

Power Electronic Capacitors

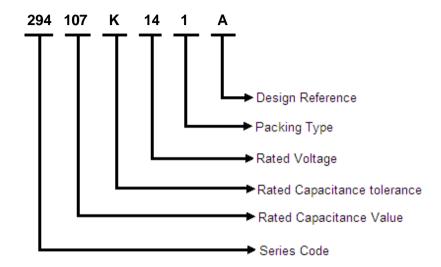
SERIES TYPE: METALLIZED POLYPROPYLENE AC FILTER CAPACITOR-Single phase

Series Code: 294

Date: November 2024



Item Code Description



Rated Capacitance

Three-digit (224) indicate rated capacitance in Pico Farad (First two digits indicate value & third digit indicates Number of zeroes to be suffixed to first two digits).

For example:

| 103 = 10 × | 10 ³ | = 10000 pF | = | 10 nF | =0.01 μF |
|-------------------|-----------------|---------------|---|----------|----------|
| $104 = 10 \times$ | 10 ⁴ | = 100000 pF | = | 100 nF | =0.1 μF |
| 105 = 10 × | 10 ⁵ | = 1000000 pF | = | 1000 nF | =1 μF |
| 106 = 10 × | 10 ⁶ | = 10000000 pF | = | 10000 nF | =10 μF |

Capacitance Tolerance

$$F = \pm 1\%$$
, $G = \pm 2\%$, $H = \pm 2.5\%$, $I = \pm 3.5\%$, $J = \pm 5\%$, $K = \pm 10\%$, $L = \pm 15\%$, $M = \pm 20\%$, $N = \pm 40\%$

Rated Voltage

One digit and one letter (2A) or two digits (05) indicate rated voltage

Rated Voltage Codification

| For AC Rated Voltage(VRMs) | | | | | | | | | | | | | |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 80 | 09 | 10 | 11 | 12 | 13 | 14 |
| 190 | 250 | 275 | 305 | 310 | 440 | 500 | 600 | 700 | 63 | 230 | 330 | 400 | 450 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
| 350 | 300 | 415 | 420 | 460 | 480 | 530 | 660 | 720 | 780 | 850 | 900 | 1000 | |



General data

Typical Application

- UPS
- Wind Power
- Variable Frequency Drives
- Inverter

Construction

- Dielectric: Metallized Polypropylene Film
- Self-Healing Property
- Wound capacitor Technology
- Aluminum can
- Mounting and Grounding: Stud on bottom of Can
- Non PCB, Soft Polyurethane resin

Features

- Compact size
- Low Loss
- Low ESR and ESL
- Low leakage current
- Safety device: Over Pressure disconnector
- IP00, IP20

Reference Standard

■ IEC 61071, IEC 60831

Climatic Category

40/70/21

Terminals

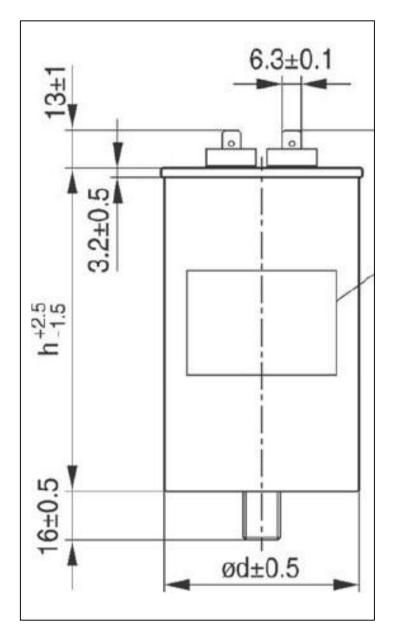
294 series: Faston Terminals

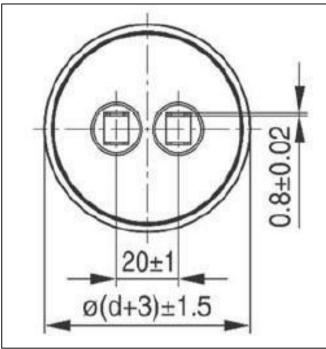
Technical data

| May Operating Temperature | +70°C |
|-------------------------------------|----------------------------|
| Max. Operating Temperature | |
| Min. Operating temperature | -40°C |
| Max. Hotspot temperature | +85°C |
| Rated Capacitance CR | 5600μF (Upon request) |
| Rated Voltage VR | Upto 1000V AC |
| Voltage proof(VT-T) | 2.15xVRMS, 2s |
| Voltage proof(VT-C) | 4000VAC for 10 sec |
| Dissipation factor tan δ (100Hz) | ≤0.001 |
| Life Test | Acc. To IEC 61071-2017 |
| Tolerance | J, ±5% |
| Degree of Protection | IP00, IP20 |
| Max. permissible altitude | 2000m MSL |
| Safety device | Over pressure disconnector |
| Max. current(IRMS) | Refer to the chart |
| Self Inductance(ESL) | Refer to the chart |
| Service Life at VRMS @ 85°C Hotspot | 100000Hrs* |

