

# HXA Series

- High reliability and high voltage are realized by hybrid electrolyte
- Endurance with ripple current : 4,000 hours at 125°C
- For high temperature and high reliability applications.  
(Automotive equipment, Base station equipment, etc.)
- RoHS Compliant
- Halogen Free
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

HXA

Higher temperature  
HXB P78



## SPECIFICATIONS

| Items                                                        | Characteristics                                                                                                                                                                                                                                                                       |                                       |      |      |      |      |      |                 |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------|------|------|------|------|-----------------|
| Category                                                     |                                                                                                                                                                                                                                                                                       |                                       |      |      |      |      |      |                 |
| Temperature Range                                            | -55 to +125℃                                                                                                                                                                                                                                                                          |                                       |      |      |      |      |      |                 |
| Rated Voltage Range                                          | 16 to 80V <sub>dc</sub>                                                                                                                                                                                                                                                               |                                       |      |      |      |      |      |                 |
| Capacitance Tolerance                                        | ± 20% (M) (at 20℃, 120Hz)                                                                                                                                                                                                                                                             |                                       |      |      |      |      |      |                 |
| Leakage Current                                              | I=0.01CV<br>Where, I : Max. leakage current ( μ A ), C: Nominal capacitance( μ F ), V : Rated voltage(V) (at 20℃ after 2 minutes)                                                                                                                                                     |                                       |      |      |      |      |      |                 |
| Dissipation Factor<br>(tan δ )                               | Rated voltage(V <sub>dc</sub> )                                                                                                                                                                                                                                                       | 16V                                   | 25V  | 35V  | 50V  | 63V  | 80V  | (at 20℃, 120Hz) |
|                                                              | tan δ (Max.)                                                                                                                                                                                                                                                                          | 0.16                                  | 0.14 | 0.12 | 0.10 | 0.08 | 0.08 |                 |
| Low Temperature<br>Characteristics<br>(Max. Impedance Ratio) | Z(-25℃)/Z(+20℃)≤1.5                                                                                                                                                                                                                                                                   |                                       |      |      |      |      |      |                 |
|                                                              | Z(-55℃)/Z(+20℃)≤2.0 (at 100kHz)                                                                                                                                                                                                                                                       |                                       |      |      |      |      |      |                 |
| Endurance                                                    | The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 4,000 hours at 125℃.                                         |                                       |      |      |      |      |      |                 |
|                                                              | Capacitance change                                                                                                                                                                                                                                                                    | ≤ ± 30% of the initial value          |      |      |      |      |      |                 |
|                                                              | D.F. (tan δ )                                                                                                                                                                                                                                                                         | ≤ 200% of the initial specified value |      |      |      |      |      |                 |
|                                                              | ESR                                                                                                                                                                                                                                                                                   | ≤ 200% of the initial specified value |      |      |      |      |      |                 |
|                                                              | Leakage current                                                                                                                                                                                                                                                                       | ≤ The initial specified value         |      |      |      |      |      |                 |
| Shelf Life                                                   | The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 125℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to item 4.1 of JIS C 5101-4. |                                       |      |      |      |      |      |                 |
|                                                              | Capacitance change                                                                                                                                                                                                                                                                    | ≤ ±30% of the initial value           |      |      |      |      |      |                 |
|                                                              | D.F. (tan δ )                                                                                                                                                                                                                                                                         | ≤ 200% of the initial specified value |      |      |      |      |      |                 |
|                                                              | ESR                                                                                                                                                                                                                                                                                   | ≤ 200% of the initial specified value |      |      |      |      |      |                 |
|                                                              | Leakage current                                                                                                                                                                                                                                                                       | ≤ The initial specified value         |      |      |      |      |      |                 |

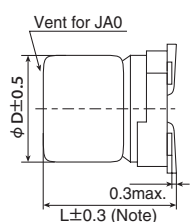
## DIMENSIONS [mm]

- Terminal Code : A

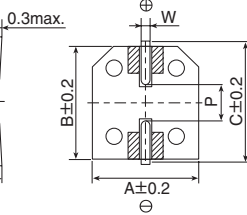
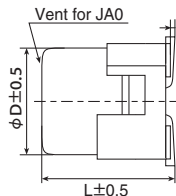
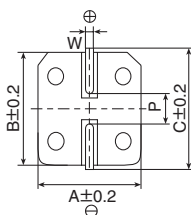
- Size code : F61 to JA0

- Terminal Code : G(Vibration resistant structure)

- Size code : HA0 and JA0



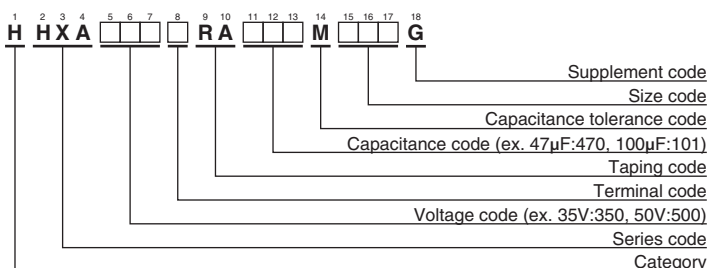
Note : L±0.5 for HA0 and JA0



⊠ : Dummy terminals

| Size Code | φD  | L    | A    | B    | C    | W          | P   |
|-----------|-----|------|------|------|------|------------|-----|
| F61       | 6.3 | 5.8  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| F80       | 6.3 | 7.7  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| HA0       | 8   | 10.0 | 8.3  | 8.3  | 9.0  | 0.7 to 1.1 | 3.1 |
| JA0       | 10  | 10.0 | 10.3 | 10.3 | 11.0 | 0.7 to 1.1 | 4.5 |

