

USG series

85°C 3000 時間 標準品
Load Life : 85°C 3000 hours, Standard



◆規格表 / SPECIFICATIONS

| 項目 Item | 特性 Characteristics | | | | | | | | | | | | | | | | | | | | | |
|--|--|-------------|-------------------------------|---|------------------------------|--|-------------------------|---|-------------------|----|-------------|---------------|-------|------|-------------------|------|------|------|------|------|------|--|
| カテゴリ温度範囲 Category Temperature Range | -40~+85°C | -25~+85°C | | | | | | | | | | | | | | | | | | | | |
| 定格電圧範囲 Rated Voltage Range | 10~250Vdc | 400~450Vdc | | | | | | | | | | | | | | | | | | | | |
| 静電容量許容差 Capacitance Tolerance | ±20% (20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | |
| 漏れ電流 Leakage Current (MAX) | $I=3\sqrt{CV}$ (定格電圧印加5分後) $I=3\sqrt{CV}$ (After 5 minutes application of rated voltage) I=漏れ電流 (μA) C=静電容量 (μF) V=定格電圧 (Vdc) Leakage Current Capacitance Rated Voltage | | | | | | | | | | | | | | | | | | | | | |
| 損失角の正接 (tan δ) Dissipation Factor (MAX) | <table border="1"> <thead> <tr> <th>定格電圧 (Vdc) Rated Voltage</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100~ 450</th> <th>(20°C, 120Hz)</th> </tr> </thead> <tbody> <tr> <td>tan δ</td> <td>0.55</td> <td>0.50</td> <td>0.45</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td></td> </tr> </tbody> </table> | | 定格電圧 (Vdc) Rated Voltage | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100~ 450 | (20°C, 120Hz) | tan δ | 0.55 | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 | |
| 定格電圧 (Vdc) Rated Voltage | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100~ 450 | (20°C, 120Hz) | | | | | | | | | | | | | |
| tan δ | 0.55 | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 | | | | | | | | | | | | | | |
| 耐久性 Endurance | 85°C中で3000時間定格電圧(リップル重畳)印加後、下記項目を満足すること。 After applying rated voltage with rated ripple current for 3000 hours at 85°C, the capacitors shall meet the following requirements. | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tbody> <tr> <td>静電容量変化率 Capacitance Change</td> <td>初期値の ±20% 以内 Within ±20% of the initial value.</td> </tr> <tr> <td>損失角の正接 Dissipation Factor</td> <td>規格値の 200% 以下 Not more than 200% of the specified value.</td> </tr> <tr> <td>漏れ電流 Leakage Current</td> <td>規格値以下 Not more than the specified value.</td> </tr> </tbody> </table> | | 静電容量変化率 Capacitance Change | 初期値の ±20% 以内 Within ±20% of the initial value. | 損失角の正接 Dissipation Factor | 規格値の 200% 以下 Not more than 200% of the specified value. | 漏れ電流 Leakage Current | 規格値以下 Not more than the specified value. | | | | | | | | | | | | | | |
| 静電容量変化率 Capacitance Change | 初期値の ±20% 以内 Within ±20% of the initial value. | | | | | | | | | | | | | | | | | | | | | |
| 損失角の正接 Dissipation Factor | 規格値の 200% 以下 Not more than 200% of the specified value. | | | | | | | | | | | | | | | | | | | | | |
| 漏れ電流 Leakage Current | 規格値以下 Not more than the specified value. | | | | | | | | | | | | | | | | | | | | | |
| 低温特性 Low Temperature Stability (インピーダンス比) Impedance Ratio (MAX) | <table border="1"> <thead> <tr> <th>定格電圧 (Vdc) Rated Voltage</th> <th>10~ 100</th> <th>160~ 250</th> <th>400</th> <th>420~ 450</th> <th>(120Hz)</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>4</td> <td>8</td> <td>12</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>12</td> <td>12</td> <td>—</td> <td>—</td> <td></td> </tr> </tbody> </table> | | 定格電圧 (Vdc) Rated Voltage | 10~ 100 | 160~ 250 | 400 | 420~ 450 | (120Hz) | Z(-25°C)/Z(+20°C) | 3 | 4 | 8 | 12 | | Z(-40°C)/Z(+20°C) | 12 | 12 | — | — | | | |
| 定格電圧 (Vdc) Rated Voltage | 10~ 100 | 160~ 250 | 400 | 420~ 450 | (120Hz) | | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(+20°C) | 3 | 4 | 8 | 12 | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(+20°C) | 12 | 12 | — | — | | | | | | | | | | | | | | | | | | |

