MPL123J3CAPEL1CT08 |
| 0.015 | 1600 | 5 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MPL153J3CAPEL1CT09 |
| 0.018 | 1600 | 5 | 18.0 | 14.0 | 8.0 | 15.0 | 0.8 | MPL183J3CAPEL1CT11 |
| 0.022 | 1600 | 5 | 18.0 | 15.5 | 8.0 | 15.0 | 0.8 | MPL223J3CAPEL1CT11 |
| 0.027 | 1600 | 5 | 18.0 | 16.0 | 10.0 | 15.0 | 0.8 | MPL273J3CAPEL1CT16 |
| 0.033 | 1600 | 5 | 18.0 | 18.5 | 11.0 | 15.0 | 0.8 | MPL333J3CAPEL1CT18 |
| 0.039 | 1600 | 5 | 18.0 | 19.2 | 11.2 | 15.0 | 0.8 | MPL393J3CAPEL1CT19 |
| 0.022 | 1600 | 5 | 26.5 | 14.5 | 6.0 | 22.5 | 0.8 | MPL223J3CAPJL1CT05 |
| 0.027 | 1600 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL273J3CAPJL1CT05 |
| 0.033 | 1600 | 5 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MPL333J3CAPJL1CT08 |
| 0.039 | 1600 | 5 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MPL393J3CAPJL1CT08 |
| 0.047 | 1600 | 5 | 26.5 | 17.0 | 8.5 | 22.5 | 0.8 | MPL473J3CAPJL1CT12 |
| 0.056 | 1600 | 5 | 26.5 | 17.0 | 9.0 | 22.5 | 0.8 | MPL563J3CAPJL1CT14 |
| 0.068 | 1600 | 5 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 | MPL683J3CAPJL1CT16 |
| 0.082 | 1600 | 5 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 | MPL823J3CAPJL1CT16 |
| 0.10 | 1600 | 5 | 26.5 | 20.0 | 11.0 | 22.5 | 0.8 | MPL104J3CAPJL1CT18 |
| 0.12 | 1600 | 5 | 26.5 | 21.5 | 12.5 | 22.5 | 0.8 | MPL124J3CAPJL1CT26 |
| 0.10 | 1600 | 5 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MPL104J3CAPML1CT18 |
| 0.12 | 1600 | 5 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MPL124J3CAPML1CT18 |
| 0.15 | 1600 | 5 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MPL154J3CAPML1CT20 |
| 0.18 | 1600 | 5 | 32.0 | 23.5 | 14.0 | 27.5 | 0.8 | MPL184J3CAPML1CT24 |
| 0.22 | 1600 | 5 | 32.0 | 24.5 | 15.0 | 27.5 | 0.8 | MPL224J3CAPML1CT36 |
| 0.27 | 1600 | 5 | 32.0 | 25.5 | 16.0 | 27.5 | 0.8 | MPL274J3CAPML1CT32 |
| 0.33 | 1600 | 5 | 32.0 | 28.0 | 17.0 | 27.5 | 0.8 | MPL334J3CAPML1CT40 |
| 0.39 | 1600 | 5 | 32.0 | 33.0 | 18.0 | 27.5 | 0.8 | MPL394J3CAPML1CT25 |

| TYPE ：MPL SPECIFICATION | DIMENSION |
|---|---|

*unit:*mm

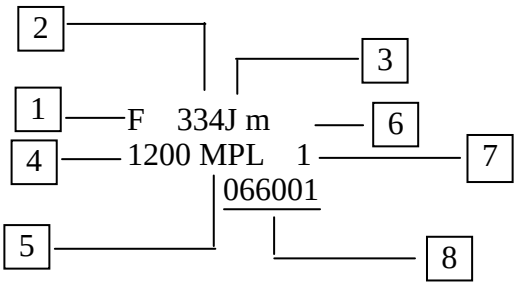



[FIG1] [FIG2] [FIG3] [FIG4] [FIG5] [Taping]