## PART NUMBERING SYSTEM



Please refer to "Product code guide (conductive polymer hybrid type)"

## MARKING

EX) 35V47μF



## Rated voltage symbol

| Rated voltage (V <sub>dc</sub> ) | Symbol |
|----------------------------------|--------|
| 16                               | C      |
| 25                               | E      |
| 35                               | V      |
| 50                               | H      |
| 63                               | J      |
| 80                               | K      |

### HXA Series

#### ◆STANDARD RATINGS

| WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Size code | ESR<br>(mΩ max./20°C, 100kHz) | Rated ripple current<br>(mA <sub>rms</sub> /125°C, 100kHz) | Part No.           |
|--------------------------|-------------|-----------|-------------------------------|------------------------------------------------------------|--------------------|
| 16                       | 82          | F61       | 45                            | 950                                                        | HHXA160ARA820MF61G |
|                          | 150         | F80       | 27                            | 1,450                                                      | HHXA160ARA151MF80G |
|                          | 270         | HA0       | 22                            | 1,700                                                      | HHXA160□RA271MHA0G |
|                          | 470         | JA0       | 18                            | 2,100                                                      | HHXA160□RA471MJA0G |
| 25                       | 47          | F61       | 50                            | 900                                                        | HHXA250ARA470MF61G |
|                          | 56          | F61       | 50                            | 900                                                        | HHXA250ARA560MF61G |
|                          | 68          | F80       | 30                            | 1,400                                                      | HHXA250ARA680MF80G |
|                          | 100         | F80       | 30                            | 1,400                                                      | HHXA250ARA101MF80G |
|                          | 150         | HA0       | 27                            | 1,600                                                      | HHXA250□RA151MHA0G |
|                          | 220         | HA0       | 27                            | 1,600                                                      | HHXA250□RA221MHA0G |
|                          | 270         | JA0       | 20                            | 2,000                                                      | HHXA250□RA271MJA0G |
|                          | 330         | JA0       | 20                            | 2,000                                                      | HHXA250□RA331MJA0G |
| 35                       | 27          | F61       | 60                            | 900                                                        | HHXA350ARA270MF61G |
|                          | 47          | F61       | 60                            | 900                                                        | HHXA350ARA470MF61G |
|                          | 47          | F80       | 35                            | 1,400                                                      | HHXA350ARA470MF80G |
|                          | 68          | F80       | 35                            | 1,400                                                      | HHXA350ARA680MF80G |
|                          | 100         | HA0       | 27                            | 1,600                                                      | HHXA350□RA101MHA0G |
|                          | 150         | HA0       | 27                            | 1,600                                                      | HHXA350□RA151MHA0G |
|                          | 150         | JA0       | 20                            | 2,000                                                      | HHXA350□RA151MJA0G |
|                          | 270         | JA0       | 20                            | 2,000                                                      | HHXA350□RA271MJA0G |
| 50                       | 10          | F61       | 80                            | 750                                                        | HHXA500ARA100MF61G |
|                          | 15          | F80       | 40                            | 1,100                                                      | HHXA500ARA150MF80G |
|                          | 22          | F61       | 80                            | 750                                                        | HHXA500ARA220MF61G |
|                          | 33          | F80       | 40                            | 1,100                                                      | HHXA500ARA330MF80G |
|                          | 33          | HA0       | 30                            | 1,250                                                      | HHXA500□RA330MHA0G |
|                          | 47          | HA0       | 30                            | 1,250                                                      | HHXA500□RA470MHA0G |
|                          | 56          | JA0       | 25                            | 1,600                                                      | HHXA500□RA560MJA0G |
|                          | 68          | HA0       | 30                            | 1,250                                                      | HHXA500□RA680MHA0G |
|                          | 100         | JA0       | 25                            | 1,600                                                      | HHXA500□RA101MJA0G |
| 63                       | 6.8         | F61       | 120                           | 700                                                        | HHXA630ARA6R8MF61G |
|                          | 10          | F61       | 120                           | 700                                                        | HHXA630ARA100MF61G |
|                          | 10          | F80       | 80                            | 900                                                        | HHXA630ARA100MF80G |
|                          | 22          | F80       | 80                            | 900                                                        | HHXA630ARA220MF80G |
|                          | 22          | HA0       | 40                            | 1,100                                                      | HHXA630□RA220MHA0G |
|                          | 33          | HA0       | 40                            | 1,100                                                      | HHXA630□RA330MHA0G |
|                          | 33          | JA0       | 30                            | 1,400                                                      | HHXA630□RA330MJA0G |
|                          | 56          | JA0       | 30                            | 1,400                                                      | HHXA630□RA560MJA0G |
| 80                       | 22          | HA0       | 45                            | 1,100                                                      | HHXA800□RA220MHA0G |
|                          | 39          | JA0       | 35                            | 1,200                                                      | HHXA800□RA390MJA0G |

□ : Enter the appropriate terminal code.