◆呼称方法 / PART NUMBER

USG M SN D x L
 定格電圧 シリーズ名 静電容量 静電容量許容差 副記号 端子記号 ケースサイズ
 Rated Voltage Series Capacitance Capacitance Tolerance Option Terminal Code Case Size

◆リップル電流補正係数 /
MULTIPLIER FOR RIPPLE CURRENT

| 周波数 (Hz) Frequency | 60 (50) | 120 (100) | 300 | 500 | 1k | 10k ≤ |
|-----------------------|------------|--------------|------|------|------|-------|
| 10~ 100Vdc | 0.90 | 1.00 | 1.03 | 1.05 | 1.10 | 1.15 |
| 160~ 250Vdc | 0.80 | 1.00 | 1.15 | 1.20 | 1.30 | 1.50 |
| 400~ 450Vdc | 0.80 | 1.00 | 1.15 | 1.20 | 1.25 | 1.40 |

◆副記号 / OPTION

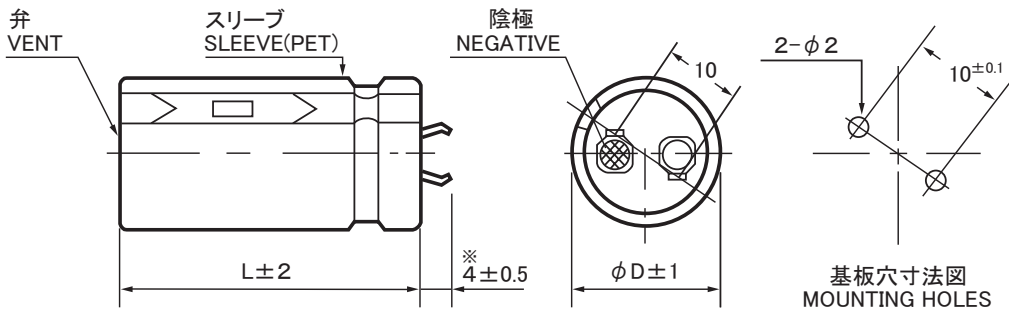
EFC : PET スリーブ、底板なし
PET Sleeve without plate

◆寸法図/DIMENSIONS

●SN[4(3.5)mm]端子タイプ
SN[4(3.5)mm]terminal type

端子記号 : SN(錫メッキ)
Terminal code : SN(Tin plating)

(mm)



※但しφ35は3.5±0.5
For φ35, 3.5±0.5

◆標準品一覧表/STANDARD SIZE

| Cap. (μF) | 10Vdc | | | | | 16Vdc | | | | | | | | | | | | |
|--------------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | φ20 | φ22 | φ25 | φ30 | φ35 | φ20 | φ22 | φ25 | φ30 | φ35 | | | | | | | | |
| 8200 | | | | | | 20×25 | 2.56 | | | | | | | | | | | |
| 10000 | 20×25 | 2.22 | | | | 20×30 | 2.85 | 22×25 | 2.85 | | | | | | | | | |
| 12000 | 20×30 | 2.44 | 22×25 | 2.41 | | 20×35 | 3.20 | 22×30 | 3.20 | | | | | | | | | |
| 15000 | 20×35 | 2.90 | 22×30 | 2.88 | 25×25 | 2.88 | | 20×40 | 3.70 | 22×35 | 3.70 | 25×25 | 3.70 | | | | | |
| 18000 | 20×40 | 3.31 | 22×35 | 3.22 | 25×30 | 3.08 | | | 22×40 | 3.98 | 25×30 | 3.98 | | | | | | |
| 22000 | | | 22×40 | 3.79 | 25×30 | 3.66 | 30×25 | 3.58 | | 22×45 | 4.52 | 25×35 | 4.52 | 30×25 | 4.52 | | | |
| 27000 | | | 22×45 | 4.04 | 25×35 | 4.04 | 30×30 | 3.99 | | 22×50 | 4.98 | 25×40 | 4.98 | 30×30 | 4.98 | | | |
| 33000 | | | 22×50 | 4.58 | 25×40 | 4.56 | 30×30 | 4.58 | | | | 25×45 | 5.49 | 30×35 | 5.49 | 35×30 | 5.49 | |
| 39000 | | | | | 25×45 | 5.29 | 30×35 | 5.21 | 35×30 | 5.05 | | | 25×50 | 6.11 | 30×40 | 6.11 | 35×35 | 6.11 |
| 47000 | | | | | 25×50 | 5.78 | 30×40 | 5.78 | 35×35 | 5.55 | | | | | 30×45 | 6.80 | 35×35 | 6.80 |
| 56000 | | | | | | | 30×45 | 6.59 | 35×35 | 6.40 | | | | | 30×50 | 7.62 | 35×40 | 7.62 |
| 68000 | | | | | | | 30×50 | 7.50 | 35×40 | 7.48 | | | | | | | 35×45 | 8.45 |
| 82000 | | | | | | | | | 35×50 | 8.50 | | | | | | | 35×50 | 9.14 |

