

Type BDPS Polypropylene Board Mount DC Link Capacitors

PCB Mount Power Film Capacitors



Type BDPS series uses the most advanced metallized film technology for long life and high reliability in DC Link applications. This series combines high capacitance and very high ripple current capability needed for today's inverter designs for medium power wind, solar, fuel cells, UPS systems and more.

Highlights

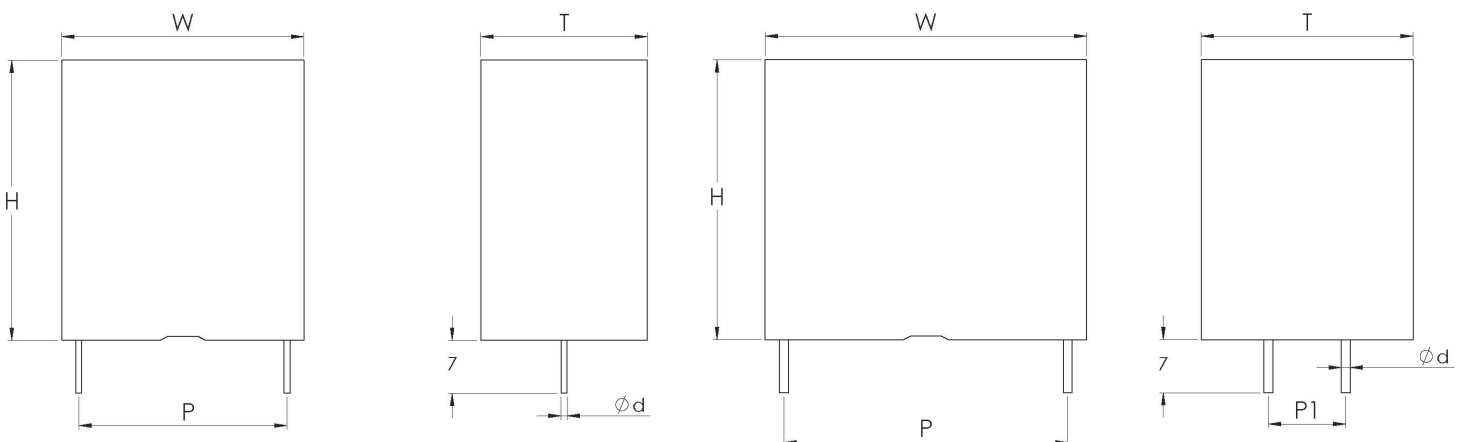
- Self-healing
- High capacitance density
- High ripple current
- Low losses

Specifications

| | |
|--|--|
| Capacitance Range | 1 μ F - 200 μ F |
| Capacitance Tolerance | \pm 5%(J) \pm 10%(K) |
| Rated Voltage | 450 Vdc - 1800 Vdc @ 85 °C, 500 Vdc - 2000 Vdc @ 70 °C |
| Maximum Operating Temperature | +105 °C |
| Upper Temperature T max. | +85 °C |
| Lower Temperature T min. | -40 °C |
| Dissipation Factor | \leq 0.0015 (0.15%) @ 100 Hz @ 20 °C |
| Test Voltage between Terminals @ 25 °C | 1.5 x rated voltage for 60s (terminal to terminal) |
| Test Voltage between Terminals and Case @ 25°C | 3 kVAC 50/60 Hz for 10s @ 25 °C |
| Insulation Resistance | IR x C \geq 10,000 M Ω x μ F @ 100VDC 20 °C |
| Reference Standards | IEC 61071 |
| RoHS Compliant | |

Dimensions

| Construction Details | |
|----------------------|---------------------|
| Case Material | Plastic UL94V-0 |
| Resin Material | Dry Resin UL94V-0 |
| Terminal Material | Tinned Copper Wires |



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Part Numbering System

| BDPS SERIES | 306 CAP | K CAP TOLERANCE | 451 VOLT | M CASE CODE | 4 LEADS | 375 L-S |
|----------------|-----------------------------|---|---|------------------|----------------------------|---|
| BDPS | EIA CAPACITANCE CODE | K = ±10% (standard) J = ±5% upon request | 451 = 450 VDC 701 = 700 VDC 801 = 800 VDC 112 = 1100 VDC 122 = 1200 VDC 182 = 1800 VDC | See table | 2 = 2 leads 4 = 4 leads | Primary Lead Spacing 275 = 27.5mm 375 = 37.5mm 525 = 52.5mm |

