

Surface Mount Type

Series : **HC** Type : **V**

Long life



Features

- Endurance : 105 °C 3000 h to 5000 h
- Vibration-proof product is available upon request. ($\phi 8$ mm and larger)
- RoHS compliant

Specifications

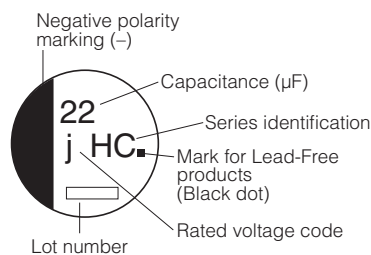
| | | |
|------------------------------------|---|--|
| Category temperature range | -40 °C to +105 °C | |
| Rated voltage range | 6.3 V.DC to 50 V.DC | |
| Capacitance range | 1 μ F to 1000 μ F | |
| Capacitance tolerance | ± 20 % (120 Hz/+20 °C) | |
| Leakage current | $I \leq 0.01$ CV or 3 (μ A) After 2 minutes (Whichever is greater) | |
| Dissipation factor (tan δ) | Please see the attached characteristics list | |
| Endurance | After applying rated working voltage for +105 °C ± 2 °C and then being stabilized at +20 °C, Capacitors shall meet the following limits. $\phi 4$ to $\phi 6.3$ (3000 hours After applying rated working voltage) $\phi 8$ to $\phi 10$ (5000 hours After applying rated working voltage) | |
| | Capacitance change | Within ± 30 % of the initial value |
| | tan δ | ≤ 300 % of the initial limit |
| | DC leakage current | Within the initial limit |
| Shelf life | After storage for 1000 hours at +105 °C ± 2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment) | |
| Resistance to soldering heat | Capacitance change | Within ± 10 % of the initial value |
| | tan δ | Within the initial limit |
| | DC leakage current | Within the initial limit |
| AEC-Q200 | AEC-Q200 compliant | |

Frequency correction factor for ripple current

| | | | | |
|-------------------|--------|------|------|---------|
| Frequency (Hz) | 50, 60 | 120 | 1 k | 10 k to |
| Correction factor | 0.70 | 1.00 | 1.30 | 1.70 |

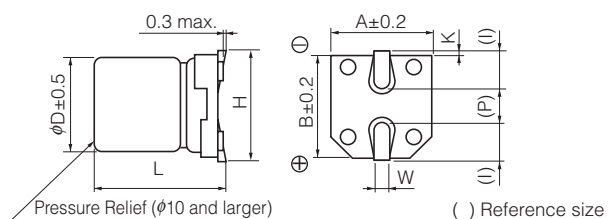
Marking

Example : 6.3 V.DC 22 μ F
Marking color : BLACK



| | | | | | | |
|-------------------|-----|----|----|----|----|----|
| R. Voltage (V.DC) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| Code | j | A | C | E | V | H |

Dimensions



(Unit : mm)

| Size code | ϕD | L | A, B | H | I | W | P | K |
|-----------|----------|----------------|------|-----------|-----|----------------|-----|-------------------------|
| B | 4.0 | 5.8 ± 0.3 | 4.3 | 5.5 max. | 1.8 | 0.65 ± 0.1 | 1.0 | 0.35 $^{+0.15}_{-0.20}$ |
| C | 5.0 | 5.8 ± 0.3 | 5.3 | 6.5 max. | 2.2 | 0.65 ± 0.1 | 1.5 | 0.35 $^{+0.15}_{-0.20}$ |
| D | 6.3 | 5.8 ± 0.3 | 6.6 | 7.8 max. | 2.6 | 0.65 ± 0.1 | 1.8 | 0.35 $^{+0.15}_{-0.20}$ |
| D8 | 6.3 | 7.7 ± 0.3 | 6.6 | 7.8 max. | 2.6 | 0.65 ± 0.1 | 1.8 | 0.35 $^{+0.15}_{-0.20}$ |
| F | 8.0 | 10.2 ± 0.3 | 8.3 | 10.0 max. | 3.4 | 0.90 ± 0.2 | 3.1 | 0.70 ± 0.2 |
| G | 10.0 | 10.2 ± 0.3 | 10.3 | 12.0 max. | 3.5 | 0.90 ± 0.2 | 4.6 | 0.70 ± 0.2 |

