

**Film Foil Capacitors**

**Reference Standard**

GB10188 (IEC384-13)

**Structures**

Material: Polypropylene film

Electrode: Aluminum Foil

Enveloped with Fire-proof epoxy resin.

Pin: CP leads or Copper wire.

**Using area**

High Frequency, DC, and Impulsion High Current conditions.

Monitor and power supplier etc

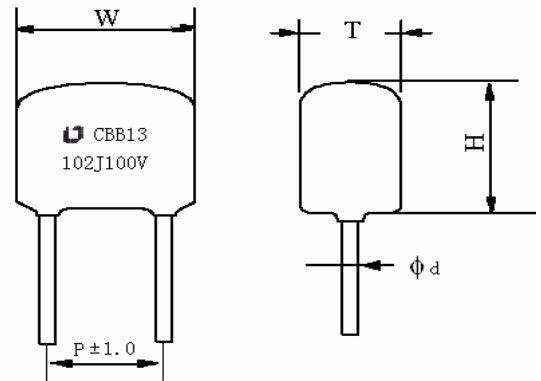
**Features:**

Very low loss at high frequency could bear the high currents' impactive.

**Specifications**

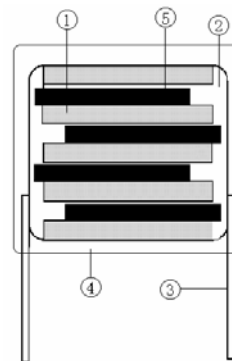
|  |   |                  |     |       |          |
|--|---|------------------|-----|-------|----------|
| Climate Conditions                         | -40--+85℃   |                  |     |       |          |
| Rated Voltage dc                           | 250V、400V、630V、1000V  |                  |     |       |          |
| Capacitance Tolerance                      | 0.001μF-0.47μF  |                  |     |       |          |
| Capacitance Tolerance                      | ±5% ±10%  |                  |     |       |          |
| Testing Voltage                            | 2.0UR (5S)  |                  |     |       |          |
| Insulation Resistance and Time Consistence | ≤0.33μF   | ≥30000MΩ         |     |       |          |
|  | >0.33μF   | ≥10000S (MΩ. μF) |     |       |          |
| Dissipation Factor                         | ≤0.0008 10kHz 20℃   |                  |     |       |          |
| Climate Category                           | Temperature: 40±2℃<br>Humidity: 93%RH<br>Lasting Time: 21 Days<br>There is no visible damage with the clearly mark.<br>Capacitance: ΔC/C≤5%<br>Dissipation Factor (1KHz): Increasing≤0.002<br>Insulation Resistance IR: ≥50% of Rated |                  |     |       |          |
| Endurance Test                             | +85℃, 1000h<br>Applying Voltage:1.25*Rate Voltage<br>Capacitance: ΔC/C≤5%<br>Insulation Resistance: ≥50% of Rated   |                  |     |       |          |
| dv/dt (v/μs)                               | Pitch   | 8.5/10/11        | 14  | 19/21 | 24/25/26 |
|  | dv/dt   | 1500             | 800 | 500   | 300      |

**Outline Drawing**



|                            |     |         |       |
|----------------------------|-----|---------|-------|
| Pitch mm                   | 10  | 15      | 19-26 |
| The Diameter of the Pin mm | 0.6 | 0.6/0.8 | 0.8   |

**Structure**



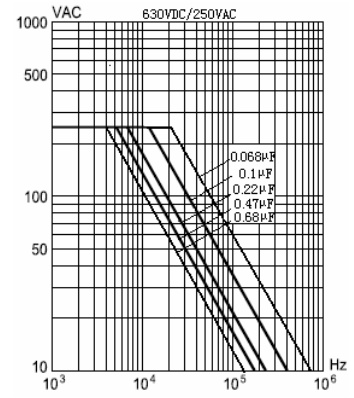
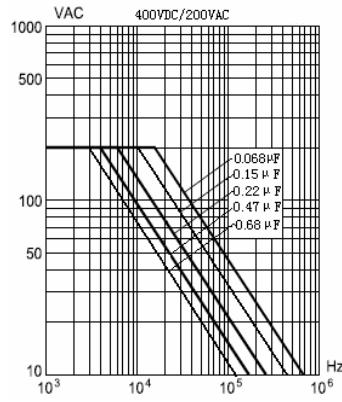
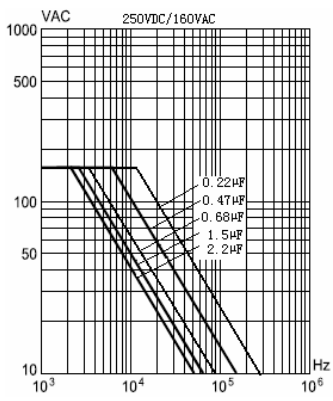
**Explanation:**