Case Dimensions (mm)

| Case Code | W (±1) | T (±1) | H (±1) | P (±0.5) | P1 (±0.5) | d |
|-----------|--------|--------|--------|----------|-----------|-----|
| A2 | 32 | 11 | 21 | 27.5 | - | 0.8 |
| B2 | 32 | 15 | 25 | 27.5 | - | 0.8 |
| C2 | 32 | 18 | 28 | 27.5 | - | 1.0 |
| D2 | 32 | 21 | 31 | 27.5 | - | 1.0 |
| E2 | 42.5 | 24.5 | 27.5 | 37.5 | - | 1.2 |
| F2 | 42.5 | 24 | 44 | 37.5 | - | 1.2 |
| F4 | 42.5 | 24 | 44 | 37.5 | 20.3 | 1.2 |
| G4 | 42.5 | 29 | 37 | 37.5 | 20.3 | 1.2 |
| H4 | 42.5 | 30 | 45 | 37.5 | 20.3 | 1.2 |
| J4 | 42.5 | 33 | 45 | 37.5 | 20.3 | 1.2 |
| K4 | 42.5 | 35 | 50 | 37.5 | 20.3 | 1.2 |
| L4 | 42.5 | 40 | 55 | 37.5 | 20.3 | 1.2 |
| M4 | 57.5 | 30 | 45 | 52.5 | 20.3 | 1.2 |
| N4 | 57.5 | 35 | 50 | 52.5 | 20.3 | 1.2 |
| P4 | 57.5 | 38 | 54 | 52.5 | 20.3 | 1.2 |
| Q4 | 57.5 | 42.5 | 56 | 52.5 | 20.3 | 1.2 |
| R4 | 57.5 | 45 | 55 | 52.5 | 20.3 | 1.2 |
| S4 | 57.5 | 45 | 65 | 52.5 | 20.3 | 1.2 |

