



**THE DATASHEET OF
ECC-A3A151JGE**

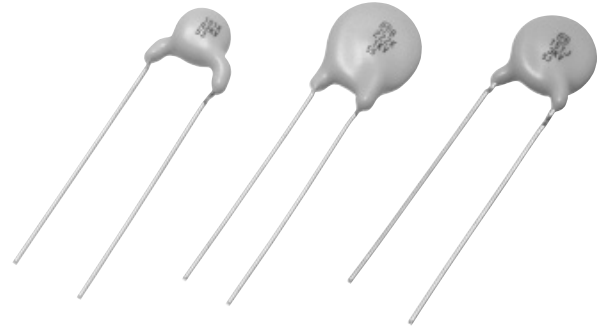


High Voltage Ceramic Disc Capacitors (Low loss type)

Series: **KGE/Char. SL/GP, 1 to 6 kVDC**

Series: **KBP/Char. B/Y5P, 1 to 3 kVDC**

Series: **KRP/Char. R/Y5R, 1 to 3 kVDC**



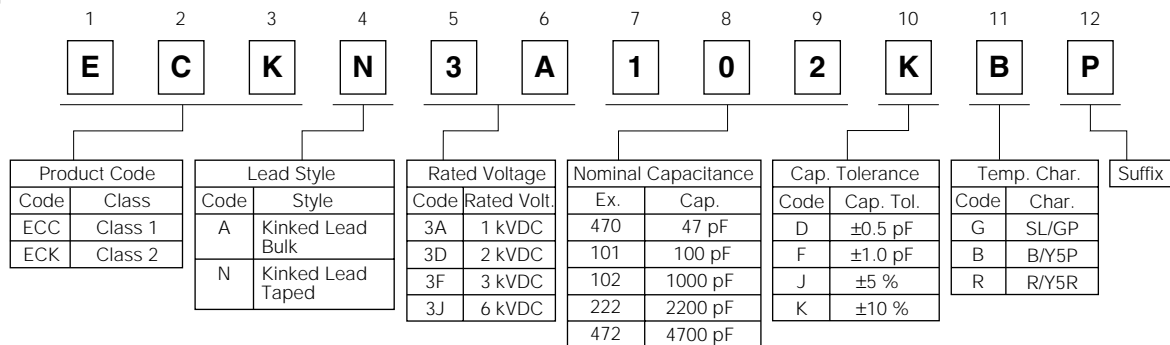
■ Features

- Wide operating temperature range: (-25 to 105 °C or -25 to 125 °C)
- Improved Voltage vs. Temperature Rise
- Flame-retardant insulated coating
- Easy mounting through kinked leads and radial taping

■ Recommended Applications

- Snubber circuit for switching power supply
- Horizontal resonance circuitry for TVs and CRT displays
- Inverter type lighting apparatus
- Ballast circuit for LCD backlighting inverter (For series KGE)
- Other high voltage pulse and DC circuitry

■ Explanation of Part Numbers



■ Specifications

| Characteristic | Series KGE | Series KBP, KRP | | | | | | | | | | | | |
|---------------------------------|---|--|--------------|-----------|----------------|-------------|-----|-------|-------|--------------|-----|-------|-------|--------------|
| Operating Temperature Range | -25 to 105 °C | -25 to 125 °C | | | | | | | | | | | | |
| Rated Voltage | 1 kVDC to 6 kVDC | 1 kVDC to 3 kVDC | | | | | | | | | | | | |
| Dielectric Withstanding Voltage | Rated Voltage 1 to 3 kVDC: 200 % of Rated Voltage for 1 to 5 seconds Rated Voltage 6 kVDC: 150 % of Rated Voltage for 1 to 5 seconds | Rated Voltage 1 to 3 kVDC: 200 % of Rated Voltage for 1 to 5 seconds | | | | | | | | | | | | |
| Capacitance | Within the specified tolerance, when measured at 1 MHz ± 20 %, 1 to 5 Vrms, and 20 °C | Within the specified tolerance, when measured at 1 kHz ± 20 %, 1 to 5 Vrms, and 20 °C | | | | | | | | | | | | |
| Q or Dissipation Factor (tanδ) | 30 pF or under Q > 400+20 C (C:Cap.pF) over 30 pF Q > 1000 at 1 MHz ± 20 %, 1 to 5 Vrms. and 20 °C | Series KBP : tanδ > 0.025 Series KRP : tanδ > 0.002 at 1 kHz ± 20 %, 1 to 5 Vrms. and 20 °C | | | | | | | | | | | | |
| Insulation Resistance | 10000 M Ω min. at 500 VDC 1 minute electrification | | | | | | | | | | | | | |
| Temperature Characteristics | Temperature Coefficient: +350 to -1000 ppm/°C (Temperature Range:20 to 85°C) | <table border="1"> <thead> <tr> <th>Series</th> <th>Temp.Char</th> <th>max.Cap.Change</th> <th>Temp. Range</th> </tr> </thead> <tbody> <tr> <td>KBP</td> <td>B/Y5P</td> <td>±10 %</td> <td>-25 to 85 °C</td> </tr> <tr> <td>KRP</td> <td>R/Y5R</td> <td>±15 %</td> <td>-25 to 85 °C</td> </tr> </tbody> </table> | Series | Temp.Char | max.Cap.Change | Temp. Range | KBP | B/Y5P | ±10 % | -25 to 85 °C | KRP | R/Y5R | ±15 % | -25 to 85 °C |
| Series | Temp.Char | max.Cap.Change | Temp. Range | | | | | | | | | | | |
| KBP | B/Y5P | ±10 % | -25 to 85 °C | | | | | | | | | | | |
| KRP | R/Y5R | ±15 % | -25 to 85 °C | | | | | | | | | | | |

■ Rated Voltage and Capacitance Range

| Series Name | Temp. Char. | Rated Voltage | Capacitance Range in pF | | | | Typical Applications |
|-------------|-------------|---------------|---|-----|------|-------|--|
| | | | 10 | 100 | 1000 | 10000 | |
| Series KGE | SL | 1 kVDC | [Bar chart showing range from 10 to 470 pF] | | | | Ballast circuit of LCD backlighting inverter |
| | | 2 kVDC | [Bar chart showing range from 10 to 220 pF] | | | | |
| | | 3 kVDC | [Bar chart showing range from 10 to 150 pF] | | | | Snubber circuit of switching power supply |
| | | 6 kVDC | [Bar chart showing range from 10 to 150 pF] | | | | |
| Series KBP | B | 1 kVDC | [Bar chart showing range from 100 to 5600 pF] | | | | Snubber circuit of switching power supply |
| | | 2 kVDC | [Bar chart showing range from 100 to 5600 pF] | | | | Horizontal resonance circuit of TV and CRT display |
| | | 3 kVDC | [Bar chart showing range from 100 to 2700 pF] | | | | |
| Series KRP | R | 1 kVDC | [Bar chart showing range from 100 to 4700 pF] | | | | Snubber circuit of switching power supply |
| | | 2 kVDC | [Bar chart showing range from 100 to 4700 pF] | | | | |
| | | 3 kVDC | [Bar chart showing range from 100 to 2200 pF] | | | | |