^{*}For conversion at different hotspot temperature and Voltage please see graph







Series 294: Faston terminals with bottom stud for mounting

Installation Space requirements:

- A minimum distance of 20 mm between the capacitors is necessary to maintain cooling.
- Keep at least 20 mm space above the capacitor and do not attach any mounting components at the crimp or on top to allow proper lateral extension in order to ensure that the over pressure disconnector can fully extend.



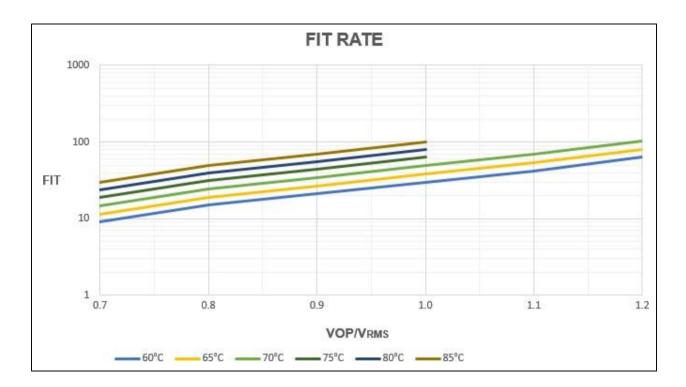
Series 294- Faston terminals

| VR/VRMS | CD(E) | Irmo (A) | Incole/IcA\ | D | Н | Item Code |
|---------|--------|----------|-------------|------|-------|------------------|
| (V) | CR(µF) | Irms (A) | lpeak(kA) | mm | mm | |
| (1) | 30 | 15 | 750 | 50 | 64.5 | 294 306 J 02 1 * |
| | 40 | 15 | 900 | 50 | 64.5 | 294 406 J 02 1 * |
| | 50 | 15 | 900 | 50 | 77.5 | 294 506 J 02 1 * |
| | 60 | 15 | 1000 | 50 | 77.5 | 294 606 J 02 1 * |
| | 70 | 15 | 1300 | 63.5 | 77.5 | 294 706 J 02 1 * |
| 050/050 | 75 | 15 | 1340 | 63.5 | 77.5 | 294 756 J 02 1 * |
| 350/250 | 80 | 15 | 1500 | 63.5 | 77.5 | 294 806 J 02 1 * |
| | 100 | 15 | 1600 | 63.5 | 77.5 | 294 107 J 02 1 * |
| | 120 | 15 | 1500 | 63.5 | 92.5 | 294 127 J 02 1 * |
| | 140 | 15 | 1520 | 63.5 | 102.5 | 294 147 J 02 1 * |
| | 150 | 15 | 1600 | 63.5 | 102.5 | 294 157 J 02 1 * |
| | 160 | 15 | 1280 | 63.5 | 127.5 | 294 167 J 02 1 * |
| | 20 | 14 | 600 | 50 | 64.5 | 294 206 J 12 1 * |
| | 25 | 15 | 750 | 50 | 64.5 | 294 256 J 12 1 * |
| | 30 | 15 | 650 | 50 | 77.5 | 294 306 J 12 1 * |
| | 40 | 15 | 800 | 50 | 92.5 | 294 406 J 12 1 * |
| 400/220 | 50 | 15 | 840 | 50 | 92.5 | 294 506 J 12 1 * |
| 460/330 | 60 | 15 | 790 | 50 | 102.5 | 294 606 J 12 1 * |
| | 70 | 15 | 1000 | 63.5 | 92.5 | 294 706 J 12 1 * |
| | 80 | 15 | 1150 | 63.5 | 102.5 | 294 806 J 12 1 * |
| | 100 | 15 | 1050 | 63.5 | 127.5 | 294 107 J 12 1 * |
| | 120 | 15 | 1150 | 63.5 | 137.5 | 294 127 J 12 1 * |
| | 20 | 14 | 520 | 50 | 77.5 | 294 206 J 18 1 * |
| | 30 | 15 | 1150 | 63.5 | 64.5 | 294 306 J 18 1 * |
| | 40 | 15 | 1030 | 63.5 | 77.5 | 294 406 J 18 1 * |
| 500/400 | 50 | 15 | 1060 | 63.5 | 87.5 | 294 506 J 18 1 * |
| 590/420 | 60 | 15 | 1000 | 63.5 | 102.5 | 294 606 J 18 1 * |
| | 70 | 15 | 870 | 63.5 | 127.5 | 294 706 J 18 1 * |
| | 80 | 15 | 990 | 63.5 | 127.5 | 294 806 J 18 1 * |
| | 100 | 15 | 1120 | 63.5 | 137.5 | 294 107 J 18 1 * |
| | 10 | 10.5 | 400 | 50 | 64.5 | 294 106 J 20 1 * |
| | 15 | 12.5 | 600 | 50 | 77.5 | 294 156 J 20 1 * |
| | 20 | 14 | 600 | 50 | 87.5 | 294 206 J 20 1 * |
| | 25 | 15 | 500 | 50 | 102.5 | 294 256 J 20 1 * |
| 680/480 | 30 | 15 | 600 | 50 | 102.5 | 294 306 J 20 1 * |
| | 40 | 15 | 750 | 63.5 | 102.5 | 294 406 J 20 1 * |
| | 50 | 15 | 950 | 63.5 | 102.5 | 294 506 J 20 1 * |
| | 60 | 15 | 850 | 63.5 | 127.5 | 294 606 J 20 1 * |
| | 70 | 15 | 1000 | 63.5 | 137.5 | 294 706 J 20 1 * |
| 750/530 | 10 | 10.5 | 450 | 50 | 64.5 | 294 106 J 21 1 * |
| | 20 | 15 | 910 | 63.5 | 77.5 | 294 206 J 21 1 * |
| | 30 | 15 | 650 | 63.5 | 102.5 | 294 306 J 21 1 * |
| | 40 | 15 | 850 | 63.5 | 102.5 | 294 406 J 21 1 * |
| | 50 | 15 | 800 | 63.5 | 127.5 | 294 506 J 21 1 * |
| | 60 | 15 | 870 | 63.5 | 137.5 | 294 606 J 21 1 * |
| | 10 | 12.5 | 520 | 63.5 | 64.5 | 294 106 J 08 1 * |
| | 20 | 15 | 750 | 63.5 | 77.5 | 294 206 J 08 1 * |
| 850/600 | 30 | 15 | 730 | 63.5 | 102.5 | 294 306 J 08 1 * |
| | 40 | 15 | 720 | 63.5 | 127.5 | 294 406 J 08 1 * |
| | 45 | 15 | 800 | 63.5 | 137.5 | 294 456 J 08 1 * |



