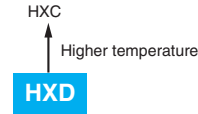


HXD Upgrade! Series

- High reliability and high voltage are realized by hybrid electrolyte
- Endurance with ripple current : 5,000 to 10,000 hours at 105°C
- Rated voltage range : 16 to 80V_{dc}, Capacitance range : 6.8 to 560μF
- For high reliability applications.
(Automotive equipment, Base station equipment, etc.)
- RoHS2 Compliant
- Halogen Free
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

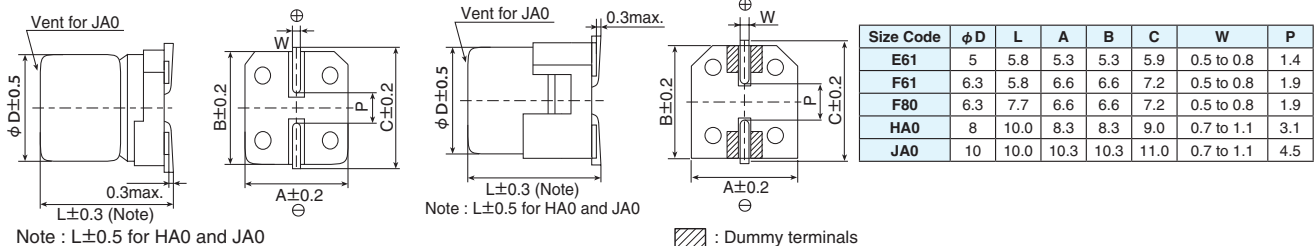


SPECIFICATIONS

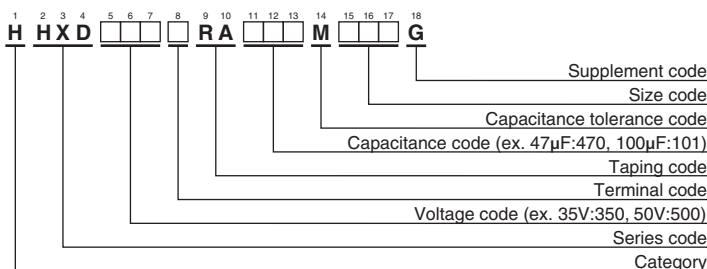
| Items | Characteristics | | | | | | |
|--|--|---------------------------------------|------|------|------|------|------|
| Category Temperature Range | -55 to +105°C | | | | | | |
| Rated Voltage Range | 16 to 80V _{dc} | | | | | | |
| Capacitance Tolerance | ±20% (M) (at 20°C, 120Hz) | | | | | | |
| Leakage Current | I=0.01CV or 3μA, whichever is greater Where, I : Max. leakage current (μA), C: Nominal capacitance(μF), V : Rated voltage(V) (at 20°C after 2 minutes) | | | | | | |
| Dissipation Factor (tan δ) | Rated voltage(V _{dc}) | 16V | 25V | 35V | 50V | 63V | 80V |
| | tan δ (Max.) | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 | 0.08 |
| Low Temperature Characteristics (Max. Impedance Ratio) | Z(-25°C)/Z(+20°C) ≤ 1.5 Z(-55°C)/Z(+20°C) ≤ 2.0 (at 100kHz) | | | | | | |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 10,000 hours (E61 and F61: 5,000 hours) at 105 °C. | | | | | | |
| | Capacitance change | ≤ ±30% of the initial value | | | | | |
| | D.F. (tan δ) | ≤ 200% of the initial specified value | | | | | |
| | ESR | ≤ 200% of the initial specified value | | | | | |
| Shelf Life | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105 °C 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 | | | | | |
| Bias Humidity Test | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at 85°C, 85% RH for 2,000 hours. | | | | | | |
| | Appearance | No significant damage | | | | | |
| | 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]

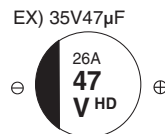
- Terminal Code : A
- Size code : E61 to JA0
- Terminal Code : G(Vibration resistant structure)
- Size code : F61 to JA0



PART NUMBERING SYSTEM



MARKING



Rated voltage symbol

| Rated voltage (V _{dc}) | Symbol |
|----------------------------------|--------|
| 16 | C |
| 25 | E |
| 35 | V |
| 50 | H |
| 63 | J |
| 80 | K |