■ Dimensions "D" (Body Diameter)

unit : mm

| Cap. in pF | KGE | | | | KBP | | | KRP | | |
|------------|------|------|------|------|------|------|------|------|------|------|
| | 1 kV | 2 kV | 3 kV | 6 kV | 1 kV | 2 kV | 3 kV | 1 kV | 2 kV | 3 kV |
| 12 to 22 | 6.0 | 7.0 | 7.0 | 7.0 | | | | | | |
| 22 to 33 | 6.0 | 7.0 | 7.0 | 8.0 | | | | | | |
| 39 | 6.0 | 7.0 | 7.0 | 9.0 | | | | | | |
| 47 | 6.0 | 7.0 | 7.0 | 9.0 | | | | | | |
| 56 | 6.0 | 7.0 | 8.0 | 10.0 | | | | | | |
| 68 | 6.0 | 7.0 | 8.0 | 11.0 | | | | | | |
| 82 | 6.0 | 7.0 | 9.0 | 11.0 | | | | | | |
| 100 | 7.0 | 8.0 | 10.0 | 13.0 | 6.0 | 7.0 | 7.5 | 6.0 | 7.0 | 7.5 |
| 120 | 7.0 | 8.0 | 10.0 | 13.0 | 6.0 | 7.0 | 7.5 | 6.0 | 7.0 | 7.5 |
| 150 | 8.0 | 9.0 | 11.0 | 15.0 | 6.0 | 7.0 | 7.5 | 6.0 | 7.0 | 7.5 |
| 180 | 8.0 | 10.0 | | | 6.0 | 7.0 | 7.5 | 6.0 | 7.0 | 7.5 |
| 220 | 9.0 | 10.0 | | | 6.0 | 7.0 | 7.5 | 6.0 | 7.0 | 8.0 |
| 270 | 9.0 | | | | 6.0 | 7.0 | 7.5 | 6.0 | 7.0 | 8.0 |
| 330 | 11.0 | | | | 6.0 | 7.0 | 8.0 | 6.0 | 7.5 | 8.5 |
| 390 | 11.0 | | | | 6.0 | 7.0 | 9.0 | 7.0 | 7.5 | 9.5 |
| 470 | 13.0 | | | | 6.0 | 7.5 | 9.5 | 7.0 | 9.0 | 9.5 |
| 560 | | | | | 7.0 | 8.0 | 10.0 | 7.0 | 9.0 | 10.5 |
| 680 | | | | | 7.0 | 9.0 | 11.0 | 7.5 | 10.0 | 10.5 |
| 820 | | | | | 7.5 | 9.0 | 11.0 | 7.5 | 10.0 | 12.5 |
| 1000 | | | | | 9.0 | 10.0 | 12.5 | 9.0 | 12.0 | 12.5 |
| 1200 | | | | | 9.0 | 10.5 | 14.5 | 9.0 | 12.0 | 14.5 |
| 1500 | | | | | 9.5 | 12.0 | 14.5 | 10.5 | 12.0 | 14.5 |
| 1800 | | | | | 12.0 | 12.5 | 16.0 | 10.5 | 14.0 | 16.5 |
| 2200 | | | | | 12.0 | 14.0 | 17.0 | 11.5 | 16.0 | 17.0 |
| 2700 | | | | | 13.5 | 16.0 | 18.5 | 13.0 | 16.0 | |
| 3300 | | | | | 13.5 | 17.0 | | 13.0 | 19.0 | |
| 3900 | | | | | 15.5 | 18.0 | | 14.0 | 20.0 | |
| 4700 | | | | | 15.5 | 25.0 | | 16.5 | 21.0 | |
| 5600 | | | | | 17.0 | 25.0 | | | | |

■ Ratings and Characteristics

- Series KGE (Class 1, Temp. Char. SL/GP, 1 kVDC to 6 kVDC)

