

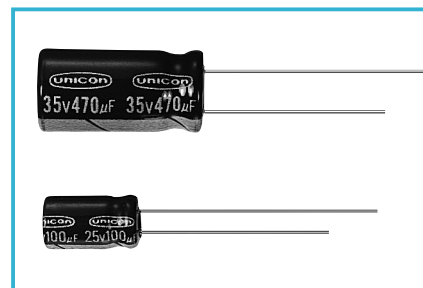
# GUM

04 形標準品 (105℃)  
RADIAL TYPE STANDARD  
シリーズ  
SERIES

標準品  
Standard広温度範囲品  
Wide temperature

## ■特 長 FEATURES

- 民生機器用標準品  
Standard size for popular circuit.
- 自動挿入用テーピング品を各種用意  
Available in taping configuration for automatic insertion.
- 105℃ 2000時間保証 ( $\phi D \geq 10$ )  
Load Life : 105℃ 2000 hours. ( $\phi D \geq 10$ )



## ■仕 様 SPECIFICATIONS

| 項 目 Items                             | 特 性 Characteristics                                                                                                                                                                                                                                           |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------|------|------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|---------|---------|--|
| 使用温度範囲<br>Operating Temperature Range | -55~+105℃ (6.3~100V) : -40~+105℃ (160~400V) : -25~+105℃ (450V)                                                                                                                                                                                                |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 定格電圧範囲<br>Rated Voltage Range         | 6.3 ~ 450V.DC                                                                                                                                                                                                                                                 |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 静電容量範囲<br>Nominal Capacitance Range   | 0.47 ~ 15000μF                                                                                                                                                                                                                                                |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 静電容量許容差<br>Capacitance Tolerance      | ±20% (20℃, 120Hz)                                                                                                                                                                                                                                             |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 漏れ電流<br>Leakage Current               | 6.3~100W.V.                                                                                                                                                                                                                                                   |                                                          |      |      |      |      | 160~450W.V.                                                                                                                                                                                                                |        |         |         |         |  |
|                                       | I=0.03CV 又は4μAのいずれか大きい値以下(1分値)<br>I=0.03CV or 4μA whichever is greater, after<br>1 minute application of rated voltage.<br>I=0.01CV 又は 3μAのいずれか大きい値以下(2分値)<br>I=0.01CV or 3μA whichever is greater, after<br>2 minutes application of rated voltage.          |                                                          |      |      |      |      | CV≤1000 : I=0.1CV + 40μA以下(1分値)<br>: I=0.1CV + 40μA or less after<br>1 minute application of rated voltage.<br>CV>1000 : I=0.04CV+100μA以下(1分値)<br>: I=0.04CV+100μA or less after<br>1 minute application of rated voltage. |        |         |         |         |  |
|                                       |                                                                                                                                                                                                                                                               |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 損失角の正接<br>Dissipation Factor          | 定格電圧(V)<br>Rated Voltage                                                                                                                                                                                                                                      | 6.3                                                      | 10   | 16   | 25   | 35   | 50                                                                                                                                                                                                                         | 63     | 100     | 160~250 | 350~450 |  |
|                                       | tanδ(MAX)                                                                                                                                                                                                                                                     | 0.24                                                     | 0.20 | 0.16 | 0.14 | 0.12 | 0.10                                                                                                                                                                                                                       | 0.09   | 0.08    | 0.20    | 0.25    |  |
|                                       | 1000μFを越えるものについては、1000μFを増す毎に0.02を加えた値とする。(120Hz,20℃)<br>For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.                                                                                                                          |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 温度特性<br>Temperature Characteristics   | インピーダンス比 Impedance Ratio (120Hz)                                                                                                                                                                                                                              |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
|                                       | 定格電圧(V)<br>Rated Voltage                                                                                                                                                                                                                                      | 6.3                                                      | 10   | 16   | 25   | 35   | 50                                                                                                                                                                                                                         | 63~100 | 160~250 | 350~400 | 450     |  |
|                                       | Z(-25℃)/Z(20℃)                                                                                                                                                                                                                                                | 4                                                        | 3    | 2    | 2    | 2    | 2                                                                                                                                                                                                                          | 2      | 4       | 4       | 6       |  |
|                                       | Z(-40℃)/Z(20℃)                                                                                                                                                                                                                                                | 8                                                        | 6    | 4    | 3    | 3    | 3                                                                                                                                                                                                                          | 3      | 15      | 10      | —       |  |
| 高温負荷特性<br>Load Life                   | 105℃2000時間定格電圧印加後、下記規格を満足する。(但し、φD≤8 は1000時間)<br>After 2000 hours application of rated voltage at 105℃, capacitors meet the characteristics requirements mentioned below. (φD≤8 : 1000hrs.)                                                                   |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
|                                       | 静電容量変化率<br>Capacitance Change                                                                                                                                                                                                                                 | 初期値の±20%以内<br>Within ±20% of initial value.              |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
|                                       | 損失角の正接<br>Dissipation Factor                                                                                                                                                                                                                                  | 初期規格値の200%以下<br>200% or less of initial specified value. |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
|                                       | 漏れ電流<br>Leakage Current                                                                                                                                                                                                                                       | 初期規格値以下<br>Initial specified value or less.              |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 高温無負荷特性<br>Shelf Life                 | 105℃1000時間無負荷放置後、上記高温負荷特性の規格を満足する。<br>(但し、JIS C-5102 4.4項の電圧処理後)<br>After leaving capacitors under no load at 105℃ for 1000 hours and applying voltage according to JIS C-5102 4.4, they meet the specified value for load life characteristics listed above. |                                                          |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 表示<br>Marking                         | 示                                                                                                                                                                                                                                                             | 茶色チューブに白色印刷<br>White print on dark brown sleeve.         |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |
| 関連規格<br>Applicable Standard           | 格                                                                                                                                                                                                                                                             | JIS C-5141 特性W<br>Characteristics W of JIS C-5141.       |      |      |      |      |                                                                                                                                                                                                                            |        |         |         |         |  |

