

# HPD19 series, Laminated polymer solid aluminum electrolytic capacitor

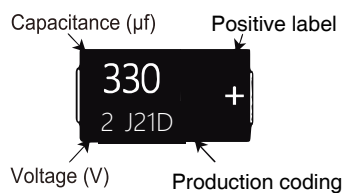
- ◆ Low ESR, High ripple current
- ◆ 105°C 2000H guaranteed.
- ◆ High pressure products ( 50Vmax)
- ◆ RoHS directive ( 2011/65/EU ) corresponding.



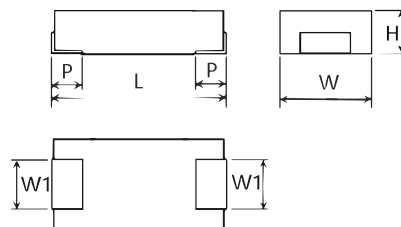
## ■ Specifications

| Items                       | Characteristics   |   |
|-----------------------------|---|---|
| Operation Temperature Range | -55°C ~ + 105°C   |   |
| Voltage Range               | 2-50V   |   |
| Capacitance Range           | 8.2~ 560μF 120Hz/20°C   |   |
| Capacitance Tolerance       | ± 20% (120Hz/20°C)  |   |
| Dissipation Factor (tanδ)   | ≤Specified value at 120Hz/20°C  |   |
| Leakage Current             | 1≤0.1C Vrated voltage for 2 minutes at 20°C   |   |
| ESR                         | ≤Specified value at 100 KHz/20°C  |   |
| surge voltage ( V )         | 1.15 times the rated voltage  |   |
| Endurance                   | After 2000 hours application of the rated voltage at 105°C, and after 16 hours at 20°C, the product should be satisfied                     |   |
|                             | Capacitance Change  | Within ± 20% of initial value .           |
|                             | Dissipation Factor  | <200% or less of initial specified value. |
|                             | Leakage Current   | <Initial specification value              |
| Hot and humid environment   | After 1000 hours at 60°C temperature, 90%~95%R.H humidity conditions, no voltage is applied, and 16 hours at 20°C, the product should meet. |   |
|                             | Capacitance Change  | +50% to -20% of the initial value         |
|                             | Dissipation Factor  | <200% or less of initial specified value. |
|                             | Leakage Current   | <Initial specification value              |

## ■ DRAWING



## ■ DIMENSIONS (Unit: mm)



|       |       |       |        |       |
|-------|-------|-------|--------|-------|
| L±0.2 | W±0.2 | H±0.1 | W1±0.1 | P±2.1 |
| 7.3   | 4.3   | 1.9   | 2.4    | 1.3   |

