

FPCAP Functional Polymer Aluminum Solid Electrolytic Capacitors

HS & HA series

Features

By using Functional Polymer cathode, Frequency & Temp. characteristics are greatly improved.

- Low ESR at a high frequency range.
- High ripple current capability.
- Long life and high reliability.

Applications

- Switching Power Supply and DC/DC Converter.
- Back up Power Supplies of CPU (VRM etc.)
- Miniature high Power Supply.

Environmental Correspondence

- Any environmental hazardous substances are not used.
- The lead free of terminal plating (Sn 100%)

Specifications

| Items | Characteristic | |
|-----------------------|-----------------------------|---|
| | HS, HA | |
| Operating temp. range | -55 to +105°C | |
| Rated voltage range | 2.5 to 35V-dc | |
| Capacitance range | 100 to 1500μF | |
| Capacitance tolerance | ±20% (M) | |
| Endurance | Test condition | 105°C, rated voltage 2000Hrs. |
| | Capacitance | Within ±20% of initial value before test |
| | Leakage current | Not to exceed the initial specified value |
| | ESR | Not to exceed 150% of initial specified value |
| | tan δ | Not to exceed 150% of initial specified value |
| Failure Rate | 0.5% / 1000Hrs. Max (60%CL) | |

Large Capacitance

Low ESR

φ8

SMD

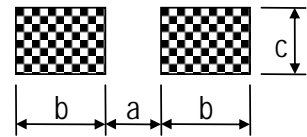
Lead-free

RoHS Compliance

UPGRADE



Recommended land pattern



[Unit: mm]

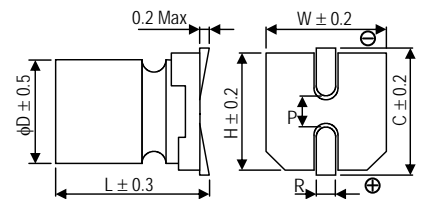
| φD | a | b | c |
|----|-----|-----|-----|
| 8 | 2.8 | 4.2 | 1.9 |

Size (ESR) List

[φD×L (mΩ)]

| R.V. (S.V.) Cap. [μF] | 2.5 (2.8) | | 4.0 (4.6) | | 6.3 (7.2) | | 10 (11.5) | | 16 (18.4) | | 25 (28.7) | | 35 (40.2) | |
|--------------------------|---------------|--------------|----------------|--------------|--------------|----|----------------|---------------|---------------|---------------|---------------|---------------|--------------|----|
| | HS | HA | HS | HA | HS | HA | HS | HA | HS | HA | HS | HS | HS | HS |
| 100 | | | | | | | | | | | 8x8.7 (25) | 8x8.7 (25) | | |
| 150 | | | | | | | | | 8x6.7 (25) | 8x6.7 (22) | | | | |
| 330 | | | | | | | 8x6.7 (9) | 8x7.7 (19) | | | | | | |
| 390 | | | | | | | 8x6.7 (18) | 8x6.7 (9) | | | | | | |
| 470 | | | | | | | 8x6.7 (9) | 8x6.7 (9) | | | | | | |
| 560 | | | 8x6.7 (16) | 8x6.7 (8) | | | 8x7.7 (9) | | | | | | | |
| 680 | | 8x6.7 (8) | | 8x7.7 (8) | | | | | | | | | | |
| 820 | 8x11.7 (9) | 8x6.7 (8) | | | | | 8x11.7 (10) | | | | | | | |
| 1000 | | 8x7.7 (8) | | | | | 8x11.7 (10) | | | | | | | |
| 1200 | | | 8x11.7 (9) | | | | | | | | | | | |
| 1500 | 8x11.7 (9) | | 8x11.7 (12) | | | | | | | | | | | |

Dimensions



[Unit: mm]

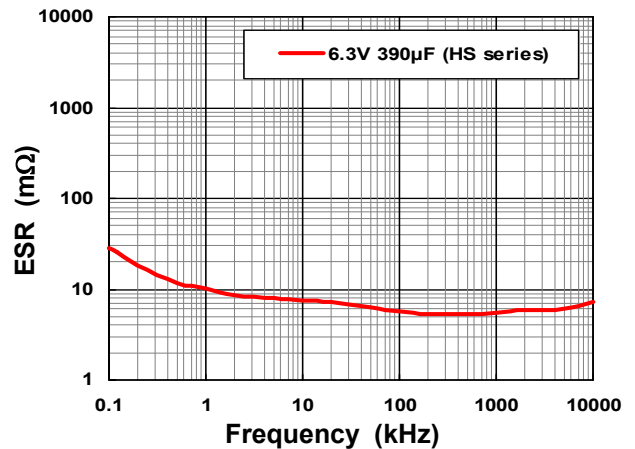
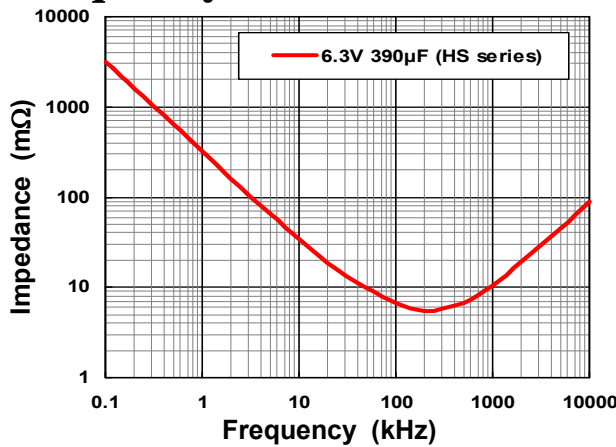
| φD×L | W | H | C | R | P |
|--------|-----|-----|-----|------------|-----|
| 8×6.7 | 8.3 | 8.3 | 9.0 | 0.8 to 1.1 | 3.2 |
| 8×7.7 | 8.3 | 8.3 | 9.0 | 0.8 to 1.1 | 3.2 |
| 8×8.7 | 8.3 | 8.3 | 9.0 | 0.8 to 1.1 | 3.2 |
| 8×11.7 | 8.3 | 8.3 | 9.0 | 0.8 to 1.1 | 3.2 |

