Type WBR 85 ºC, Industrial Grade, Axial Leaded, Aluminum

85 ºC, Industrial Grade



Type WBR capacitors are the preferred choice for many varied industrial applications because they have high capacitance and extended life characteristics. The rugged construction delivers the high vibration resistance required in industrial applications

Highlights

- High capacitance
- Extended life
- Rugged construction
- High vibration resistance

Specifications

Capacitance Range: 1.0 to 5,000 µF

Voltage Range: 16 to 450 Vdc

Capacitance Tolerance: 16 to 50 Vdc -10 + 150%, 75 to 350 Vdc –10 + 100%, 450 Vdc –10 + 50%

Operating Temperature Range: –40 ºC +85ºC

Leakage Current: 16-75 Vdc ≤ 0.01CV + 10 µA

150-450 Vdc ≤ 0.03CV + 20 µA

Ripple Current Multipliers:

Ambient Temperature

45 ºC	55 ºC	65 ºC	75 ºC	85 ºC	95 ºC	105 ºC
1.50	1.46	1.32	1.17	1.00	0.79	0.50

Frequency	60 Hz	120 Hz	400 Hz	1000 Hz	10 kHz	50 kHz	100 kHz
0-60 Vdc	0.85	1.00	1.10	1.15	1.15	1.15	1.15
61-200 Vdc	0.83	1.00	1.15	1.20	1.20	1.20	1.20
201-450 Vdc	0.80	1.00	1.15	1.30	1.30	1.30	1.30

RoHS Compliant

Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Load Life: 2,000 h @ +85 ºC

Δ Capacitance ±20%

Δ ESR 150% of limit

Δ DCL 100% of limit

Shelf Life: 500 h @ 85 ºC

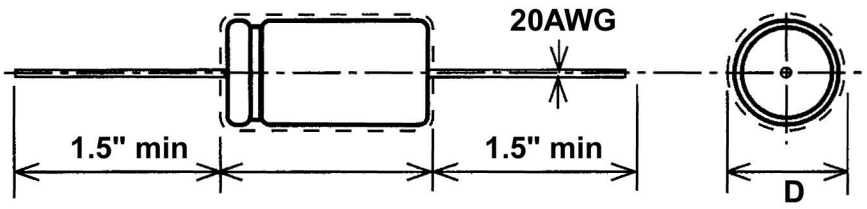
Δ Capacitance ±20%

Δ ESR 150% of limit

Δ DCL 100% of limit

Vibration: 10 to 55 Hz; 0.06” and 10 g max, 2 h in each plane

Outline Drawing



Type WBR 85 ºC, Industrial Grade, Axial Leaded, Aluminum

Part Numbering System

WBR	500	—	16	A	E
Type	Capacitance		Voltage	Lead	Epoxy Endseal
WBR	**500** = 500 µF		**16** = 16 Vdc	**A** = 1.5" 20 AWG **Blank** = See table	**E** = Epoxy **Blank** = No epoxy