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Ratings

| CDE Part Number | Cap 1kHz μF | ESR 10kHz mΩ | I _{rms} 10kHz 85°C A | ESL nH | dV/dt V/μs | Peak Current A | W | T | H | P | P1 |
|--|-------------------|--------------------|--|-----------|---------------|----------------------|------|------|------|------|------|
| 450 Vdc (85 °C)/ 500 VDC (70°C) | | | | | | | | | | | |
| BDPS405K451A2275 | 4 | 20.5 | 4.0 | 10 | 75 | 300 | 32.0 | 11.0 | 21.0 | 27.5 | |
| BDPS705K451B2275 | 7 | 11.5 | 6.5 | 10 | 75 | 525 | 32.0 | 15.0 | 25.0 | 27.5 | |
| BDPS106K451C2275 | 10 | 8.0 | 9.0 | 10 | 75 | 750 | 32.0 | 18.0 | 28.0 | 27.5 | |
| BDPS126K451D2275 | 12 | 7.0 | 10.0 | 10 | 75 | 900 | 32.0 | 21.0 | 31.0 | 27.5 | |
| BDPS206K451E2375 | 20 | 7.0 | 11.0 | 10 | 40 | 800 | 42.5 | 24.5 | 27.5 | 37.5 | |
| BDPS306K451F4375 | 30 | 6.5 | 15.0 | 10 | 40 | 1200 | 42.5 | 24.0 | 44.0 | 37.5 | 20.3 |
| BDPS456K451G4375 | 45 | 6.0 | 17.0 | 10 | 40 | 1800 | 42.5 | 29.0 | 37.0 | 37.5 | 20.3 |
| BDPS606K451H4375 | 60 | 4.5 | 18.5 | 15 | 40 | 2400 | 42.5 | 30.0 | 45.0 | 37.5 | 20.3 |
| BDPS606K451J4375 | 60 | 4.5 | 18.5 | 15 | 40 | 2400 | 42.5 | 33.0 | 45.0 | 37.5 | 20.3 |
| BDPS756K451K4375 | 75 | 3.0 | 19.0 | 15 | 20 | 1500 | 42.5 | 35.0 | 50.0 | 37.5 | 20.3 |
| BDPS107K451L4375 | 100 | 2.8 | 20.0 | 15 | 20 | 2000 | 42.5 | 40.0 | 55.0 | 37.5 | 20.3 |
| BDPS756K451M4525 | 75 | 3.2 | 18.0 | 15 | 20 | 1500 | 57.5 | 30.0 | 45.0 | 52.5 | 20.3 |
| BDPS107K451N4525 | 100 | 3.0 | 22.0 | 15 | 20 | 2000 | 57.5 | 35.0 | 50.0 | 52.5 | 20.3 |
| BDPS127K451P4525 | 120 | 2.8 | 25.0 | 15 | 20 | 2400 | 57.5 | 38.0 | 54.0 | 52.5 | 20.3 |
| BDPS157K451Q4525 | 150 | 2.5 | 28.0 | 15 | 20 | 3000 | 57.5 | 42.5 | 56.0 | 52.5 | 20.3 |
| BDPS157K451R4525 | 150 | 2.5 | 28.0 | 15 | 20 | 3000 | 57.5 | 45.0 | 55.0 | 52.5 | 20.3 |
| BDPS207K451S4525 | 200 | 2.3 | 28.0 | 15 | 20 | 4000 | 57.5 | 45.0 | 65.0 | 52.5 | 20.3 |
| 700 Vdc (85 °C)/ 800 VDC (70°C) | | | | | | | | | | | |
| BDPS305K701A2275 | 3 | 23.0 | 4.0 | 10 | 75 | 225 | 32.0 | 11.0 | 21.0 | 27.5 | |
| BDPS505K701B2275 | 5 | 14.0 | 6.0 | 10 | 75 | 375 | 32.0 | 15.0 | 25.0 | 27.5 | |
| BDPS805K701C2275 | 8 | 8.5 | 8.5 | 10 | 75 | 600 | 32.0 | 18.0 | 28.0 | 27.5 | |
| BDPS106K701D2275 | 10 | 7.0 | 10.0 | 10 | 75 | 750 | 32.0 | 21.0 | 31.0 | 27.5 | |
| BDPS106K701E2375 | 10 | 10.0 | 10.0 | 10 | 40 | 400 | 42.5 | 24.5 | 27.5 | 37.5 | |
| BDPS206K701F4375 | 20 | 7.5 | 12.0 | 10 | 40 | 800 | 42.5 | 24.0 | 44.0 | 37.5 | 20.3 |
| BDPS256K701G4375 | 25 | 6.0 | 12.0 | 10 | 40 | 1000 | 42.5 | 29.0 | 37.0 | 37.5 | 20.3 |
| BDPS406K701J4375 | 40 | 5.5 | 13.0 | 10 | 40 | 1600 | 42.5 | 33.0 | 45.0 | 37.5 | 20.3 |
| BDPS456K701K4375 | 45 | 5.0 | 15.0 | 10 | 40 | 1800 | 42.5 | 35.0 | 50.0 | 37.5 | 20.3 |
| BDPS556K701L4375 | 55 | 4.5 | 18.0 | 10 | 40 | 2200 | 42.5 | 40.0 | 55.0 | 37.5 | 20.3 |
| BDPS406K701M4525 | 40 | 6.0 | 15.0 | 15 | 20 | 800 | 57.5 | 30.0 | 45.0 | 52.5 | 20.3 |
| BDPS506K701M4525 | 50 | 5.5 | 18.0 | 15 | 20 | 1000 | 57.5 | 30.0 | 45.0 | 52.5 | 20.3 |
| BDPS606K701N4525 | 60 | 5.0 | 20.0 | 15 | 20 | 1200 | 57.5 | 35.0 | 50.0 | 52.5 | 20.3 |
| BDPS756K701N4525 | 75 | 4.5 | 22.0 | 15 | 20 | 1500 | 57.5 | 35.0 | 50.0 | 52.5 | 20.3 |
| BDPS806K701P4525 | 80 | 4.0 | 22.0 | 15 | 20 | 1600 | 57.5 | 38.0 | 54.0 | 52.5 | 20.3 |
| BDPS906K701Q4525 | 90 | 3.5 | 25.0 | 15 | 20 | 1800 | 57.5 | 42.5 | 56.0 | 52.5 | 20.3 |
| BDPS107K701Q4525 | 100 | 3.2 | 27.5 | 15 | 20 | 2000 | 57.5 | 42.5 | 56.0 | 52.5 | 20.3 |
| BDPS107K701R4525 | 100 | 3.2 | 27.5 | 15 | 20 | 2000 | 57.5 | 45.0 | 55.0 | 52.5 | 20.3 |
| BDPS117K701S4525 | 110 | 3.0 | 28.0 | 15 | 20 | 2200 | 57.5 | 45.0 | 65.0 | 52.5 | 20.3 |