| Rated Volt. | Cap. in pF | Capacitance Tolerance (%) | Dimensions in mm | | Kinked Lead Type (Bulk) | | | Kinked Lead Taping Type | | | |
|-------------|------------|---------------------------|------------------|--------------|-------------------------|------------------|--------------|-------------------------|------------|------------------|------|
| | | | D max. | T max. | Part Number | Dimensions in mm | | Part Number | Taped Type | Dimensions in mm | |
| | | | | | | F | d | | | F | d |
| 1 kVDC | 12 | ±5, ±10 | 6.0 | 5.0 | ECCA3A120□GE | 5.0 | 0.60 | ECCN3A120□GE | NO | 5.0 | 0.60 |
| | 15 | ±5, ±10 | 6.0 | 5.0 | ECCA3A150□GE | 5.0 | 0.60 | ECCN3A150□GE | NO | 5.0 | 0.60 |
| | 18 | ±5, ±10 | 6.0 | 5.0 | ECCA3A180□GE | 5.0 | 0.60 | ECCN3A180□GE | NO | 5.0 | 0.60 |
| | 22 | ±5, ±10 | 6.0 | 5.0 | ECCA3A220□GE | 5.0 | 0.60 | ECCN3A220□GE | NO | 5.0 | 0.60 |
| | 27 | ±5, ±10 | 6.0 | 5.0 | ECCA3A270□GE | 5.0 | 0.60 | ECCN3A270□GE | NO | 5.0 | 0.60 |
| | 33 | ±5, ±10 | 6.0 | 5.0 | ECCA3A330□GE | 5.0 | 0.60 | ECCN3A330□GE | NO | 5.0 | 0.60 |
| | 39 | ±5, ±10 | 6.0 | 5.0 | ECCA3A390□GE | 5.0 | 0.60 | ECCN3A390□GE | NO | 5.0 | 0.60 |
| | 47 | ±5, ±10 | 6.0 | 5.0 | ECCA3A470□GE | 5.0 | 0.60 | ECCN3A470□GE | NO | 5.0 | 0.60 |
| | 56 | ±5, ±10 | 6.0 | 5.0 | ECCA3A560□GE | 5.0 | 0.60 | ECCN3A560□GE | NO | 5.0 | 0.60 |
| | 68 | ±5, ±10 | 6.0 | 5.0 | ECCA3A680□GE | 5.0 | 0.60 | ECCN3A680□GE | NO | 5.0 | 0.60 |
| | 82 | ±5, ±10 | 6.0 | 5.0 | ECCA3A820□GE | 5.0 | 0.60 | ECCN3A820□GE | NO | 5.0 | 0.60 |
| | 100 | ±5, ±10 | 7.0 | 5.0 | ECCA3A101□GE | 5.0 | 0.60 | ECCN3A101□GE | NO | 5.0 | 0.60 |
| | 120 | ±5, ±10 | 7.0 | 5.0 | ECCA3A121□GE | 5.0 | 0.60 | ECCN3A121□GE | NO | 5.0 | 0.60 |
| | 150 | ±5, ±10 | 8.0 | 5.0 | ECCA3A151□GE | 5.0 | 0.60 | ECCN3A151□GE | NO | 5.0 | 0.60 |
| | 180 | ±5, ±10 | 8.0 | 5.0 | ECCA3A181□GE | 5.0 | 0.60 | ECCN3A181□GE | NO | 5.0 | 0.60 |
| | 220 | ±5, ±10 | 9.0 | 5.0 | ECCA3A221□GE | 5.0 | 0.60 | ECCN3A221□GE | NO | 5.0 | 0.60 |
| | 270 | ±5, ±10 | 9.0 | 5.0 | ECCA3A271□GE | 5.0 | 0.60 | ECCN3A271□GE | NO | 5.0 | 0.60 |
| | 330 | ±5, ±10 | 11.0 | 5.0 | ECCA3A331□GE | 5.0 | 0.60 | ECCN3A331□GE | NO | 5.0 | 0.60 |
| 390 | ±5, ±10 | 11.0 | 5.0 | ECCA3A391□GE | 5.0 | 0.60 | ECCN3A391□GE | NO | 5.0 | 0.60 | |
| 470 | ±5, ±10 | 13.0 | 5.0 | ECCA3A471□GE | 7.5 | 0.65 | ECCN3A471□GE | N1 | 7.5 | 0.65 | |
| 2 kVDC | 12 | ±5, ±10 | 7.0 | 5.5 | ECCA3D120□GE | 7.5 | 0.65 | ECCN3D120□GE | N1 | 7.5 | 0.65 |
| | 15 | ±5, ±10 | 7.0 | 5.5 | ECCA3D150□GE | 7.5 | 0.65 | ECCN3D150□GE | N1 | 7.5 | 0.65 |
| | 18 | ±5, ±10 | 7.0 | 5.5 | ECCA3D180□GE | 7.5 | 0.65 | ECCN3D180□GE | N1 | 7.5 | 0.65 |
| | 22 | ±5, ±10 | 7.0 | 5.5 | ECCA3D220□GE | 7.5 | 0.65 | ECCN3D220□GE | N1 | 7.5 | 0.65 |
| | 27 | ±5, ±10 | 7.0 | 5.5 | ECCA3D270□GE | 7.5 | 0.65 | ECCN3D270□GE | N1 | 7.5 | 0.65 |
| | 33 | ±5, ±10 | 7.0 | 5.5 | ECCA3D330□GE | 7.5 | 0.65 | ECCN3D330□GE | N1 | 7.5 | 0.65 |
| | 39 | ±5, ±10 | 7.0 | 5.5 | ECCA3D390□GE | 7.5 | 0.65 | ECCN3D390□GE | N1 | 7.5 | 0.65 |
| | 47 | ±5, ±10 | 7.0 | 5.5 | ECCA3D470□GE | 7.5 | 0.65 | ECCN3D470□GE | N1 | 7.5 | 0.65 |
| | 56 | ±5, ±10 | 7.0 | 5.5 | ECCA3D560□GE | 7.5 | 0.65 | ECCN3D560□GE | N1 | 7.5 | 0.65 |
| | 68 | ±5, ±10 | 7.0 | 5.5 | ECCA3D680□GE | 7.5 | 0.65 | ECCN3D680□GE | N1 | 7.5 | 0.65 |
| | 82 | ±5, ±10 | 7.0 | 5.5 | ECCA3D820□GE | 7.5 | 0.65 | ECCN3D820□GE | N1 | 7.5 | 0.65 |
| | 100 | ±5, ±10 | 8.0 | 5.5 | ECCA3D101□GE | 7.5 | 0.65 | ECCN3D101□GE | N1 | 7.5 | 0.65 |
| 120 | ±5, ±10 | 8.0 | 5.5 | ECCA3D121□GE | 7.5 | 0.65 | ECCN3D121□GE | N1 | 7.5 | 0.65 | |
| 150 | ±5, ±10 | 9.0 | 5.5 | ECCA3D151□GE | 7.5 | 0.65 | ECCN3D151□GE | N1 | 7.5 | 0.65 | |
| 180 | ±5, ±10 | 10.0 | 5.5 | ECCA3D181□GE | 7.5 | 0.65 | ECCN3D181□GE | N1 | 7.5 | 0.65 | |
| 220 | ±5, ±10 | 10.0 | 5.5 | ECCA3D221□GE | 7.5 | 0.65 | ECCN3D221□GE | N1 | 7.5 | 0.65 | |
| 3 kVDC | 12 | ±5, ±10 | 7.0 | 6.0 | ECCA3F120□GE | 7.5 | 0.65 | ECCN3F120□GE | N1 | 7.5 | 0.65 |
| | 15 | ±5, ±10 | 7.0 | 6.0 | ECCA3F150□GE | 7.5 | 0.65 | ECCN3F150□GE | N1 | 7.5 | 0.65 |
| | 18 | ±5, ±10 | 7.0 | 6.0 | ECCA3F180□GE | 7.5 | 0.65 | ECCN3F180□GE | N1 | 7.5 | 0.65 |
| | 22 | ±5, ±10 | 7.0 | 6.0 | ECCA3F220□GE | 7.5 | 0.65 | ECCN3F220□GE | N1 | 7.5 | 0.65 |
| | 27 | ±5, ±10 | 7.0 | 6.0 | ECCA3F270□GE | 7.5 | 0.65 | ECCN3F270□GE | N1 | 7.5 | 0.65 |
| | 33 | ±5, ±10 | 7.0 | 6.0 | ECCA3F330□GE | 7.5 | 0.65 | ECCN3F330□GE | N1 | 7.5 | 0.65 |
| | 39 | ±5, ±10 | 7.0 | 6.0 | ECCA3F390□GE | 7.5 | 0.65 | ECCN3F390□GE | N1 | 7.5 | 0.65 |
| | 47 | ±5, ±10 | 7.0 | 6.0 | ECCA3F470□GE | 7.5 | 0.65 | ECCN3F470□GE | N1 | 7.5 | 0.65 |
| | 56 | ±5, ±10 | 8.0 | 6.0 | ECCA3F560□GE | 7.5 | 0.65 | ECCN3F560□GE | N1 | 7.5 | 0.65 |
| | 68 | ±5, ±10 | 8.0 | 6.0 | ECCA3F680□GE | 7.5 | 0.65 | ECCN3F680□GE | N1 | 7.5 | 0.65 |
| | 82 | ±5, ±10 | 9.0 | 6.0 | ECCA3F820□GE | 7.5 | 0.65 | ECCN3F820□GE | N1 | 7.5 | 0.65 |
| | 100 | ±5, ±10 | 10.0 | 6.0 | ECCA3F101□GE | 7.5 | 0.65 | ECCN3F101□GE | N1 | 7.5 | 0.65 |
| | 120 | ±5, ±10 | 10.0 | 6.0 | ECCA3F121□GE | 7.5 | 0.65 | ECCN3F121□GE | N1 | 7.5 | 0.65 |
| | 150 | ±5, ±10 | 11.0 | 6.0 | ECCA3F151□GE | 7.5 | 0.65 | ECCN3F151□GE | N1 | 7.5 | 0.65 |

Note : □--Capacitance Tolerance Code J (± 5%) or K (± 10%)