## ■ DIMENSIONS & STANDARD RATINGS

| Rated Voltage | Cap (uF) | Size(mm) |     |     | L.C. (μA, 2min) | Tanδ 120Hz | ESR (mΩ100kHz) | Rated ripple current |      |
|---------------|----------|----------|-----|-----|-----------------|------------|----------------|----------------------|------|
|               |          | L        | W   | H   |                 |            |                |                      |      |
| 2             | 82       | 7.3      | 4.3 | 1.9 | 16.4            | 0.06       | 15             | 5100                 |      |
|               | 180      | 7.3      | 4.3 | 1.9 | 36              | 0.06       | 12             | 5600                 |      |
|               | 220      | 7.3      | 4.3 | 1.9 | 44              | 0.06       | 9              | 6300                 |      |
|               | 270      | 7.3      | 4.3 | 1.9 | 54              | 0.06       | 9              | 6300                 |      |
|               | 330      | 7.3      | 4.3 | 1.9 | 66              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 66              | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 66              | 0.06       | 4.5            | 8500                 |      |
|               | 390      | 7.3      | 4.3 | 1.9 | 78              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 78              | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 78              | 0.06       | 4.5            | 8500                 |      |
|               | 470      | 7.3      | 4.3 | 1.9 | 94              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 94              | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 94              | 0.06       | 4.5            | 8500                 |      |
|               | 560      | 7.3      | 4.3 | 1.9 | 112             | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 112             | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 112             | 0.06       | 4.5            | 8500                 |      |
|               | 2.5      | 68       | 7.3 | 4.3 | 1.9             | 17         | 0.06           | 15                   | 5100 |
|               |          | 150      | 7.3 | 4.3 | 1.9             | 38         | 0.06           | 12                   | 5600 |
| 220           |          | 7.3      | 4.3 | 1.9 | 55              | 0.06       | 9              | 6300                 |      |
| 227           |          | 7.3      | 4.3 | 1.9 | 68              | 0.06       | 9              | 6300                 |      |
| 330           |          | 7.3      | 4.3 | 1.9 | 83              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 83              | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 83              | 0.06       | 4.5            | 8500                 |      |
| 390           |          | 7.3      | 4.3 | 1.9 | 98              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 98              | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 98              | 0.06       | 4.5            | 8500                 |      |
| 470           |          | 7.3      | 4.3 | 1.9 | 118             | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 118             | 0.06       | 6              | 7500                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 118             | 0.06       | 4.5            | 8500                 |      |
| 4             |          | 47       | 7.3 | 4.3 | 1.9             | 188        | 0.06           | 20                   | 4200 |
|               |          | 100      | 7.3 | 4.3 | 1.9             | 40         | 0.06           | 12                   | 5600 |
|               | 150      | 7.3      | 4.3 | 1.9 | 60              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 60              | 0.06       | 7              | 7000                 |      |
|               | 220      | 7.3      | 4.3 | 1.9 | 88              | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 88              | 0.06       | 7              | 7000                 |      |
|               | 270      | 7.3      | 4.3 | 1.9 | 108             | 0.06       | 9              | 6300                 |      |
|               |          | 7.3      | 4.3 | 1.9 | 108             | 0.06       | 7              | 7000                 |      |
| 6.3           | 33       | 7.3      | 4.3 | 1.9 | 21              | 0.06       | 20             | 4200                 |      |
|               | 68       | 7.3      | 4.3 | 1.9 | 43              | 0.06       | 15             | 5100                 |      |
|               | 100      | 7.3      | 4.3 | 1.9 | 63              | 0.06       | 12             | 5600                 |      |
|               | 150      | 7.3      | 4.3 | 1.9 | 95              | 0.06       | 9              | 6300                 |      |
|               | 180      | 7.3      | 4.3 | 1.9 | 113             | 0.06       | 9              | 6300                 |      |
|               | 220      | 7.3      | 4.3 | 1.9 | 139             | 0.06       | 9              | 6300                 |      |
| 10            | 22       | 7.3      | 4.3 | 1.9 | 22              | 0.06       | 20             | 4200                 |      |
|               | 39       | 7.3      | 4.3 | 1.9 | 39              | 0.06       | 18             | 4600                 |      |
|               | 68       | 7.3      | 4.3 | 1.9 | 68              | 0.06       | 15             | 5100                 |      |
|               | 82       | 7.3      | 4.3 | 1.9 | 82              | 0.06       | 12             | 5600                 |      |
|               | 100      | 7.3      | 4.3 | 1.9 | 100             | 0.06       | 10             | 5900                 |      |
| 16            | 15       | 7.3      | 4.3 | 1.9 | 24              | 0.06       | 70             | 2400                 |      |