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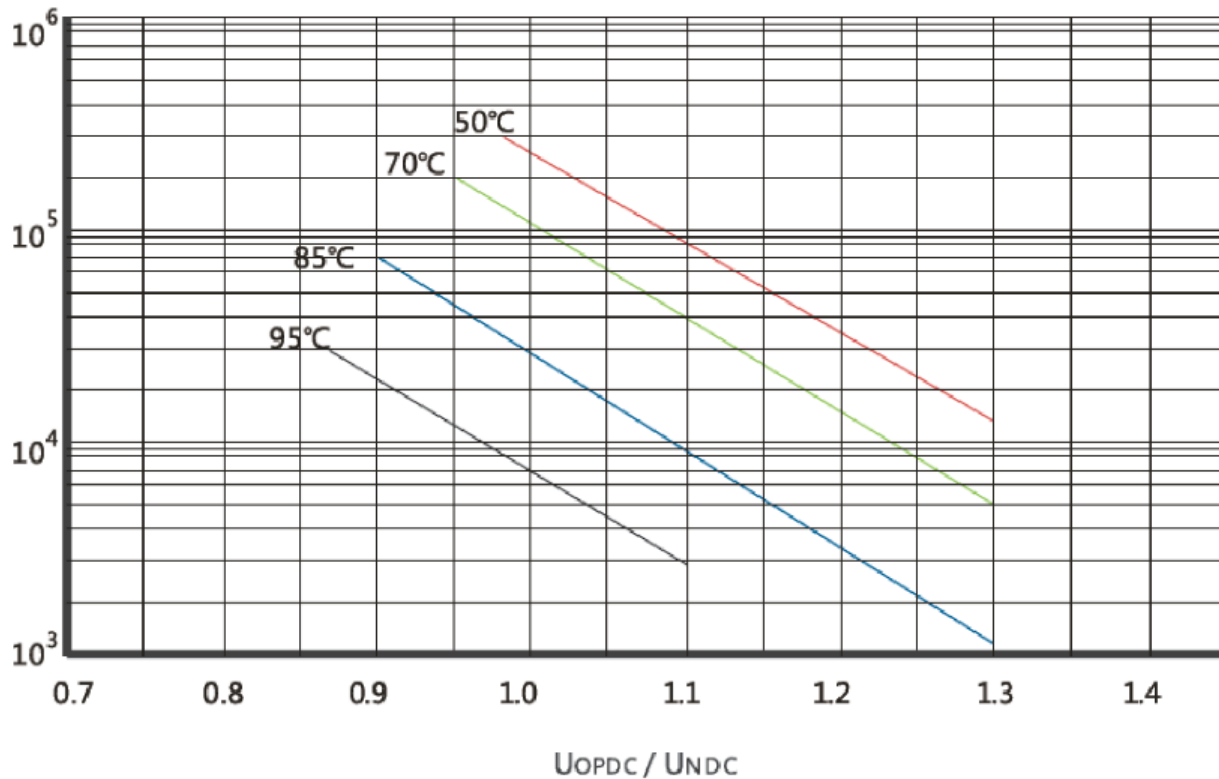
| CDE Part Number | Cap 1kHz μF | ESR 10kHz mΩ | I _{rms} 10kHz 85°C A | ESL nH | dV/dt V/μs | Peak Current A | W | T | H | P | P1 |
|--|-------------------|--------------------|--|-----------|---------------|----------------------|------|------|----|------|------|
| 800 Vdc(85 °C)/ 900 VDC (70°C) | | | | | | | | | | | |
| BDPS205K801A2275 | 2 | 31.0 | 3.5 | 10 | 75 | 150 | 32.0 | 11 | 21 | 27.5 | |
| BDPS405K801B2275 | 4 | 15.5 | 5.5 | 10 | 75 | 300 | 32.0 | 15 | 25 | 27.5 | |
| BDPS605K801C2275 | 6 | 10.5 | 7.5 | 10 | 75 | 450 | 32.0 | 18 | 28 | 27.5 | |
| BDPS805K801D2275 | 8 | 8.0 | 9.5 | 10 | 75 | 600 | 32.0 | 21 | 31 | 27.5 | |
| BDPS156K801F2375 | 15 | 10.0 | 10.0 | 10 | 40 | 600 | 42.5 | 24 | 44 | 37.5 | |
| BDPS206K801G4375 | 20 | 7.5 | 12.0 | 10 | 40 | 800 | 42.5 | 29 | 37 | 37.5 | 20.3 |
| BDPS306K801H4375 | 30 | 4.5 | 16.0 | 10 | 40 | 1200 | 42.5 | 30 | 45 | 37.5 | 20.3 |
| BDPS306K801J4375 | 30 | 4.5 | 16.0 | 10 | 40 | 1200 | 42.5 | 33 | 45 | 37.5 | 20.3 |
| BDPS456K801K4375 | 45 | 4.2 | 17.0 | 10 | 40 | 1800 | 42.5 | 35 | 50 | 37.5 | 20.3 |
| BDPS556K801L4375 | 55 | 4.0 | 18.0 | 10 | 40 | 2200 | 42.5 | 40 | 55 | 37.5 | 20.3 |
| BDPS356K801M4525 | 35 | 5.5 | 14.0 | 15 | 20 | 700 | 57.5 | 30 | 45 | 52.5 | 20.3 |
| BDPS506K801N4525 | 50 | 4.5 | 18.0 | 15 | 20 | 1000 | 57.5 | 35 | 50 | 52.5 | 20.3 |
| BDPS606K801P4525 | 60 | 4.5 | 20.0 | 15 | 20 | 1200 | 57.5 | 38 | 54 | 52.5 | 20.3 |
| BDPS706K801Q4525 | 70 | 3.5 | 22.0 | 15 | 20 | 1400 | 57.5 | 42.5 | 56 | 52.5 | 20.3 |