■ Ratings and Characteristics

● Series KGE (Class 1, Temp. Char. SL/GP, 1 to 6 kVDC) (Continuation)

| Rated Volt. | Cap. in pF | Capacitance Tolerance (%) | Dimensions in mm | | Kinked Lead Type (Bulk) | | | Kinked Lead Taping Type | | | |
|-------------|------------|---------------------------|------------------|--------------|-------------------------|------------------|--------------|-------------------------|------------|------------------|------|
| | | | D max. | T max. | Part Number | Dimensions in mm | | Part Number | Taped Type | Dimensions in mm | |
| | | | | | | F | d | | | F | d |
| 6 kVDC | 5 | ±0.5pF or ±1pF | 7.0 | 6.0 | ECCA3J050□GE | 7.5 | 0.65 | ECCN3J050□GE | N1 | 7.5 | 0.65 |
| | 6 | ±0.5pF or ±1pF | 7.0 | 6.0 | ECCA3J060□GE | 7.5 | 0.65 | ECCN3J060□GE | N1 | 7.5 | 0.65 |
| | 7 | ±0.5pF or ±1pF | 7.0 | 6.0 | ECCA3J070□GE | 7.5 | 0.65 | ECCN3J070□GE | N1 | 7.5 | 0.65 |
| | 8 | ±0.5pF or ±1pF | 7.0 | 6.0 | ECCA3J080□GE | 7.5 | 0.65 | ECCN3J080□GE | N1 | 7.5 | 0.65 |
| | 9 | ±0.5pF or ±1pF | 7.0 | 6.0 | ECCA3J090□GE | 7.5 | 0.65 | ECCN3J090□GE | N1 | 7.5 | 0.65 |
| | 10 | ±0.5pF or ±1pF | 7.0 | 6.0 | ECCA3J100□GE | 7.5 | 0.65 | ECCN3J100□GE | N1 | 7.5 | 0.65 |
| | 12 | ±5 or ±10 | 7.0 | 6.0 | ECCA3J120□GE | 7.5 | 0.65 | ECCN3J120□GE | N1 | 7.5 | 0.65 |
| | 15 | ±5 or ±10 | 7.0 | 6.0 | ECCA3J150□GE | 7.5 | 0.65 | ECCN3J150□GE | N1 | 7.5 | 0.65 |
| | 18 | ±5 or ±10 | 7.0 | 6.0 | ECCA3J180□GE | 7.5 | 0.65 | ECCN3J180□GE | N1 | 7.5 | 0.65 |
| | 22 | ±5 or ±10 | 7.0 | 6.0 | ECCA3J220□GE | 7.5 | 0.65 | ECCN3J220□GE | N1 | 7.5 | 0.65 |
| | 27 | ±5 or ±10 | 8.0 | 6.0 | ECCA3J270□GE | 7.5 | 0.65 | ECCN3J270□GE | N1 | 7.5 | 0.65 |
| | 33 | ±5 or ±10 | 8.0 | 6.0 | ECCA3J330□GE | 7.5 | 0.65 | ECCN3J330□GE | N1 | 7.5 | 0.65 |
| | 39 | ±5 or ±10 | 9.0 | 6.0 | ECCA3J390□GE | 7.5 | 0.65 | ECCN3J390□GE | N1 | 7.5 | 0.65 |
| | 47 | ±5 or ±10 | 9.0 | 6.0 | ECCA3J470□GE | 7.5 | 0.65 | ECCN3J470□GE | N1 | 7.5 | 0.65 |
| | 56 | ±5 or ±10 | 10.0 | 6.0 | ECCA3J560□GE | 7.5 | 0.65 | ECCN3J560□GE | N1 | 7.5 | 0.65 |
| | 68 | ±5 or ±10 | 11.0 | 6.0 | ECCA3J680□GE | 7.5 | 0.65 | ECCN3J680□GE | N1 | 7.5 | 0.65 |
| | 82 | ±5 or ±10 | 11.0 | 6.0 | ECCA3J820□GE | 7.5 | 0.65 | ECCN3J820□GE | N1 | 7.5 | 0.65 |
| | 100 | ±5 or ±10 | 13.0 | 6.0 | ECCA3J101□GE | 7.5 | 0.65 | ECCN3J101□GE | N1 | 7.5 | 0.65 |
| 120 | ±5 or ±10 | 13.0 | 6.0 | ECCA3J121□GE | 7.5 | 0.65 | ECCN3J121□GE | N1 | 7.5 | 0.65 | |
| 150 | ±5 or ±10 | 15.0 | 6.0 | ECCA3J151□GE | 7.5 | 0.65 | ECCN3J151□GE | N2 | 7.5 | 0.65 | |

Note : □--Capacitance Tolerance Code D (± 0.5pF) or F (± 1pF) or J (± 5%) or K (± 10%)

● Series KBP (Class 2, Temp. Char. B/Y5P, 1 to 3 kVDC)

| Rated Volt. | Cap. in pF | Capacitance Tolerance (%) | Dimensions in mm | | Kinked Lead Type (Bulk) | | | Kinked Lead Taping Type | | | |
|-------------|------------|---------------------------|------------------|--------------|-------------------------|------------------|--------------|-------------------------|------------|------------------|------|
| | | | D max. | T max. | Part Number | Dimensions in mm | | Part Number | Taped Type | Dimensions in mm | |
| | | | | | | F | d | | | F | d |
| 1 kVDC | 100 | ±10 | 6.0 | 4.5 | ECKA3A101KBP | 5.0 | 0.60 | ECKN3A101KBP | N0 | 5.0 | 0.60 |
| | 120 | ±10 | 6.0 | 4.5 | ECKA3A121KBP | 5.0 | 0.60 | ECKN3A121KBP | N0 | 5.0 | 0.60 |
| | 150 | ±10 | 6.0 | 4.5 | ECKA3A151KBP | 5.0 | 0.60 | ECKN3A151KBP | N0 | 5.0 | 0.60 |
| | 180 | ±10 | 6.0 | 4.5 | ECKA3A181KBP | 5.0 | 0.60 | ECKN3A181KBP | N0 | 5.0 | 0.60 |
| | 220 | ±10 | 6.0 | 4.5 | ECKA3A221KBP | 5.0 | 0.60 | ECKN3A221KBP | N0 | 5.0 | 0.60 |
| | 270 | ±10 | 6.0 | 4.5 | ECKA3A271KBP | 5.0 | 0.60 | ECKN3A271KBP | N0 | 5.0 | 0.60 |
| | 330 | ±10 | 6.0 | 4.5 | ECKA3A331KBP | 5.0 | 0.60 | ECKN3A331KBP | N0 | 5.0 | 0.60 |
| | 390 | ±10 | 6.0 | 4.5 | ECKA3A391KBP | 5.0 | 0.60 | ECKN3A391KBP | N0 | 5.0 | 0.60 |
| | 470 | ±10 | 6.0 | 4.5 | ECKA3A471KBP | 5.0 | 0.60 | ECKN3A471KBP | N0 | 5.0 | 0.60 |
| | 560 | ±10 | 7.0 | 4.5 | ECKA3A561KBP | 5.0 | 0.60 | ECKN3A561KBP | N0 | 5.0 | 0.60 |
| | 680 | ±10 | 7.0 | 4.5 | ECKA3A681KBP | 5.0 | 0.60 | ECKN3A681KBP | N0 | 5.0 | 0.60 |
| | 820 | ±10 | 7.5 | 4.5 | ECKA3A821KBP | 5.0 | 0.60 | ECKN3A821KBP | N0 | 5.0 | 0.60 |
| | 1000 | ±10 | 9.0 | 4.5 | ECKA3A102KBP | 5.0 | 0.60 | ECKN3A102KBP | N0 | 5.0 | 0.60 |
| | 1200 | ±10 | 9.0 | 4.5 | ECKA3A122KBP | 5.0 | 0.60 | ECKN3A122KBP | N0 | 5.0 | 0.60 |
| | 1500 | ±10 | 9.5 | 4.5 | ECKA3A152KBP | 5.0 | 0.60 | ECKN3A152KBP | N0 | 5.0 | 0.60 |
| | 1800 | ±10 | 10.0 | 4.5 | ECKA3A182KBP | 5.0 | 0.60 | ECKN3A182KBP | N0 | 5.0 | 0.60 |
| | 2200 | ±10 | 12.0 | 4.5 | ECKA3A222KBP | 5.0 | 0.60 | ECKN3A222KBP | N0 | 5.0 | 0.60 |
| | 2700 | ±10 | 12.0 | 4.5 | ECKA3A272KBP | 5.0 | 0.60 | ECKN3A272KBP | N0 | 5.0 | 0.60 |
| | 3300 | ±10 | 13.5 | 4.5 | ECKA3A332KBP | 10.0 | 0.65 | ECKN3A332KBP | N1 | 7.5 | 0.65 |
| | 3900 | ±10 | 13.5 | 4.5 | ECKA3A392KBP | 10.0 | 0.65 | ECKN3A392KBP | N1 | 7.5 | 0.65 |
| 4700 | ±10 | 15.5 | 4.5 | ECKA3A472KBP | 10.0 | 0.65 | ECKN3A472KBP | N2 | 7.5 | 0.65 | |
| 5600 | ±10 | 17.0 | 4.5 | ECKA3A562KBP | 10.0 | 0.65 | ECKN3A562KBP | N2 | 7.5 | 0.65 | |