| Cap. (μF) | 25Vdc | | | | | 35Vdc | | | | | | | | | | |
|--------------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | φ20 | φ22 | φ25 | φ30 | φ35 | φ20 | φ22 | φ25 | φ30 | φ35 | | | | | | |
| 3300 | | | | | | 20×25 | 2.14 | | | | | | | | | |
| 3900 | | | | | | 20×30 | 2.28 | | | | | | | | | |
| 4700 | | | | | | 20×35 | 2.46 | 22×25 | 2.46 | | | | | | | |
| 5600 | 20×25 | 2.33 | | | | 20×40 | 2.79 | 22×30 | 2.79 | 25×25 | 2.79 | | | | | |
| 6800 | 20×30 | 2.56 | 22×25 | 2.56 | | | | 22×35 | 2.89 | 25×30 | 2.89 | | | | | |
| 8200 | 20×35 | 2.91 | 22×30 | 2.91 | | | | 22×40 | 3.47 | 25×30 | 3.47 | 30×25 | 3.47 | | | |
| 10000 | 20×40 | 3.18 | 22×35 | 3.18 | 25×25 | 3.18 | | 22×45 | 3.59 | 25×35 | 3.59 | 30×30 | 3.59 | | | |
| 12000 | | | 22×40 | 3.53 | 25×30 | 3.53 | | 22×50 | 4.51 | 25×40 | 4.51 | 30×30 | 4.51 | | | |
| 15000 | | | 22×45 | 4.08 | 25×35 | 4.08 | 30×25 | 4.08 | | | 25×45 | 4.80 | 30×35 | 4.80 | 35×30 | 4.80 |
| 18000 | | | 22×50 | 4.68 | 25×40 | 4.68 | 30×30 | 4.68 | | | | 30×40 | 5.70 | 35×35 | 5.70 | |
| 22000 | | | | | 25×45 | 5.19 | 30×35 | 5.19 | 35×30 | 5.19 | | | 30×45 | 6.38 | 35×40 | 6.38 |
| 27000 | | | | | 25×50 | 6.02 | 30×40 | 6.02 | 35×35 | 6.02 | | | | | 35×45 | 6.90 |
| 33000 | | | | | | | 30×45 | 6.75 | 35×40 | 6.75 | | | | | 35×50 | 7.49 |
| 39000 | | | | | | | 30×50 | 7.56 | 35×45 | 7.56 | | | | | | |
| 47000 | | | | | | | | | 35×50 | 8.30 | | | | | | |

| Cap. (μF) | 50Vdc | | | | | 63Vdc | | | | | | | | | | |
|--------------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|
| | φ20 | φ22 | φ25 | φ30 | φ35 | φ20 | φ22 | φ25 | φ30 | φ35 | | | | | | |
| 1500 | | | | | | 20×25 | 1.69 | | | | | | | | | |
| 1800 | | | | | | 20×30 | 2.04 | 22×25 | 2.04 | | | | | | | |
| 2200 | 20×25 | 2.07 | | | | 20×35 | 2.40 | 22×30 | 2.40 | | | | | | | |
| 2700 | 20×30 | 2.21 | 22×25 | 2.21 | | 20×40 | 2.52 | 22×35 | 2.52 | 25×25 | 2.52 | | | | | |
| 3300 | 20×35 | 2.41 | 22×30 | 2.41 | | | | 22×40 | 2.69 | 25×30 | 2.69 | | | | | |
| 3900 | 20×40 | 2.72 | 22×30 | 2.72 | 25×25 | 2.72 | | 22×45 | 3.10 | 25×35 | 3.10 | 30×25 | 3.10 | | | |
| 4700 | | | 22×35 | 3.01 | 25×30 | 3.01 | | 22×50 | 3.49 | 25×40 | 3.49 | 30×30 | 3.49 | | | |
| 5600 | | | 22×40 | 3.43 | 25×35 | 3.43 | 30×25 | 3.43 | | 25×45 | 3.81 | 30×35 | 3.81 | | | |
| 6800 | | | 22×45 | 3.94 | 25×35 | 3.94 | 30×30 | 3.94 | | 25×50 | 4.41 | 30×40 | 4.41 | 35×30 | 4.41 | |
| 8200 | | | | | 25×40 | 4.37 | 30×35 | 4.37 | | | | 30×45 | 4.90 | 35×35 | 4.90 | |
| 10000 | | | | | 25×50 | 5.02 | 30×40 | 5.02 | 35×30 | 5.02 | | | 30×50 | 5.49 | 35×40 | 5.49 |
| 12000 | | | | | | | 30×45 | 5.60 | 35×35 | 5.60 | | | | | 35×45 | 6.30 |
| 15000 | | | | | | | 30×50 | 6.44 | 35×40 | 6.44 | | | | | | |
| 18000 | | | | | | | | | 35×45 | 6.71 | | | | | | |