| CAP. *(uF)* | VOLT. *(VDC)* | TOL. ±% | DIMENSION unit:mm | | | | | SCC *P/N* |
|---|---|---|---|---|---|---|---|---|
| | | | *W* | *H* | *T* | *P* | *dφ* ±0.05 | |
| 0.0033 | 2000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL332J3DAPEL1CT03 |
| 0.0039 | 2000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL392J3DAPEL1CT03 |
| 0.0047 | 2000 | 5 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 | MPL472J3DAPEL1CT03 |
| 0.0056 | 2000 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL562J3DAPEL1CT05 |
| 0.0068 | 2000 | 5 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 | MPL682J3DAPEL1CT05 |
| 0.0082 | 2000 | 5 | 18.0 | 13.0 | 7.0 | 15.0 | 0.8 | MPL822J3DAPEL1CT08 |
| 0.010 | 2000 | 5 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 | MPL103J3DAPEL1CT09 |
| 0.012 | 2000 | 5 | 18.0 | 14.0 | 8.0 | 15.0 | 0.8 | MPL123J3DAPEL1CT11 |
| 0.015 | 2000 | 5 | 18.0 | 15.5 | 8.0 | 15.0 | 0.8 | MPL153J3DAPEL1CT11 |
| 0.018 | 2000 | 5 | 18.0 | 16.0 | 10.0 | 15.0 | 0.8 | MPL183J3DAPEL1CT16 |
| 0.022 | 2000 | 5 | 18.0 | 18.5 | 11.0 | 15.0 | 0.8 | MPL223J3DAPEL1CT18 |
| 0.027 | 2000 | 5 | 18.0 | 19.2 | 11.2 | 15.0 | 0.8 | MPL273J3DAPEL1CT19 |
| 0.015 | 2000 | 5 | 26.5 | 14.5 | 6.0 | 22.5 | 0.8 | MPL153J3DAPJL1CT05 |
| 0.018 | 2000 | 5 | 26.5 | 15.0 | 6.0 | 22.5 | 0.8 | MPL183J3DAPJL1CT05 |
| 0.022 | 2000 | 5 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 | MPL223J3DAPJL1CT08 |
| 0.027 | 2000 | 5 | 26.5 | 16.5 | 7.5 | 22.5 | 0.8 | MPL273J3DAPJL1CT09 |
| 0.033 | 2000 | 5 | 26.5 | 17.0 | 8.0 | 22.5 | 0.8 | MPL333J3DAPJL1CT11 |
| 0.047 | 2000 | 5 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 | MPL473J3DAPJL1CT16 |
| 0.056 | 2000 | 5 | 26.5 | 20.0 | 11.0 | 22.5 | 0.8 | MPL563J3DAPJL1CT18 |
| 0.068 | 2000 | 5 | 26.5 | 21.5 | 12.5 | 22.5 | 0.8 | MPL683J3DAPJL1CT26 |
| 0.082 | 2000 | 5 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 | MPL823J3DAPML1CT18 |
| 0.10 | 2000 | 5 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MPL104J3DAPML1CT20 |
| 0.12 | 2000 | 5 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 | MPL124J3DAPML1CT20 |
| 0.15 | 2000 | 5 | 32.0 | 24.5 | 15.0 | 27.5 | 0.8 | MPL154J3DAPML1CT36 |
| 0.18 | 2000 | 5 | 32.0 | 25.5 | 16.0 | 27.5 | 0.8 | MPL184J3DAPML1CT32 |
| 0.22 | 2000 | 5 | 32.0 | 28.0 | 17.0 | 27.5 | 0.8 | MPL224J3DAPML1CT40 |
| 0.27 | 2000 | 5 | 32.0 | 33.0 | 18.0 | 27.5 | 0.8 | MPL274J3DAPML1CT25 |
| | | | | | | | | |

STRONG COMPONENTS CO.,LTD

Marking



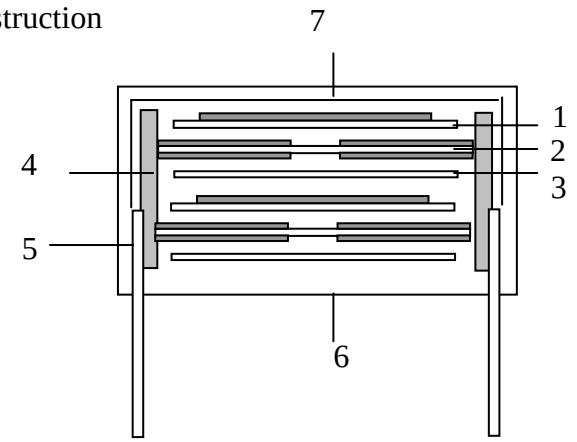

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | ：Company symbol | 2 | ：Capacitance | 3 | ：Tolerance | 4 | ：Rated voltage |
| 5 | ：Type name | 6 | ：Year / Month | 7 | ：Week | 8 | ：Production batch number (P≧10mm) |