■ Ratings and Characteristics

● Series KBP (Class 2, Temp. Char. B/Y5P, 1 to 3 kVDC) (Continuation)

| Rated Volt. | Cap. in pF | Capacitance Tolerance (%) | Dimensions in mm | | Kinked Lead Type (Bulk) | | | Kinked Lead Taping Type | | | |
|-------------|------------|---------------------------|------------------|--------------|-------------------------|------------------|--------------|-------------------------|------------|------------------|------|
| | | | D max. | T max. | Part Number | Dimensions in mm | | Part Number | Taped Type | Dimensions in mm | |
| | | | | | | F | d | | | F | d |
| 2 kVDC | 100 | ±10 | 7.0 | 5.0 | ECKA3D101KBP | 7.5 | 0.65 | ECKN3D101KBP | N1 | 7.5 | 0.65 |
| | 120 | ±10 | 7.0 | 5.0 | ECKA3D121KBP | 7.5 | 0.65 | ECKN3D121KBP | N1 | 7.5 | 0.65 |
| | 150 | ±10 | 7.0 | 5.0 | ECKA3D151KBP | 7.5 | 0.65 | ECKN3D151KBP | N1 | 7.5 | 0.65 |
| | 180 | ±10 | 7.0 | 5.0 | ECKA3D181KBP | 7.5 | 0.65 | ECKN3D181KBP | N1 | 7.5 | 0.65 |
| | 220 | ±10 | 7.0 | 5.0 | ECKA3D221KBP | 7.5 | 0.65 | ECKN3D221KBP | N1 | 7.5 | 0.65 |
| | 270 | ±10 | 7.0 | 5.0 | ECKA3D271KBP | 7.5 | 0.65 | ECKN3D271KBP | N1 | 7.5 | 0.65 |
| | 330 | ±10 | 7.0 | 5.0 | ECKA3D331KBP | 7.5 | 0.65 | ECKN3D331KBP | N1 | 7.5 | 0.65 |
| | 390 | ±10 | 7.0 | 5.0 | ECKA3D391KBP | 7.5 | 0.65 | ECKN3D391KBP | N1 | 7.5 | 0.65 |
| | 470 | ±10 | 7.5 | 5.0 | ECKA3D471KBP | 7.5 | 0.65 | ECKN3D471KBP | N1 | 7.5 | 0.65 |
| | 560 | ±10 | 8.0 | 5.0 | ECKA3D561KBP | 7.5 | 0.65 | ECKN3D561KBP | N1 | 7.5 | 0.65 |
| | 680 | ±10 | 9.0 | 5.0 | ECKA3D681KBP | 7.5 | 0.65 | ECKN3D681KBP | N1 | 7.5 | 0.65 |
| | 820 | ±10 | 9.0 | 5.0 | ECKA3D821KBP | 7.5 | 0.65 | ECKN3D821KBP | N1 | 7.5 | 0.65 |
| | 1000 | ±10 | 10.0 | 5.0 | ECKA3D102KBP | 7.5 | 0.65 | ECKN3D102KBP | N1 | 7.5 | 0.65 |
| | 1200 | ±10 | 10.5 | 5.0 | ECKA3D122KBP | 7.5 | 0.65 | ECKN3D122KBP | N1 | 7.5 | 0.65 |
| | 1500 | ±10 | 12.0 | 5.0 | ECKA3D152KBP | 7.5 | 0.65 | ECKN3D152KBP | N1 | 7.5 | 0.65 |
| | 1800 | ±10 | 12.5 | 5.0 | ECKA3D182KBP | 7.5 | 0.65 | ECKN3D182KBP | N1 | 7.5 | 0.65 |
| | 2200 | ±10 | 14.0 | 5.0 | ECKA3D222KBP | 10.0 | 0.65 | ECKN3D222KBP | N2 | 7.5 | 0.65 |
| | 2700 | ±10 | 16.0 | 5.0 | ECKA3D272KBP | 10.0 | 0.65 | ECKN3D272KBP | N2 | 7.5 | 0.65 |
| | 3300 | ±10 | 17.0 | 5.0 | ECKA3D332KBP | 10.0 | 0.65 | ECKN3D332KBP | N2 | 7.5 | 0.65 |
| | 3900 | ±10 | 18.0 | 5.0 | ECKA3D392KBP | 10.0 | 0.65 | ECKN3D392KBP | N2 | 7.5 | 0.65 |
| 4700 | ±10 | 25.0 | 5.0 | ECKA3D472KBP | 10.0 | 0.65 | — | — | — | — | |
| 5600 | ±10 | 25.0 | 5.0 | ECKA3D562KBP | 10.0 | 0.65 | — | — | — | — | |
| 3 kVDC | 100 | ±10 | 7.5 | 6.0 | ECKA3F101KBP | 7.5 | 0.65 | ECKN3F101KBP | N1 | 7.5 | 0.65 |
| | 120 | ±10 | 7.5 | 6.0 | ECKA3F121KBP | 7.5 | 0.65 | ECKN3F121KBP | N1 | 7.5 | 0.65 |
| | 150 | ±10 | 7.5 | 6.0 | ECKA3F151KBP | 7.5 | 0.65 | ECKN3F151KBP | N1 | 7.5 | 0.65 |
| | 180 | ±10 | 7.5 | 6.0 | ECKA3F181KBP | 7.5 | 0.65 | ECKN3F181KBP | N1 | 7.5 | 0.65 |
| | 220 | ±10 | 7.5 | 6.0 | ECKA3F221KBP | 7.5 | 0.65 | ECKN3F221KBP | N1 | 7.5 | 0.65 |
| | 270 | ±10 | 7.5 | 6.0 | ECKA3F271KBP | 7.5 | 0.65 | ECKN3F271KBP | N1 | 7.5 | 0.65 |
| | 330 | ±10 | 8.0 | 6.0 | ECKA3F331KBP | 7.5 | 0.65 | ECKN3F331KBP | N1 | 7.5 | 0.65 |
| | 390 | ±10 | 9.0 | 6.0 | ECKA3F391KBP | 7.5 | 0.65 | ECKN3F391KBP | N1 | 7.5 | 0.65 |
| | 470 | ±10 | 9.5 | 6.0 | ECKA3F471KBP | 7.5 | 0.65 | ECKN3F471KBP | N1 | 7.5 | 0.65 |
| | 560 | ±10 | 10.0 | 6.0 | ECKA3F561KBP | 7.5 | 0.65 | ECKN3F561KBP | N1 | 7.5 | 0.65 |
| | 680 | ±10 | 11.0 | 6.0 | ECKA3F681KBP | 7.5 | 0.65 | ECKN3F681KBP | N1 | 7.5 | 0.65 |
| | 820 | ±10 | 11.0 | 6.0 | ECKA3F821KBP | 7.5 | 0.65 | ECKN3F821KBP | N1 | 7.5 | 0.65 |
| | 1000 | ±10 | 12.5 | 6.0 | ECKA3F102KBP | 7.5 | 0.65 | ECKN3F102KBP | N1 | 7.5 | 0.65 |
| | 1200 | ±10 | 14.5 | 6.0 | ECKA3F122KBP | 10.0 | 0.65 | ECKN3F122KBP | N1 | 7.5 | 0.65 |
| | 1500 | ±10 | 14.5 | 6.0 | ECKA3F152KBP | 10.0 | 0.65 | ECKN3F152KBP | N1 | 7.5 | 0.65 |
| | 1800 | ±10 | 16.0 | 6.0 | ECKA3F182KBP | 10.0 | 0.65 | ECKN3F182KBP | N2 | 7.5 | 0.65 |
| 2200 | ±10 | 17.0 | 6.0 | ECKA3F222KBP | 10.0 | 0.65 | ECKN3F222KBP | N2 | 7.5 | 0.65 | |
| 2700 | ±10 | 18.5 | 6.0 | ECKA3F272KBP | 10.0 | 0.65 | ECKN3F272KBP | N2 | 7.5 | 0.65 | |