ケースサイズ Case Size φD×L(mm) → ↑
リップル電流 Ripple Current (A.r.m.s./120Hz,85°C) → ↑

◆標準品一覧表／STANDARD SIZE

| Cap. (μ F) | 80Vdc | | | | | 100Vdc | | | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|-------|------|-------|------|
| | ϕ 20 | ϕ 22 | ϕ 25 | ϕ 30 | ϕ 35 | ϕ 20 | ϕ 22 | ϕ 25 | ϕ 30 | ϕ 35 | | | | | |
| 680 | | | | | | 20×25 | 1.66 | | | | | | | | |
| 820 | | | | | | 20×30 | 1.86 | 22×25 | 1.86 | | | | | | |
| 1000 | 20×25 | 1.56 | | | | 20×30 | 2.02 | 22×30 | 2.02 | | | | | | |
| 1200 | 20×30 | 1.80 | 22×25 | 1.80 | | 20×35 | 2.12 | 22×30 | 2.12 | 25×25 | 2.12 | | | | |
| 1500 | 20×30 | 2.10 | 22×30 | 2.10 | | 20×40 | 2.45 | 22×35 | 2.45 | 25×30 | 2.45 | | | | |
| 1800 | 20×35 | 2.30 | 22×30 | 2.30 | 25×25 | 2.30 | | 22×40 | 2.77 | 25×30 | 2.77 | 30×25 | 2.77 | | |
| 2200 | 20×40 | 2.53 | 22×35 | 2.53 | 25×30 | 2.53 | | 22×45 | 3.12 | 25×35 | 3.12 | 30×30 | 3.12 | | |
| 2700 | | | 22×40 | 2.93 | 25×35 | 2.93 | 30×25 | 2.93 | | 25×40 | 3.61 | 30×30 | 3.61 | | |
| 3300 | | | 22×45 | 3.25 | 25×35 | 3.25 | 30×30 | 3.25 | | 25×50 | 4.06 | 30×35 | 4.06 | 35×30 | 4.06 |
| 3900 | | | | | 25×40 | 3.62 | 30×35 | 3.62 | | | | 30×40 | 4.60 | 35×35 | 4.60 |
| 4700 | | | | | 25×45 | 4.28 | 30×40 | 4.28 | 35×30 | 4.28 | | 30×45 | 5.13 | 35×40 | 5.13 |
| 5600 | | | | | | | 30×45 | 4.55 | 35×35 | 4.55 | | | | 35×45 | 5.75 |
| 6800 | | | | | | | 30×45 | 5.83 | 35×40 | 5.83 | | | | 35×50 | 6.01 |
| 8200 | | | | | | | | | 35×45 | 6.40 | | | | | |
| 10000 | | | | | | | | | 35×50 | 7.03 | | | | | |