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

◆STANDARD RATINGS

| WV (V _{dc}) | Cap (μF) | Size code | ESR (mΩ max./20°C, 100kHz) | Rated ripple current (mA rms/105°C, 100kHz) | Part No. |
|-----------------------|----------|-----------|----------------------------|---|--------------------|
| 16 | 47 | E61 | 80 | 900 | HHXD160ARA470ME61G |
| | 100 | F61 | 45 | 1,600 | HHXD160□RA101MF61G |
| | 180 | F80 | 27 | 2,200 | HHXD160□RA181MF80G |
| | 330 | HA0 | 22 | 2,500 | HHXD160□RA331MHA0G |
| | 560 | JA0 | 18 | 2,600 | HHXD160□RA561MJA0G |
| 25 | 33 | E61 | 80 | 900 | HHXD250ARA330ME61G |
| | 47 | F61 | 50 | 1,300 | HHXD250□RA470MF61G |
| | 56 | F61 | 50 | 1,300 | HHXD250□RA560MF61G |
| | 68 | F80 | 30 | 2,000 | HHXD250□RA680MF80G |
| | 100 | F80 | 30 | 2,000 | HHXD250□RA101MF80G |
| | 150 | HA0 | 27 | 2,300 | HHXD250□RA151MHA0G |
| | 220 | HA0 | 27 | 2,300 | HHXD250□RA221MHA0G |
| | 270 | JA0 | 20 | 2,500 | HHXD250□RA271MJA0G |
| | 330 | JA0 | 20 | 2,500 | HHXD250□RA331MJA0G |
| 390 | JA0 | 20 | 2,500 | HHXD250□RA391MJA0G | |
| 35 | 22 | E61 | 100 | 900 | HHXD350ARA220ME61G |
| | 27 | F61 | 60 | 1,300 | HHXD350□RA270MF61G |
| | 47 | F61 | 60 | 1,300 | HHXD350□RA470MF61G |
| | 47 | F80 | 35 | 2,000 | HHXD350□RA470MF80G |
| | 68 | F80 | 35 | 2,000 | HHXD350□RA680MF80G |
| | 100 | HA0 | 27 | 2,300 | HHXD350□RA101MHA0G |
| | 150 | HA0 | 27 | 2,300 | HHXD350□RA151MHA0G |
| | 150 | JA0 | 20 | 2,500 | HHXD350□RA151MJA0G |
| 270 | JA0 | 20 | 2,500 | HHXD350□RA271MJA0G | |
| 50 | 10 | F61 | 80 | 1,100 | HHXD500□RA100MF61G |
| | 15 | F80 | 40 | 1,600 | HHXD500□RA150MF80G |
| | 22 | F61 | 80 | 1,100 | HHXD500□RA220MF61G |
| | 33 | F80 | 40 | 1,600 | HHXD500□RA330MF80G |
| | 33 | HA0 | 30 | 1,800 | HHXD500□RA330MHA0G |
| | 47 | HA0 | 30 | 1,800 | HHXD500□RA470MHA0G |
| | 56 | JA0 | 25 | 2,400 | HHXD500□RA560MJA0G |
| | 82 | HA0 | 30 | 1,800 | HHXD500□RA820MHA0G |
| | 100 | JA0 | 25 | 2,400 | HHXD500□RA101MJA0G |
| 120 | JA0 | 25 | 2,400 | HHXD500□RA121MJA0G | |
| 63 | 6.8 | F61 | 120 | 1,000 | HHXD630□RA6R8MF61G |
| | 10 | F61 | 120 | 1,000 | HHXD630□RA100MF61G |
| | 10 | F80 | 80 | 1,500 | HHXD630□RA100MF80G |
| | 22 | F80 | 80 | 1,500 | HHXD630□RA220MF80G |
| | 22 | HA0 | 40 | 1,600 | HHXD630□RA220MHA0G |
| | 33 | HA0 | 40 | 1,600 | HHXD630□RA330MHA0G |
| | 33 | JA0 | 30 | 2,400 | HHXD630□RA330MJA0G |
| | 47 | HA0 | 40 | 1,600 | HHXD630□RA470MHA0G |
| | 56 | JA0 | 30 | 2,400 | HHXD630□RA560MJA0G |
| 100 | JA0 | 30 | 2,400 | HHXD630□RA101MJA0G | |
| 80 | 56 | JA0 | 33 | 2,400 | HHXD800□RA560MJA0G |

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

| Capacitance(μF) | Frequency(Hz) | | | | | | |
|-----------------|---------------|------|------|------|------|------|--------------|
| | 120 | 1k | 5k | 10k | 20k | 30k | 100k to 500k |
| to 10 | 0.03 | 0.30 | 0.50 | 0.60 | 0.70 | 0.75 | 1.00 |
| 15 to 33 | 0.07 | 0.30 | 0.50 | 0.60 | 0.70 | 0.75 | 1.00 |
| 47 to 180 | 0.10 | 0.40 | 0.60 | 0.70 | 0.80 | 0.80 | 1.00 |
| 220 to 560 | 0.13 | 0.45 | 0.65 | 0.75 | 0.85 | 0.85 | 1.00 |