● Part number & Specifications

| Rated Voltage (V) | Rated Capacitance (μF, 120Hz) | Part Number | | Leakage Current * (μA, 2 min) | tanδ (120Hz) | ESR (mΩ, 100kHz) | Rated Ripple Current (mA, r.m.s.) | Case Size φD×L(mm) |
|-------------------|-------------------------------|----------------|------------------|-------------------------------|--------------|------------------|-----------------------------------|--------------------|
| | | NICHICON | FPCAP | | | | | |
| 2.5 | 680 | RHA0E681MCN1GS | FP-2R5ME681M-HAR | 700 | 0.12 | 8 | 5000 | 8 × 6.7 |
| | 820 | RHS0E821MCN1GS | FP-2R5ME821M-HSR | 700 | 0.12 | 9 | 5400 | 8 × 11.7 |
| | 820 | RHA0E821MCN1GS | FP-2R5ME821M-HAR | 700 | 0.12 | 8 | 5000 | 8 × 6.7 |
| | 1000 | RHA0E102MCN1GS | FP-2R5ME102M-HAR | 750 | 0.12 | 8 | 5000 | 8 × 7.7 |
| | 1500 | RHS0E152MCN1GS | FP-2R5ME152M-HSR | 1125 | 0.12 | 9 | 5400 | 8 × 11.7 |
| 4.0 | 560 | RHS0G561MCN1GS | FP-4R0ME561M-HSR | 700 | 0.12 | 16 | 3200 | 8 × 6.7 |
| | 560 | RHA0G561MCN1GS | FP-4R0ME561M-HAR | 700 | 0.12 | 8 | 5000 | 8 × 6.7 |
| | 680 | RHA0G681MCN1GS | FP-4R0ME681M-HAR | 816 | 0.12 | 8 | 5000 | 8 × 7.7 |
| | 1200 | RHS0G122MCN1GS | FP-4R0ME122M-HSR | 1440 | 0.12 | 9 | 5400 | 8 × 11.7 |
| | 1500 | RHS0G152MCN1GS | FP-4R0ME152M-HSR | 1800 | 0.12 | 12 | 4700 | 8 × 11.7 |
| 6.3 | 330 | RHA0J331MCN1GS | FP-6R3ME331M-HAR | 700 | 0.12 | 9 | 4500 | 8 × 6.7 |
| | 390 | RHS0J391MCN1GS | FP-6R3ME391M-HSR | 737 | 0.12 | 18 | 3200 | 8 × 6.7 |
| | 390 | RHA0J391MCN1GS | FP-6R3ME391M-HAR | 737 | 0.12 | 9 | 4500 | 8 × 6.7 |
| | 470 | RHA0J471MCN1GS | FP-6R3ME471M-HAR | 888 | 0.12 | 9 | 4500 | 8 × 6.7 |
| | 560 | RHA0J561MCN1GS | FP-6R3ME561M-HAR | 1058 | 0.12 | 9 | 4500 | 8 × 7.7 |
| | 820 | RHS0J821MCN1GS | FP-6R3ME821M-HSR | 1550 | 0.12 | 10 | 5150 | 8 × 11.7 |
| | 1000 | RHS0J102MCN1GS | FP-6R3ME102M-HSR | 1890 | 0.12 | 10 | 5150 | 8 × 11.7 |
| 10 | 150 | RHS1A151MCN1GS | FP-010ME151M-HSR | 700 | 0.12 | 25 | 3000 | 8 × 6.7 |
| | 330 | RHS1A331MCN1GS | FP-010ME331M-HSR | 660 | 0.12 | 19 | 3390 | 8 × 7.7 |
| 16 | 150 | RHA1C151MCN1GS | FP-016ME151M-HAR | 700 | 0.12 | 22 | 3220 | 8 × 6.7 |
| 25 | 100 | RHS1E101MCN1GS | FP-025ME101M-HSR | 700 | 0.12 | 25 | 3000 | 8 × 8.7 |
| 35 | 100 | RHS1V101MCN1GS | FP-035ME101M-HSR | 700 | 0.12 | 25 | 3000 | 8 × 8.7 |

* In case of some doubt about measured values, measure after applying rated voltage for 120 minutes at 105°C.

● Frequency Characteristics



● Part Number (EX) 6.3V, 390μF, HS series

Nichicon P/N

| | | | | | | | |
|----------|-------------|---------------|-------------------|-----------------------|---------------|--------------|-------------|
| R | HS | 0J | 391 | M | CN | 1 | GS |
| Type | Series name | Rated Voltage | Rated Capacitance | Capacitance Tolerance | Configuration | Control code | Taping code |

FPCAP P/N

| | | | | | | | |
|----------------|---------------|----------------|-------------------|-----------------------|-------------|-------------|--------------|
| FP | 6R3 | ME | 391 | M | HS | R | |
| Commodity Mark | Rated Voltage | Classification | Rated Capacitance | Capacitance Tolerance | Series name | Taping code | Control code |