■ Ratings and Characteristics

- Series KRP (Class 2, Temp. Char. R/Y5R, 1 to 3 kVDC)

| Rated Volt. | Cap. in pF | Capacitance Tolerance (%) | Dimensions in mm | | Kinked Lead Type (Bulk) | | | Kinked Lead Taping Type | | | |
|-------------|------------|---------------------------|------------------|--------------|-------------------------|------------------|------|-------------------------|------------|------------------|------|
| | | | D max. | T max. | Part Number | Dimensions in mm | | Part Number | Taped Type | Dimensions in mm | |
| | | | | | | F | d | | | F | d |
| 1 kVDC | 100 | ±10 | 6.0 | 4.5 | ECKA3A101KRP | 5.0 | 0.60 | ECKN3A101KRP | NO | 5.0 | 0.60 |
| | 120 | ±10 | 6.0 | 4.5 | ECKA3A121KRP | 5.0 | 0.60 | ECKN3A121KRP | NO | 5.0 | 0.60 |
| | 150 | ±10 | 6.0 | 4.5 | ECKA3A151KRP | 5.0 | 0.60 | ECKN3A151KRP | NO | 5.0 | 0.60 |
| | 180 | ±10 | 6.0 | 4.5 | ECKA3A181KRP | 5.0 | 0.60 | ECKN3A181KRP | NO | 5.0 | 0.60 |
| | 220 | ±10 | 6.0 | 4.5 | ECKA3A221KRP | 5.0 | 0.60 | ECKN3A221KRP | NO | 5.0 | 0.60 |
| | 270 | ±10 | 6.0 | 4.5 | ECKA3A271KRP | 5.0 | 0.60 | ECKN3A271KRP | NO | 5.0 | 0.60 |
| | 330 | ±10 | 6.0 | 4.5 | ECKA3A331KRP | 5.0 | 0.60 | ECKN3A331KRP | NO | 5.0 | 0.60 |
| | 390 | ±10 | 7.0 | 4.5 | ECKA3A391KRP | 5.0 | 0.60 | ECKN3A391KRP | NO | 5.0 | 0.60 |
| | 470 | ±10 | 7.0 | 4.5 | ECKA3A471KRP | 5.0 | 0.60 | ECKN3A471KRP | NO | 5.0 | 0.60 |
| | 560 | ±10 | 7.0 | 4.5 | ECKA3A561KRP | 5.0 | 0.60 | ECKN3A561KRP | NO | 5.0 | 0.60 |
| | 680 | ±10 | 7.5 | 4.5 | ECKA3A681KRP | 5.0 | 0.60 | ECKN3A681KRP | NO | 5.0 | 0.60 |
| | 820 | ±10 | 7.5 | 4.5 | ECKA3A821KRP | 5.0 | 0.60 | ECKN3A821KRP | NO | 5.0 | 0.60 |
| | 1000 | ±10 | 9.0 | 4.5 | ECKA3A102KRP | 5.0 | 0.60 | ECKN3A102KRP | NO | 5.0 | 0.60 |
| | 1200 | ±10 | 9.0 | 4.5 | ECKA3A122KRP | 5.0 | 0.60 | ECKN3A122KRP | NO | 5.0 | 0.60 |
| | 1500 | ±10 | 10.5 | 4.5 | ECKA3A152KRP | 5.0 | 0.60 | ECKN3A152KRP | NO | 5.0 | 0.60 |
| | 1800 | ±10 | 10.5 | 4.5 | ECKA3A182KRP | 5.0 | 0.60 | ECKN3A182KRP | NO | 5.0 | 0.60 |
| | 2200 | ±10 | 11.5 | 4.5 | ECKA3A222KRP | 5.0 | 0.60 | ECKN3A222KRP | NO | 5.0 | 0.60 |
| | 2700 | ±10 | 13.0 | 4.5 | ECKA3A272KRP | 7.5 | 0.65 | ECKN3A272KRP | N1 | 7.5 | 0.65 |
| | 3300 | ±10 | 13.0 | 4.5 | ECKA3A332KRP | 7.5 | 0.65 | ECKN3A332KRP | N1 | 7.5 | 0.65 |
| | 3900 | ±10 | 14.0 | 4.5 | ECKA3A392KRP | 7.5 | 0.65 | ECKN3A392KRP | N1 | 7.5 | 0.65 |
| 4700 | ±10 | 16.5 | 4.5 | ECKA3A472KRP | 7.5 | 0.65 | — | — | — | — | |
| 2 kVDC | 100 | ±10 | 7.0 | 5.0 | ECKA3D101KRP | 7.5 | 0.65 | ECKN3D101KRP | N1 | 7.5 | 0.65 |
| | 120 | ±10 | 7.0 | 5.0 | ECKA3D121KRP | 7.5 | 0.65 | ECKN3D121KRP | N1 | 7.5 | 0.65 |
| | 150 | ±10 | 7.0 | 5.0 | ECKA3D151KRP | 7.5 | 0.65 | ECKN3D151KRP | N1 | 7.5 | 0.65 |
| | 180 | ±10 | 7.0 | 5.0 | ECKA3D181KRP | 7.5 | 0.65 | ECKN3D181KRP | N1 | 7.5 | 0.65 |
| | 220 | ±10 | 7.0 | 5.0 | ECKA3D221KRP | 7.5 | 0.65 | ECKN3D221KRP | N1 | 7.5 | 0.65 |
| | 270 | ±10 | 7.0 | 5.0 | ECKA3D271KRP | 7.5 | 0.65 | ECKN3D271KRP | N1 | 7.5 | 0.65 |
| | 330 | ±10 | 7.5 | 5.0 | ECKA3D331KRP | 7.5 | 0.65 | ECKN3D331KRP | N1 | 7.5 | 0.65 |
| | 390 | ±10 | 7.5 | 5.0 | ECKA3D391KRP | 7.5 | 0.65 | ECKN3D391KRP | N1 | 7.5 | 0.65 |
| | 470 | ±10 | 9.0 | 5.0 | ECKA3D471KRP | 7.5 | 0.65 | ECKN3D471KRP | N1 | 7.5 | 0.65 |
| | 560 | ±10 | 9.0 | 5.0 | ECKA3D561KRP | 7.5 | 0.65 | ECKN3D561KRP | N1 | 7.5 | 0.65 |
| | 680 | ±10 | 10.0 | 5.0 | ECKA3D681KRP | 7.5 | 0.65 | ECKN3D681KRP | N1 | 7.5 | 0.65 |
| | 820 | ±10 | 10.0 | 5.0 | ECKA3D821KRP | 7.5 | 0.65 | ECKN3D821KRP | N1 | 7.5 | 0.65 |
| | 1000 | ±10 | 12.0 | 5.0 | ECKA3D102KRP | 7.5 | 0.65 | ECKN3D102KRP | N1 | 7.5 | 0.65 |
| | 1200 | ±10 | 12.0 | 5.0 | ECKA3D122KRP | 7.5 | 0.65 | ECKN3D122KRP | N1 | 7.5 | 0.65 |
| | 1500 | ±10 | 12.0 | 5.0 | ECKA3D152KRP | 7.5 | 0.65 | ECKN3D152KRP | N1 | 7.5 | 0.65 |
| | 1800 | ±10 | 14.0 | 5.0 | ECKA3D182KRP | 10.0 | 0.65 | — | — | — | — |
| | 2200 | ±10 | 16.0 | 5.0 | ECKA3D222KRP | 10.0 | 0.65 | — | — | — | — |
| | 2700 | ±10 | 16.0 | 5.0 | ECKA3D272KRP | 10.0 | 0.65 | — | — | — | — |
| | 3300 | ±10 | 19.0 | 5.0 | ECKA3D332KRP | 10.0 | 0.65 | — | — | — | — |
| | 3900 | ±10 | 20.0 | 5.0 | ECKA3D392KRP | 10.0 | 0.65 | — | — | — | — |
| 4700 | ±10 | 21.0 | 5.0 | ECKA3D472KRP | 10.0 | 0.65 | — | — | — | — | |