| Cap. (μ F) | 160Vdc | | | | | 180Vdc | | | | | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|-------|-------|-------|-------|------|
| | ϕ 20 | ϕ 22 | ϕ 25 | ϕ 30 | ϕ 35 | ϕ 20 | ϕ 22 | ϕ 25 | ϕ 30 | ϕ 35 | | | | | | | |
| 390 | 20×25 | 1.19 | | | | 20×25 | 1.84 | | | | | | | | | | |
| 470 | 20×30 | 1.76 | 22×25 | 1.76 | | 20×30 | 2.08 | 22×25 | 2.08 | | | | | | | | |
| 560 | 20×30 | 2.25 | 22×25 | 2.25 | | 20×35 | 2.25 | 22×30 | 2.25 | | | | | | | | |
| 680 | 20×35 | 2.50 | 22×30 | 2.50 | 25×25 | 2.50 | | 20×40 | 2.50 | 22×35 | 2.50 | 25×25 | 2.50 | | | | |
| 820 | 20×40 | 2.75 | 22×35 | 2.75 | 25×30 | 2.75 | | 20×45 | 2.75 | 22×40 | 2.75 | 25×30 | 2.75 | | | | |
| 1000 | | | 22×40 | 3.00 | 25×30 | 3.00 | 30×25 | 3.00 | | 22×45 | 3.00 | 25×35 | 3.00 | 30×25 | 3.00 | | |
| 1200 | | | 22×45 | 3.25 | 25×35 | 3.25 | 30×30 | 3.25 | | 22×50 | 3.31 | 25×40 | 3.31 | 30×30 | 3.31 | 35×25 | 3.31 |
| 1500 | | | | | 25×45 | 3.73 | 30×35 | 3.73 | | | 25×50 | 3.83 | 30×35 | 3.83 | 35×30 | 3.83 | |
| 1800 | | | | | 25×50 | 4.20 | 30×35 | 4.20 | 35×30 | 4.20 | | | | 30×40 | 4.32 | 35×35 | 4.32 |
| 2200 | | | | | | | 30×45 | 4.78 | 35×35 | 4.78 | | | | 30×50 | 4.92 | 35×40 | 4.92 |
| 2700 | | | | | | | 30×50 | 5.45 | 35×40 | 5.45 | | | | | 35×45 | 5.52 | |
| 3300 | | | | | | | | | 35×45 | 5.75 | | | | | | | |

| Cap. (μ F) | 200Vdc | | | | | 220Vdc | | | | | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|-------|------|-------|-------|-------|------|
| | ϕ 20 | ϕ 22 | ϕ 25 | ϕ 30 | ϕ 35 | ϕ 20 | ϕ 22 | ϕ 25 | ϕ 30 | ϕ 35 | | | | | | | |
| 270 | | | | | | 20×25 | 1.42 | | | | | | | | | | |
| 330 | 20×25 | 1.44 | | | | 20×30 | 1.58 | 22×25 | 1.58 | | | | | | | | |
| 390 | 20×30 | 1.68 | 22×25 | 1.68 | | 20×35 | 1.75 | 22×30 | 1.75 | | | | | | | | |
| 470 | 20×35 | 1.93 | 22×30 | 1.93 | 25×25 | 1.93 | | 20×35 | 1.99 | 22×30 | 1.99 | 25×25 | 1.99 | | | | |
| 560 | 20×35 | 2.43 | 22×30 | 2.43 | 25×25 | 2.43 | | 20×40 | 2.28 | 22×35 | 2.28 | 25×30 | 2.28 | | | | |
| 680 | 20×40 | 2.68 | 22×35 | 2.68 | 25×30 | 2.68 | 30×25 | 2.68 | | 22×40 | 2.46 | 25×30 | 2.46 | 30×25 | 2.46 | | |
| 820 | | | 22×40 | 2.93 | 25×30 | 2.93 | 30×25 | 2.93 | | 22×45 | 2.81 | 25×35 | 2.81 | 30×30 | 2.81 | | |
| 1000 | | | 22×45 | 3.25 | 25×35 | 3.25 | 30×30 | 3.25 | 35×25 | 3.25 | | 25×45 | 3.29 | 30×30 | 3.29 | | |
| 1200 | | | | | 25×45 | 3.50 | 30×35 | 3.50 | 35×30 | 3.50 | | 25×50 | 3.60 | 30×35 | 3.60 | 35×30 | 3.60 |
| 1500 | | | | | 25×50 | 3.87 | 30×40 | 3.87 | 35×30 | 3.87 | | | | 30×45 | 3.92 | 35×35 | 3.92 |
| 1800 | | | | | | | 30×45 | 4.32 | 35×35 | 4.32 | | | | 30×50 | 4.30 | 35×40 | 4.30 |
| 2200 | | | | | | | 30×50 | 4.92 | 35×40 | 4.92 | | | | | 35×50 | 4.95 | |
| 2700 | | | | | | | | | 35×50 | 5.45 | | | | | | | |

ケースサイズ Case Size ϕ D × L (mm) \rightarrow
 リプル電流 Ripple Current (A.r.m.s./120Hz,85°C) \rightarrow