Expected FIT Rate at different hotspot temperature and Voltage

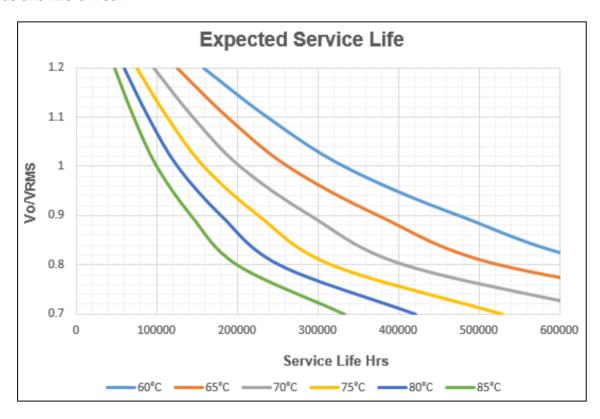
The Expected Failure rate are typical theoretical values derived from lifetime tests. The FIT (Failure in Time) of a component is defined as the number of expected failures in 10^9 hours of operation.





Service life expectancy at different hotspot temperature and Voltage

Lifetime estimations are typical theoretical values derived from lifetime tests based on Deki's internal standards and IEC 61709.



Disclaimer

All our capacitors are designed, manufactured and tested to specifications. We strictly adhere to standards in procurement of materials, in the laid down manufacturing processes and consistently apply stringent process controls and testing parameters. This ensures that our capacitors always perform to the offered specifications. Appropriateness of use in a specific circuit and fitness to a particular application however needs to be verified and its reliability through expected lifetime is required to be validated by the customer. Deki's responsibility is limited to ensuring that the capacitor performs as claimed in the specification/ data sheets provided by Deki. Deki specifically disclaims any implied warranties of fitness for any particular purpose. Liability, in any case is limited to the price paid for the capacitors.