■ Ratings and Characteristics

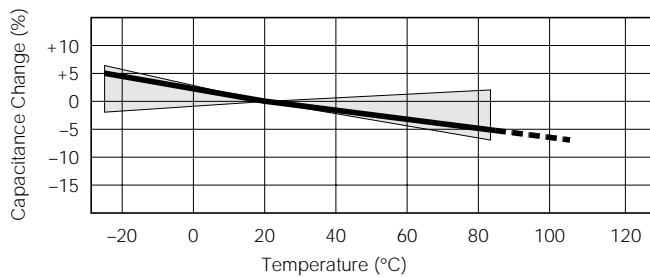
● Series KRP (Class 2, Temp. Char. R/Y5R, 1 to 3 kVDC) (Continuation)

| Rated Volt. | Cap. in pF | Capacitance Tolerance (%) | Dimensions in mm | | Kinked Lead Type (Bulk) | | | Kinked Lead Taping Type | | | |
|-------------|------------|---------------------------|------------------|--------------|-------------------------|------------------|------|-------------------------|------------|------------------|------|
| | | | D max. | T max. | Part Number | Dimensions in mm | | Part Number | Taped Type | Dimensions in mm | |
| | | | | | | F | d | | | F | d |
| 3 kVDC | 100 | ±10 | 7.5 | 5.5 | ECKA3F101KRP | 7.5 | 0.65 | ECKN3F101KRP | N1 | 7.5 | 0.65 |
| | 120 | ±10 | 7.5 | 5.5 | ECKA3F121KRP | 7.5 | 0.65 | ECKN3F121KRP | N1 | 7.5 | 0.65 |
| | 150 | ±10 | 7.5 | 5.5 | ECKA3F151KRP | 7.5 | 0.65 | ECKN3F151KRP | N1 | 7.5 | 0.65 |
| | 180 | ±10 | 7.5 | 5.5 | ECKA3F181KRP | 7.5 | 0.65 | ECKN3F181KRP | N1 | 7.5 | 0.65 |
| | 220 | ±10 | 8.0 | 5.5 | ECKA3F221KRP | 7.5 | 0.65 | ECKN3F221KRP | N1 | 7.5 | 0.65 |
| | 270 | ±10 | 8.0 | 5.5 | ECKA3F271KRP | 7.5 | 0.65 | ECKN3F271KRP | N1 | 7.5 | 0.65 |
| | 330 | ±10 | 8.5 | 5.5 | ECKA3F331KRP | 7.5 | 0.65 | ECKN3F331KRP | N1 | 7.5 | 0.65 |
| | 390 | ±10 | 9.5 | 5.5 | ECKA3F391KRP | 7.5 | 0.65 | ECKN3F391KRP | N1 | 7.5 | 0.65 |
| | 470 | ±10 | 9.5 | 5.5 | ECKA3F471KRP | 7.5 | 0.65 | ECKN3F471KRP | N1 | 7.5 | 0.65 |
| | 560 | ±10 | 10.5 | 5.5 | ECKA3F561KRP | 7.5 | 0.65 | ECKN3F561KRP | N1 | 7.5 | 0.65 |
| | 680 | ±10 | 10.5 | 5.5 | ECKA3F681KRP | 7.5 | 0.65 | ECKN3F681KRP | N1 | 7.5 | 0.65 |
| | 820 | ±10 | 12.5 | 5.5 | ECKA3F821KRP | 7.5 | 0.65 | ECKN3F821KRP | N1 | 7.5 | 0.65 |
| | 1000 | ±10 | 12.5 | 5.5 | ECKA3F102KRP | 10.0 | 0.65 | --- | --- | --- | --- |
| | 1200 | ±10 | 14.5 | 5.5 | ECKA3F122KRP | 10.0 | 0.65 | --- | --- | --- | --- |
| | 1500 | ±10 | 14.5 | 5.5 | ECKA3F152KRP | 10.0 | 0.65 | --- | --- | --- | --- |
| | 1800 | ±10 | 16.5 | 5.5 | ECKA3F182KRP | 10.0 | 0.65 | --- | --- | --- | --- |
| 2200 | ±10 | 17.0 | 5.5 | ECKA3F222KRP | 10.0 | 0.65 | --- | --- | --- | --- | |