- ①Polypropylene Film
- ②Mental Spay Layer
- ③CP Leads
- ④Epoxy Resin
- ⑤Aluminum Foil
- ⑥RoHS Compliant

**The exchanging of AC and DC**

|    |        |        |        |
|----|--------|--------|--------|
| DC | 250VDC | 400VDC | 630VDC |
| AC | 160VAC | 200VAC | 250VAC |

**■ The Relationship of AC Voltage Proof and Frequency**



**CBB13 (PPN) Dimension Lists**

| Cap.          | Part No.            | Dimensions (mm) |        |       | Pitch (mm) |
|---------------|---------------------|-----------------|--------|-------|------------|
|               |                     | W±1.0           | T ±1.0 | H±1.0 |            |
| <b>250VDC</b> |                     |                 |        |       |            |
| 102           | PPN102J(K)212061000 | 12              | 5.5    | 9.5   | 8.5        |
| 122           | PPN122J(K)212061000 | 12              | 5.5    | 9.5   | 8.5        |
| 152           | PPN152J(K)212061000 | 12              | 5.5    | 9.5   | 8.5        |
| 182           | PPN182J(K)212061000 | 12              | 5.5    | 9.5   | 8.5        |
| 222           | PPN222J(K)212061000 | 12              | 5.5    | 9.5   | 8.5        |
| 332           | PPN332J(K)212071000 | 12              | 6.5    | 10    | 8.5        |
| 392           | PPN392J(K)212071000 | 12              | 6.5    | 10    | 8.5        |
| 472           | PPN472J(K)212071000 | 12              | 6.5    | 10    | 8.5        |
| 562           | PPN562J(K)212071100 | 12              | 7      | 11    | 8.5        |
| 682           | PPN682J(K)212071100 | 12              | 7      | 11    | 8.5        |
| 822           | PPN822J(K)214071200 | 14              | 7      | 11.5  | 10         |
| 103           | PPN103J(K)214071200 | 14              | 7      | 11.5  | 10         |
| 123           | PPN123J(K)218061200 | 18              | 6      | 11.5  | 14         |
| 153           | PPN153J(K)218061200 | 18              | 6      | 11.5  | 14         |
| 183           | PPN183J(K)218061200 | 18              | 6.5    | 11.5  | 14         |
| 223           | PPN223J(K)218071200 | 18              | 7      | 12    | 14         |
| 273           | PPN273J(K)218071400 | 18              | 7      | 13.5  | 14         |
| 333           | PPN333J(K)218081400 | 18              | 7.5    | 14    | 14         |
| 393           | PPN393J(K)218081500 | 18              | 8      | 14.5  | 14         |
| 473           | PPN473J(K)21809160  | 18              | 8.5    | 15.5  | 14         |
| 563           | PPN563J(K)230817000 | 22.5            | 8      | 16.5  | 19         |
| 683           | PPN683J(K)23091700  | 22.5            | 8.5    | 17    | 19         |
| 823           | PPN823J(K)23091800  | 22.5            | 9      | 17.5  | 19         |
| 104           | PPN104J(K)23101800  | 22.5            | 10     | 18    | 19         |
| 124           | PPN124J(K)25112100  | 25              | 11     | 21    | 21         |
| 154           | PPN154J(K)25112100  | 25              | 11     | 21    | 21         |
| 184           | PPN184J(K)29112300  | 29              | 11     | 23    | 25         |
| 224           | PPN224J(K)29112300  | 29              | 11     | 23    | 25         |
| 274           | PPN274J(K)29132500  | 29              | 13     | 25    | 25         |
| 334           | PPN334J(K)29152600  | 30              | 15     | 26    | 25         |
| 394           | PPN394J(K)29172800  | 30              | 17     | 28    | 25         |
| 474           | PPN474J(K)29182900  | 30              | 18     | 29    | 25         |