Characteristics list

Endurance : 105 °C 3000 h ($\phi 8, \phi 10$: 5000 h)

| Rated voltage (V.DC) | Cap. ($\pm 20\%$) (μF) | Case size (mm) | | Size code | Specification | | Part No. | Reflow | Min. Packaging Q'ty |
|----------------------|---------------------------------------|----------------|------|-----------|---|---------------------------------|--------------|--------|---------------------|
| | | ϕD | L | | Ripple current (120 Hz) (+105 °C) (mA r.m.s.) | $\tan \delta$ (120 Hz) (+20 °C) | | | Taping (pcs) |
| 6.3 | 22 | 4 | 5.8 | B | 26 | 0.30 | EEEHC0J220R | (1) | 2000 |
| | 47 | 5 | 5.8 | C | 46 | 0.30 | EEEHC0J470R | (1) | 1000 |
| | 100 | 6.3 | 5.8 | D | 71 | 0.30 | EEEHC0J101P | (1) | 1000 |
| | 220 | 6.3 | 7.7 | D8 | 101 | 0.30 | EEEHC0J221XP | (1) | 900 |
| | 330 | 8 | 10.2 | F | 230 | 0.30 | EEEHC0J331P | (2) | 500 |
| | 1000 | 10 | 10.2 | G | 313 | 0.50 | EEEHC0J102P | (2) | 500 |
| 10 | 33 | 5 | 5.8 | C | 43 | 0.26 | EEEHC1A330R | (1) | 1000 |
| | 220 | 8 | 10.2 | F | 160 | 0.26 | EEEHC1A221P | (2) | 500 |
| 16 | 10 | 4 | 5.8 | B | 28 | 0.20 | EEEHC1C100R | (1) | 2000 |
| | 22 | 5 | 5.8 | C | 39 | 0.20 | EEEHC1C220R | (1) | 1000 |
| | 47 | 6.3 | 5.8 | D | 70 | 0.20 | EEEHC1C470P | (1) | 1000 |
| | 100 | 6.3 | 7.7 | D8 | 81 | 0.20 | EEEHC1C101XP | (1) | 900 |
| | 470 | 10 | 10.2 | G | 340 | 0.20 | EEEHC1C471P | (2) | 500 |
| 25 | 33 | 6.3 | 5.8 | D | 65 | 0.16 | EEEHC1E330P | (1) | 1000 |
| | 47 | 6.3 | 7.7 | D8 | 65 | 0.16 | EEEHC1E470XP | (1) | 900 |
| | 100 | 8 | 10.2 | F | 130 | 0.16 | EEEHC1E101P | (2) | 500 |
| | 330 | 10 | 10.2 | G | 238 | 0.16 | EEEHC1E331P | (2) | 500 |
| 35 | 4.7 | 4 | 5.8 | B | 15 | 0.14 | EEEHC1V4R7R | (1) | 2000 |
| | 10 | 5 | 5.8 | C | 28 | 0.14 | EEEHC1V100R | (1) | 1000 |
| | 22 | 6.3 | 5.8 | D | 55 | 0.14 | EEEHC1V220P | (1) | 1000 |
| | 33 | 6.3 | 7.7 | D8 | 57 | 0.14 | EEEHC1V330XP | (1) | 900 |
| | 220 | 10 | 10.2 | G | 220 | 0.14 | EEEHC1V221P | (2) | 500 |
| 50 | 1 | 4 | 5.8 | B | 10 | 0.12 | EEEHC1H1R0R | (1) | 2000 |
| | 2.2 | 4 | 5.8 | B | 16 | 0.12 | EEEHC1H2R2R | (1) | 2000 |
| | 3.3 | 4 | 5.8 | B | 16 | 0.12 | EEEHC1H3R3R | (1) | 2000 |
| | 4.7 | 5 | 5.8 | C | 23 | 0.12 | EEEHC1H4R7R | (1) | 1000 |
| | 10 | 6.3 | 5.8 | D | 35 | 0.12 | EEEHC1H100P | (1) | 1000 |
| | 22 | 6.3 | 7.7 | D8 | 49 | 0.12 | EEEHC1H220XP | (1) | 900 |
| | 33 | 8 | 10.2 | F | 91 | 0.12 | EEEHC1H330P | (2) | 500 |
| | 47 | 8 | 10.2 | F | 100 | 0.12 | EEEHC1H470P | (2) | 500 |
| 100 | 10 | 10.2 | G | 160 | 0.12 | EEEHC1H101P | (2) | 500 | |

· Please refer to the page of "Reflow Profile" and "The Taping Dimensions".

· When requesting vibration-proof product, please put the last "V" instead to "P"

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