## ■許容リップル電流周波数補正係数 Frequency coefficient of allowable ripple current

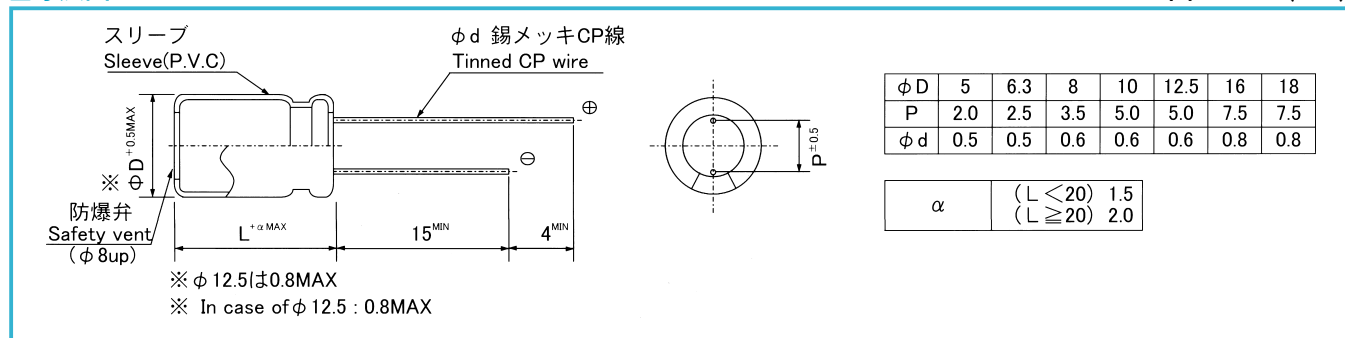
| W.V.(V.DC) | Frequency     | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz~ |
|------------|---------------|------|-------|-------|------|--------|
|            | Cap( $\mu$ F) |      |       |       |      |        |
| 6.3~100    | ~47           | 0.75 | 1     | 1.35  | 1.57 | 2.00   |
|            | 100~470       | 0.80 | 1     | 1.23  | 1.34 | 1.50   |
|            | 1000~15000    | 0.85 | 1     | 1.10  | 1.13 | 1.15   |
| 160~450    | 0.47~220      | 0.80 | 1     | 1.25  | 1.40 | 1.60   |

■品名コード体系 (例: 50 V 1 $\mu$ F) PART NUMBERING EXAMPLE (ex: 50 V 1 $\mu$ F)

| 1                    | 2 | 3 | 4                              | 5 | 6                                  | 7 | 8                                                   | 9 | 10                | 11 |
|----------------------|---|---|--------------------------------|---|------------------------------------|---|-----------------------------------------------------|---|-------------------|----|
| G                    | U | M | 1                              | H | 0                                  | 1 | 0                                                   | M |                   |    |
| シリーズ名<br>Series Name |   |   | 定格電圧<br>Rated Voltage<br>(50V) |   | 静電容量<br>Capacitance<br>(1 $\mu$ F) |   | 容量許容差<br>Capacitance<br>Tolerance<br>( $\pm 20\%$ ) |   | 個別指定<br>Custom ID |    |