| BDPS756K801R4525 | 75 | 3.2 | 24.0 | 15 | 20 | 1500 | 57.5 | 45 | 55 | 52.5 | 20.3 |
| BDPS856K801S4525 | 85 | 3.0 | 26.0 | 15 | 20 | 1700 | 57.5 | 45 | 65 | 52.5 | 20.3 |
| 1100 Vdc(85 °C)/ 1200 VDC (70°C) | | | | | | | | | | | |
| BDPS105K112A2275 | 1 | 45.5 | 3.0 | 10 | 95 | 95 | 32.0 | 11 | 21 | 27.5 | |
| BDPS205K112B2275 | 2 | 23.0 | 4.5 | 10 | 95 | 190 | 32.0 | 15 | 25 | 27.5 | |
| BDPS305K112C2275 | 3 | 15.5 | 6.0 | 10 | 95 | 285 | 32.0 | 18 | 28 | 27.5 | |
| BDPS405K112D2275 | 4 | 11.5 | 8.0 | 10 | 95 | 380 | 32.0 | 21 | 31 | 27.5 | |
| BDPS106K112F2375 | 10 | 11.0 | 11.0 | 10 | 40 | 429 | 42.5 | 24 | 44 | 37.5 | |
| BDPS156K112G4375 | 15 | 8.0 | 15.0 | 10 | 40 | 600 | 42.5 | 29 | 37 | 37.5 | 20.3 |
| BDPS206K112H4375 | 20 | 5.0 | 18.0 | 10 | 40 | 800 | 42.5 | 30 | 45 | 37.5 | 20.3 |
| BDPS206K112J4375 | 20 | 5.0 | 18.0 | 10 | 40 | 800 | 42.5 | 33 | 45 | 37.5 | 20.3 |
| BDPS356K112K4375 | 35 | 4.5 | 19.0 | 10 | 40 | 1400 | 42.5 | 35 | 50 | 37.5 | 20.3 |
| BDPS206K112M4525 | 20 | 7.0 | 15.0 | 15 | 25 | 500 | 57.5 | 30 | 45 | 52.5 | 20.3 |
| BDPS256K112N4525 | 25 | 6.0 | 17.0 | 15 | 25 | 625 | 57.5 | 35 | 50 | 52.5 | 20.3 |
| BDPS306K112N4525 | 30 | 5.0 | 18.0 | 15 | 25 | 750 | 57.5 | 35 | 50 | 52.5 | 20.3 |
| BDPS456K112P4525 | 45 | 4.5 | 18.5 | 15 | 25 | 1125 | 57.5 | 38 | 54 | 52.5 | 20.3 |
| BDPS506K112Q4525 | 50 | 3.5 | 20.0 | 15 | 25 | 1250 | 57.5 | 42.5 | 56 | 52.5 | 20.3 |
| BDPS556K112Q4525 | 55 | 3.5 | 21.0 | 15 | 25 | 1375 | 57.5 | 42.5 | 56 | 52.5 | 20.3 |
| BDPS606K112R4525 | 60 | 3.2 | 22.0 | 15 | 25 | 1500 | 57.5 | 45 | 55 | 52.5 | 20.3 |
| BDPS706K112S4525 | 70 | 3.0 | 24.0 | 15 | 25 | 1750 | 57.5 | 45 | 65 | 52.5 | 20.3 |