■ Typical Temperature Characteristics

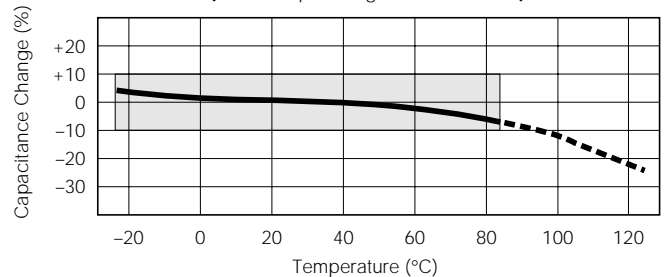
Series KGE (Char. SL/GP)

(Temp. Coeff. : +350 to -1000 ppm/°C)



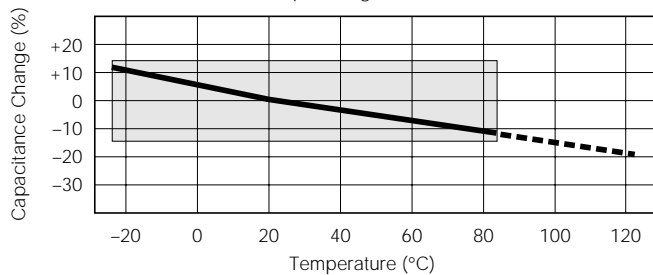
Series KBP (Char. B/Y5P)

(Temp. Range : -25 to 85 °C
max. Cap. Change : ±10 %)

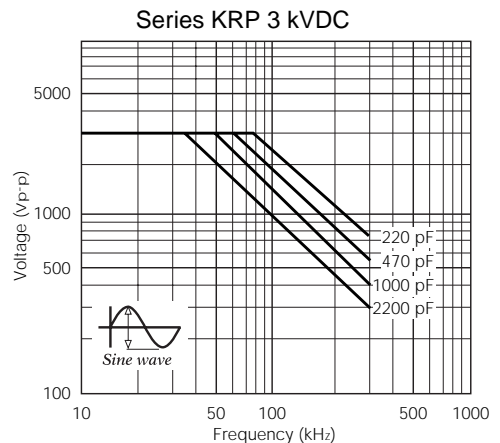
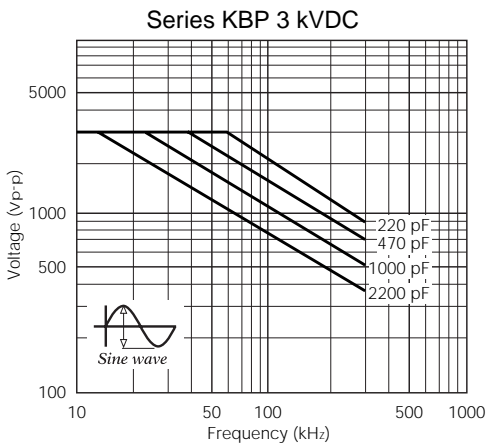
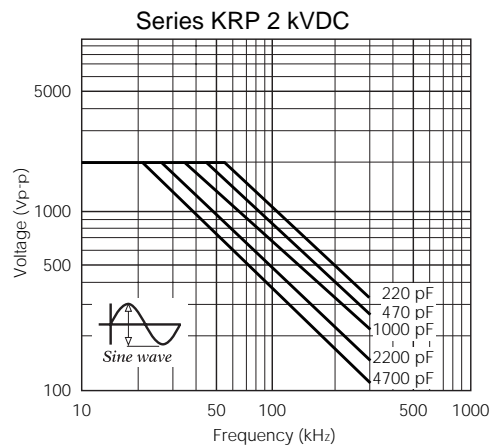
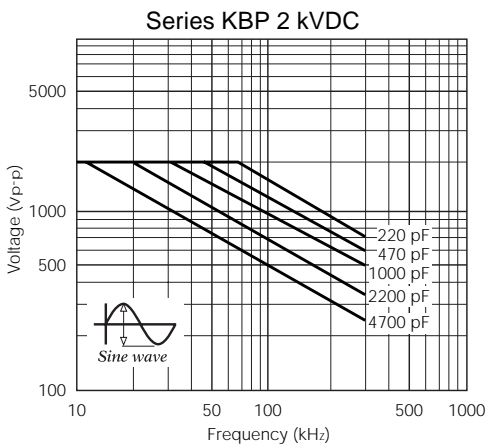
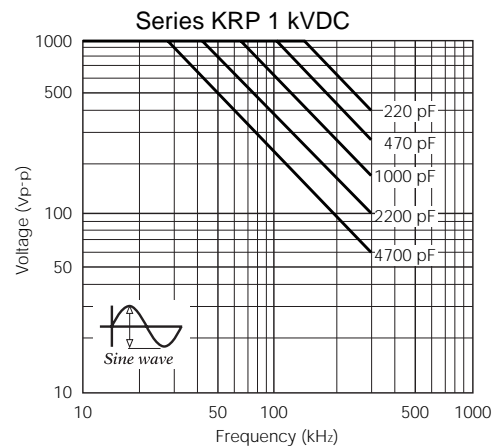
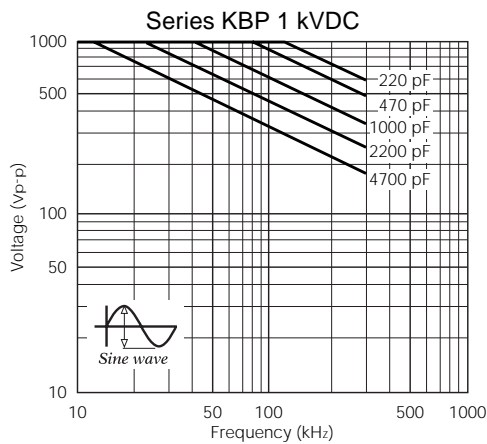


Series KRP (Char. R/Y5R)

(Temp. Range : -25 to 85 °C
max. Cap. Change : ±15 %)

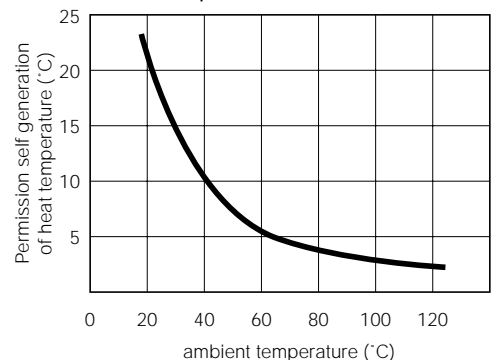


■ Characteristics of Voltage – Frequency





The graphs above show the maximum permissible voltage when using a capacitor with an AC sine wave voltage. When measuring this voltage in room temperature (25 °C), the capacitor self-heat generation will rise a maximum of 20 °C. When using a pulse voltage or an AC voltage other than a sine wave, confirm that the capacitor self-heat generation is less than 20 °C in an ambient room temperature of 25 °C. The self-heat generation temperature is the difference between the surface temperature and the ambient room temperature. As for the situation when the self-heat generation temperature is more than 25 °C, refer to the figure on the right.

Permission self generation of heat temperature vs. ambient temperature



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