| Cap.          | Part No.            | Dimensions (mm) |        |       | Pitch (mm) |
|---------------|---------------------|-----------------|--------|-------|------------|
|               |                     | W±1.0           | T ±1.0 | H±1.0 |            |
| <b>400VDC</b> |                     |                 |        |       |            |
| 102           | PPN102J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 122           | PPN122J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 152           | PPN152J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 182           | PPN182J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 222           | PPN222J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 272           | PPN272J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 332           | PPN332J(K)414061000 | 13.5            | 6      | 10    | 10         |
| 392           | PPN392J(K)415061200 | 15              | 6      | 11.5  | 11         |
| 472           | PPN472J(K)415061200 | 15              | 6      | 11.5  | 11         |
| 562           | PPN562J(K)415071200 | 15              | 7      | 12    | 11         |
| 682           | PPN682J(K)415071200 | 15              | 7      | 12    | 11         |
| 822           | PPN822J(K)415081300 | 15              | 8      | 13    | 11         |
| 103           | PPN103J(K)415081300 | 15              | 8      | 13    | 11         |
| 123           | PPN123J(K)418071300 | 18              | 7      | 12.5  | 14         |
| 153           | PPN153J(K)418071300 | 18              | 7      | 12.5  | 14         |
| 183           | PPN183J(K)418081300 | 18              | 7.5    | 12.5  | 14         |
| 223           | PPN223J(K)418081400 | 18              | 8      | 13.5  | 14         |
| 273           | PPN273J(K)418081500 | 18              | 8      | 15    | 14         |
| 333           | PPN333J(K)423081500 | 22.5            | 8      | 15    | 19         |
| 393           | PPN393J(K)423091600 | 22.5            | 8.5    | 15.5  | 19         |
| 473           | PPN473J(K)423091600 | 22.5            | 9      | 16    | 19         |
| 563           | PPN563J(K)423091700 | 22.5            | 9      | 17    | 19         |
| 683           | PPN683J(K)423101900 | 22.5            | 10     | 18.5  | 19         |
| 823           | PPN823J(K)423111900 | 22.5            | 11     | 19    | 19         |
| 104           | PPN104J(K)429101800 | 29              | 10     | 18    | 24         |
| 124           | PPN124J(K)429131000 | 29              | 13     | 21    | 24         |
| 154           | PPN154J(K)429131000 | 29              | 13     | 21    | 24         |
| 184           | PPN184J(K)430142500 | 30              | 13.5   | 25    | 25         |
| 224           | PPN224J(K)430142500 | 30              | 13.5   | 25    | 25         |
| 274           | PPN274J(K)431142600 | 31              | 14     | 26    | 26         |
| 334           | PPN334J(K)431152700 | 31              | 15     | 27    | 26         |
| 394           | PPN394J(K)431172900 | 31              | 17     | 29    | 26         |
| 474           | PPN474J(K)432203000 | 32              | 20     | 30    | 26         |

| Cap.          | Part No.            | Dimensions (mm) |        |       | Pitch (mm) |
|---------------|---------------------|-----------------|--------|-------|------------|
|               |                     | W±1.0           | T ±1.0 | H±1.0 |            |
| <b>630VDC</b> |                     |                 |        |       |            |
| 102           | PPN102J(K)615061000 | 14.5            | 6      | 10    | 11         |
| 122           | PPN122J(K)615061000 | 14.5            | 6      | 10    | 11         |
| 152           | PPN152J(K)615071100 | 14.5            | 6.5    | 11    | 11         |
| 182           | PPN182J(K)615071100 | 14.5            | 6.5    | 11    | 11         |
| 222           | PPN222J(K)615071100 | 14.5            | 6.5    | 11    | 11         |
| 272           | PPN272J(K)615081200 | 14.5            | 7.5    | 12    | 11         |
| 332           | PPN332J(K)615081200 | 14.5            | 7.5    | 12    | 11         |
| 392           | PPN392J(K)615091300 | 14.5            | 8.5    | 13    | 11         |
| 472           | PPN472J(K)615091300 | 14.5            | 8.5    | 13    | 11         |
| 562           | PPN562J(K)618071300 | 18              | 7      | 12.5  | 14         |
| 682           | PPN682J(K)618071300 | 18              | 7      | 12.5  | 14         |
| 822           | PPN822J(K)618081500 | 18              | 7.5    | 14.5  | 14         |
| 103           | PPN103J(K)618081500 | 18              | 7.5    | 14.5  | 14         |
| 123           | PPN123J(K)623081500 | 22.5            | 8      | 15    | 19         |
| 153           | PPN153J(K)623081500 | 22.5            | 8      | 15    | 19         |
| 183           | PPN183J(K)623091600 | 22.5            | 8.5    | 15.5  | 19         |
| 223           | PPN223J(K)623091600 | 22.5            | 9      | 16    | 19         |
| 273           | PPN273J(K)623101800 | 22.5            | 9.5    | 17.5  | 19         |
| 333           | PPN333J(K)623101900 | 22.5            | 10     | 18.5  | 19         |
| 393           | PPN393J(K)623111900 | 22.5            | 11     | 19    | 19         |
| 473           | PPN473J(K)623122000 | 22.5            | 11.5   | 20    | 19         |
| 563           | PPN563J(K)629111900 | 29              | 11     | 19    | 24         |
| 683           | PPN683J(K)629122000 | 29              | 12     | 20    | 24         |
| 823           | PPN823J(K)629122200 | 29              | 12     | 22    | 24         |
| 104           | PPN104J(K)629142300 | 29              | 13.5   | 23    | 24         |