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| CDE Part Number | Cap 1kHz μF | ESR 10kHz mΩ | I _{rms} 10kHz 85°C A | ESL nH | dV/dt V/μs | Peak Current A | W | T | H | P | P1 |
|--|-------------------|--------------------|--|-----------|---------------|----------------------|------|------|----|------|------|
| 1200 Vdc(85 °C)/ 1500 VDC (70°C) | | | | | | | | | | | |
| BDPS105K122A2275 | 1 | 43.0 | 3.0 | 10 | 100 | 100 | 32.0 | 11 | 21 | 27.5 | |
| BDPS205K122B2275 | 2 | 21.5 | 5.0 | 10 | 100 | 200 | 32.0 | 15 | 25 | 27.5 | |
| BDPS305K122C2275 | 3 | 14.5 | 6.5 | 10 | 100 | 300 | 32.0 | 18 | 28 | 27.5 | |
| BDPS405K122D2275 | 4 | 11.0 | 8.0 | 10 | 100 | 400 | 32.0 | 21 | 31 | 27.5 | |
| BDPS126K122H4375 | 12 | 5.0 | 15.0 | 10 | 50 | 600 | 42.5 | 30 | 45 | 37.5 | 20.3 |
| BDPS186K122K4375 | 18 | 4.5 | 18.0 | 10 | 50 | 900 | 42.5 | 35 | 50 | 37.5 | 20.3 |
| BDPS206K122L4375 | 20 | 7.0 | 16.0 | 15 | 50 | 1000 | 42.5 | 40 | 55 | 37.5 | 20.3 |
| BDPS126K122M4525 | 12 | 11.0 | 13.0 | 15 | 40 | 480 | 57.5 | 30 | 45 | 52.5 | 20.3 |
| BDPS206K122N4525 | 20 | 8.0 | 17.0 | 15 | 40 | 800 | 57.5 | 35 | 50 | 52.5 | 20.3 |
| BDPS256K122Q4525 | 25 | 7.0 | 20.0 | 15 | 40 | 1000 | 57.5 | 42.5 | 56 | 52.5 | 20.3 |
| BDPS406K122R4525 | 40 | 6.0 | 22.0 | 15 | 25 | 1000 | 57.5 | 45 | 55 | 52.5 | 20.3 |
| BDPS456K122S4525 | 45 | 5.5 | 24.0 | 15 | 25 | 1125 | 57.5 | 45 | 65 | 52.5 | 20.3 |
| 1800 Vdc(85 °C)/ 2000 VDC (70°C) | | | | | | | | | | | |
| BDPS605K182H4375 | 6 | 24.0 | 5.0 | 10 | 100 | 600 | 42.5 | 30 | 45 | 37.5 | 20.3 |
| BDPS805K182K4375 | 8 | 20.0 | 8.0 | 10 | 100 | 800 | 42.5 | 35 | 50 | 37.5 | 20.3 |
| BDPS106K182L4375 | 10 | 18.0 | 10.0 | 10 | 100 | 1000 | 42.5 | 40 | 55 | 37.5 | 20.3 |
| BDPS805K182M4525 | 8 | 12.0 | 13.0 | 15 | 50 | 400 | 57.5 | 30 | 45 | 52.5 | 20.3 |
| BDPS106K182N4525 | 10 | 10.0 | 17.0 | 15 | 50 | 500 | 57.5 | 35 | 50 | 52.5 | 20.3 |
| BDPS156K182Q4525 | 15 | 8.0 | 20.0 | 15 | 50 | 750 | 57.5 | 42.5 | 56 | 52.5 | 20.3 |
| BDPS186K182R4525 | 18 | 7.5 | 21.0 | 15 | 50 | 900 | 57.5 | 45 | 55 | 52.5 | 20.3 |
| BDPS206K182S4525 | 20 | 7.0 | 22.0 | 15 | 45 | 900 | 57.5 | 45 | 65 | 52.5 | 20.3 |

Lifetime Expectancy Typical Curves



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