■寸法図 DIMENSIONS

単位 unit(mm)



■寸法表 STANDARD PRODUCTS TABLE

φ D × L (mm)

| WV(V.DC) |      | 6.3     | 10   | 16      | 25   | 35      | 50   | 63      | 100    |
|----------|------|---------|------|---------|------|---------|------|---------|--------|
| Cap(μF)  | Code | 0J      | 1A   | 1C      | 1E   | 1V      | 1H   | 1J      | 2A     |
| 0.47     | R47  |         |      |         |      |         | 5X11 | 5       | 5X11   |
| 1        | 010  |         |      |         |      |         | 5X11 | 10      | 5X11   |
| 2.2      | 2R2  |         |      |         |      |         | 5X11 | 18      | 5X11   |
| 3.3      | 3R3  |         |      |         |      |         | 5X11 | 25      | 5X11   |
| 4.7      | 4R7  |         |      |         |      |         | 5X11 | 30      | 5X11   |
| 10       | 100  |         |      |         |      |         | 5X11 | 50      | 5X11   |
| 22       | 220  |         |      |         |      |         | 5X11 | 75      | 6.3X11 |
| 33       | 330  |         |      |         |      | 5X11    | 85   | 6.3X11  | 105    |
| 47       | 470  |         |      | 5X11    | 90   | 5X11    | 95   | 6.3X11  | 110    |
| 100      | 101  | 5X11    | 105  | 5X11    | 115  | 6.3X11  | 140  | 6.3X11  | 150    |
| 220      | 221  | 6.3X11  | 170  | 6.3X11  | 190  | 8X11.5  | 240  | 8X11.5  | 260    |
| 330      | 331  | 6.3X11  | 200  | 8X11.5  | 270  | 8X11.5  | 300  | 10X12.5 | 380    |
| 470      | 471  | 8X11.5  | 290  | 8X11.5  | 320  | 10X12.5 | 420  | 10X16   | 490    |
| 1000     | 102  | 10X12.5 | 510  | 10X16   | 610  | 10X20   | 730  | 12.5X20 | 900    |
| 2200     | 222  | 12.5X20 | 980  | 12.5X20 | 1060 | 12.5X25 | 1250 | 16X25   | 1300   |
| 3300     | 332  | 12.5X20 | 1150 | 12.5X25 | 1320 | 16X25   | 1420 | 16X31.5 | 1530   |
| 4700     | 472  | 16X25   | 1390 | 16X25   | 1490 | 16X31.5 | 1650 | 18X35.5 | 1730   |
| 6800     | 682  | 16X25   | 1570 | 16X31.5 | 1700 | 18X35.5 | 1830 |         |        |
| 10000    | 103  | 16X31.5 | 1790 | 18X35.5 | 1880 | 18X40   | 2290 |         |        |
| 15000    | 153  | 18X35.5 | 1960 | 18X40   | 2340 |         |      |         |        |

Ripple(mA rms) at 105°C 120Hz

| WV(V.DC) |      | 160     | 200    | 250     | 350    | 400     | 450     |
|----------|------|---------|--------|---------|--------|---------|---------|
| Cap(μF)  | Code | 2C      | 2D     | 2E      | 2V     | 2G      | 2W      |
| 0.47     | R47  |         |        | 6.3X11  | 10     |         |         |
| 1        | 010  |         |        | 6.3X11  | 14     | 8X11.5  | 17      |
| 2.2      | 2R2  |         | 6.3X11 | 21      | 8X11.5 | 25      | 10X12.5 |
| 3.3      | 3R3  | 8X11.5  | 31     | 8X11.5  | 31     | 10X12.5 | 35      |
| 4.7      | 4R7  | 8X11.5  | 37     | 10X12.5 | 42     | 10X12.5 | 42      |
| 10       | 100  | 10X12.5 | 62     | 10X16   | 69     | 10X20   | 74      |
| 22       | 220  | 10X20   | 105    | 10X20   | 105    | 12.5X25 | 125     |
| 33       | 330  | 12.5X20 | 145    | 12.5X25 | 155    | 12.5X25 | 155     |
| 47       | 470  | 12.5X25 | 190    | 12.5X25 | 190    | 16X25   | 195     |
| 100      | 101  | 16X25   | 280    | 16X31.5 | 285    | 18X35.5 | 290     |
| 220      | 221  | 18X35.5 | 430    | 18X40   | 435    |         |         |

ケースサイズ: リプル  
Case Size: Ripple