| 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 |
| 2017 | 5 | E | 2018 | 5 | S | 2019 | 5 | e | 2020 | 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)
2. Double sided metallized polyester film(AL)
3. Polypropylene film
4. Metal spray. (Zn+ Tin/Zn)
5. Lead wire(Tin-plated copper wire)
6. Epoxy resin. (UL94V-0、B)
7. PBT Case. (UL94V-0、B)

| *TYPE：MPL 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 Factor 1.25%per℃ for VR(DC) | | | IEC 60384-16 **2.1.12.2.5** |
| **2** | 額 定 電 壓 Rated Voltage | | 1000VDC,1200VDC,1600VDC, 2000VDC | | | IEC 60384-14 2.2.3 |
| **3** | 耐電壓 Withstand Voltage | 端 子 間 Between Terminals | 無 Short 現 象. | | Rated voltage x 160% 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 | | | | |
| **5** | 絕 緣 阻 抗 Insulation Resistance | | C≦0.33 μF | VR≦100V 50,000 MΩ<br>VR＞100V 100,000 MΩ | Charge time: 60 ±5sec. Charge voltage: VR < 100VDC: 50VDC VR < 500VDC: 100VDC VR ≧ 500VDC. 500VDC Test Temp: 20°C | IEC 60384-16 4.2.4 |
| | | | C＞0.33 μF | VR≦100V 15,000 S<br>VR＞100V 30,000 S | | |
| **6** | 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 |
| **7** | 散 逸 因 數 Dissipation Factor | | 0.08 %max at 1KHz | | Measure voltage at 1 Vrms Test temp: 20°C | IEC 60384-16 4.2.3 |
| **8** | 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 | |
| **9** | 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 |
| **10** | 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 |
| **11** | 耐 寒 性 Cold Resistance | 靜電容量化率 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 Remark | 參考標准 Reference Standard |
|---|---|---|---|---|---|
| **12** | 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<br>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 7 範圍以內 Within spec of item 7 above. | | |
| | | 絕緣阻抗 Insulation Resistance | Same as the spec of item 5 above | | |
| **13** | 耐熱性 Dry Heat Resistance | 絕緣阻抗 Insulation Resistance | 50% of minimum specified value | Temperature: +110 ±2°C<br>Duration: 96±4 hrs | IEC 60384-16 4.10.2 |
| | | 靜電容量變化率 Capacitance Change | △C/C≦±5% Within±5% | | |
| **14** | 溫度循環 Temperature Cycle | 外觀 Appearance | 無明顯異常 No abnormality on appearance | Total: 5 cycle<br>Step 1: -40±2°C 30 ±1min<br>Step 2: +25±2°C 3min max<br>Step 3: +110±2°C 30 ±1min<br>Step 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 | | |
| | | 散逸因數 Dissipation Factor Change | △DF≦ 0.3%at 1KHz(20°C) | | |
| **15** | 穩態濕熱試驗 Damp heat , Steady state | 外觀 Appearance | 無明顯異常 No abnormality on appearance<br>印字可辨識 Marking to be legible | Humidity: 90~95% RH<br>Temperature: +40 ±2°C<br>Duration: 56Days +48/-0hrs<br>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% at 1KHz(20°C) | | |

| TYPE：MPL SPECIFICATION | | | ELECTRICAL CHARACTERISTICS | | |
|---|---|---|---|---|---|
| **No** | **項 目 Item** | | **性 能 Performance** | **條 件 Remark** | **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 Duration:1,000 +48/-0 hrs<br>Applied Voltage 125% x $V_R$ through series resistor of 20~1000Ω/V to the Capacitor<br>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%at 10KHz(20°C) | | |
| **17** | 充放電 Charging and discharging | 靜電容量變化率 Capacitance Change | △C/C≦±5%(relative to the initial value) | Times:10 000<br>Duration of charging:0.5s<br>Duration of discharging : 0.5s<br>Charging voltage: rated voltage<br>Charging resistance:220/CR(Ω)<br>Discharging resistance: R=10/ $C_R$(Ω) or 20(whichever is the greater)<br>$C_R$: rated capacitance (μF) | IEC 60384-16 4.13 |
| | | 散逸因數變化量 Dissipation Factor Change | Increase of: △DF≦0.5%(1KHZ) | | |
| | | 絕 緣 阻 抗 Insulation Resistance | IR: ≧50%of rated value | | |
| **18** | 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<br>Temperature:40±2℃<br>Applied Voltage100%×$V_{RDC}$<br>Duration:1000±24hrs<br>Through series resistor of 20~1000Ω/V to the Capacitor<br>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% 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