| Rated Voltage | Cap (μF) | Size(mm) |     |     | L.C. (μA, 2min) | Tans 120Hz | ESR (mΩ100kHz) | Rated ripple current |
|---------------|----------|----------|-----|-----|-----------------|------------|----------------|----------------------|
|               |          | L        | W   | H   |                 |            |                |                      |
| 16            | 15       | 7.3      | 4.3 | 1.9 | 24              | 0.06       | 70             | 2400                 |
|               | 33       | 7.3      | 4.3 | 1.9 | 53              | 0.06       | 50             | 2850                 |
|               | 47       | 7.3      | 4.3 | 1.9 | 75              | 0.06       | 40             | 3200                 |
|               | 68       | 7.3      | 4.3 | 1.9 | 109             | 0.06       | 30             | 3500                 |
|               | 82       | 7.3      | 4.3 | 1.9 | 131             | 0.06       | 25             | 3800                 |
|               | 100      | 7.3      | 4.3 | 1.9 | 160             | 0.06       | 20             | 4200                 |
| 20            | 10       | 7.3      | 4.3 | 1.9 | 20              | 0.06       | 80             | 2200                 |
|               | 22       | 7.3      | 4.3 | 1.9 | 44              | 0.06       | 65             | 2500                 |
|               | 33       | 7.3      | 4.3 | 1.9 | 66              | 0.06       | 45             | 3000                 |
|               | 47       | 7.3      | 4.3 | 1.9 | 94              | 0.06       | 35             | 3300                 |
|               | 56       | 7.3      | 4.3 | 1.9 | 112             | 0.06       | 30             | 3500                 |
|               | 68       | 7.3      | 4.3 | 1.9 | 136             | 0.06       | 25             | 3800                 |
| 25            | 10       | 7.3      | 4.3 | 1.9 | 25              | 0.06       | 80             | 2200                 |
|               | 22       | 7.3      | 4.3 | 1.9 | 55              | 0.06       | 65             | 2500                 |
|               | 33       | 7.3      | 4.3 | 1.9 | 83              | 0.06       | 45             | 3000                 |
|               | 39       | 7.3      | 4.3 | 1.9 | 98              | 0.06       | 35             | 3300                 |
|               | 47       | 7.3      | 4.3 | 1.9 | 117.5           | 0.06       | 30             | 3500                 |
|               | 56       | 7.3      | 4.3 | 1.9 | 140             | 0.06       | 25             | 3800                 |
|               | 68       | 7.3      | 4.3 | 1.9 | 170             | 0.06       | 20             | 4200                 |
| 35            | 15       | 7.3      | 4.3 | 1.9 | 53              | 0.06       | 60             | 2700                 |
|               | 22       | 7.3      | 4.3 | 1.9 | 77              | 0.06       | 50             | 2850                 |
|               | 33       | 7.3      | 4.3 | 1.9 | 115.5           | 0.06       | 30             | 3200                 |
| 50            | 8.2      | 7.3      | 4.3 | 1.9 | 41              | 0.06       | 55             | 2700                 |
|               | 10       | 7.3      | 4.3 | 1.9 | 50              | 0.06       | 45             | 3000                 |

### ◆ How to order

|              |   |                  |  |                           |                |  |
|--------------|---|------------------|--|---------------------------|----------------|--|
| <b>HPD19</b> | <b>106</b>  | <b>M</b>         | <b>00350</b>   | <b>0704</b>               | <b>R</b>       | <b>-</b>   |
| ↓            | ↓   | ↓                | ↓  | ↓                         | ↓              | ↓  |
| <u>Type</u>  | <u>Capacitance code</u>   | <u>Tolerance</u> | <u>Rated Voltage</u>   | <u>Size Code</u>          | <u>Package</u> | <u>Additional characters may be added for special requirements</u> |
| HPD19        | pF Code: 1st two digits represent significant figures<br>3rd digit represents multiplier (number of zeros to follow)<br>106= 10uF<br>107= 100uF | M: +/-20%        | Code 00350: 35VDC<br>For DC Voltage<br>00020: 2.0VDC<br>00025: 2.5VDC<br>00063: 6.3VDC<br>00350: 35VDC | Code 0704: Size 7.3x4.3mm | R: Tape & Reel |  |