Ratings

Cap (µF)	Catalog Part Number	Max ESR 120 Hz (Ω)	Ripple @ 85 ºC 120 Hz (A)	Max Case Size D x L (Inches)	
16 Vdc (20 Vdc Surge)					
100	WBR100-16A	5.30	0.057	0.34	0.76
250	WBR250-16A	2.10	0.118	0.34	0.88
500	WBR500-16A	1.10	0.270	0.40	1.00
1000	WBR1000-16A	0.53	0.420	0.40	1.32
2000	WBR2000-16A	0.27	0.660	0.47	1.57
3000	WBR3000-16A	0.18	0.820	0.52	1.83
4000	WBR4000-16A	0.13	1.000	0.65	1.83
5000	WBR5000-16A	0.11	1.200	0.65	1.83
25 Vdc (30 Vdc Surge)					
10	WBR10-25A	48.00	0.018	0.28	0.57
25	WBR25-25A	19.00	0.031	0.28	0.57
50	WBR50-25A	9.50	0.044	0.34	0.76
100	WBR100-25A	4.80	0.074	0.34	0.76
250	WBR250-25A	1.80	0.155	0.40	1.00
500	WBR500-25A	0.95	0.280	0.40	1.32
1000	WBR1000-25A	0.48	0.450	0.47	1.57
2000	WBR2000-25A	0.23	0.720	0.65	1.83
35 Vdc (40 Vdc Surge)					
100	WBR100-35A	4.40	0.086	0.40	0.88
150	WBR150-35A	2.95	0.114	0.40	1.00
300	WBR300-35A	1.45	0.195	0.47	1.32
500	WBR500-35A	0.87	0.285	0.52	1.67
1000	WBR1000-35A	0.44	0.450	0.54	1.67
2000	WBR2000-35A	0.22	0.910	0.65	1.83
3000	WBR3000-35A	0.15	1.150	0.74	1.69
50 Vdc (65 Vdc Surge)					
1	WBR1-50A	390.00	0.010	0.28	0.57
2	WBR2-50A	195.00	0.012	0.28	0.57
5	WBR5-50A	77.00	0.014	0.28	0.57
10	WBR10-50A	39.00	0.020	0.28	0.57
25	WBR25-50A	15.50	0.035	0.34	0.76
50	WBR50-50A	7.70	0.060	0.40	1.88
100	WBR100-50A	3.90	0.140	0.40	1.00
150	WBR150-50A	2.50	0.160	0.40	1.00
250	WBR250-50A	1.50	0.220	0.40	1.32
500	WBR500-50A	0.77	0.340	0.52	1.57
1000	WBR1000-50A	0.39	0.530	0.65	1.83
1500	WBR1500-50A	0.25	0.740	0.65	1.83
75 Vdc (95 Vdc Surge)					
150	WBR150-75A	2.50	0.180	0.47	1.32
275	WBR275-75A	1.30	0.280	0.52	1.57
500	WBR500-75A	0.72	0.400	0.65	1.83

Cap (µF)	Catalog Part Number	Max ESR 120 Hz (Ω)	Ripple @ 85 ºC 120 Hz (A)	Max Case Size D x L (Inches)	
150 Vdc (175 Vdc Surge)					
4	WBR4-150A	78.00	0.018	0.34	0.88
5	WBR5-150A	62.00	0.020	0.34	0.88
8	WBR8-150A	39.00	0.030	0.40	0.88
10	WBR10-150A	31.00	0.034	0.40	0.88
16	WBR16-150A	19.50	0.045	0.40	1.00
20	WBR20-150A	15.50	0.050	0.40	1.32
30	WBR30-150A	10.50	0.085	0.40	1.57
40	WBR40-150A	7.80	0.096	0.47	1.32
50	WBR50-150A	6.20	0.105	0.47	1.57
60	WBR60-150A	5.20	0.130	0.65	1.57
80	WBR80-150A	3.90	0.155	0.65	1.83
100	WBR100-150A	3.10	0.190	0.65	1.83
150	WBR150-150A	2.05	0.230	0.74	1.69
180 Vdc (250 Vdc Surge)					
125	WBR125-180A	2.30	0.300	0.74	1.69
250 Vdc (300 Vdc Surge)					
4	WBR4-250A	64.00	0.035	0.40	1.00
8	WBR8-250A	32.00	0.056	0.40	1.32
12	WBR12-250A	21.50	0.062	0.40	1.32
16	WBR16-250A	16.00	0.065	0.47	1.57
20	WBR20-250A	12.50	0.075	0.47	1.57
30	WBR30-250A	8.40	0.105	0.52	1.57
40	WBR40-250A	6.30	0.125	0.52	1.83
50	WBR50-250A	5.00	0.140	0.65	1.83
60	WBR60-250A	4.20	0.180	0.65	1.83
80	WBR80-250A	3.10	0.200	0.74	1.69
350 Vdc (400 Vdc Surge)					
4	WBR4-350A	51.00	0.036	0.40	1.00
8	WBR8-350A	26.00	0.050	0.47	1.32
20	WBR20-350A	10.00	0.090	0.52	1.57
40	WBR40-350A	5.10	0.135	0.65	1.83
450 Vdc (525 Vdc Surge)					
1	WBR1-450A	205.00	0.023	0.40	1.00
2	WBR2-450A	102.00	0.030	0.40	1.00
4	WBR4-450A	51.00	0.038	0.47	1.57
5	WBR5-450A	40.00	0.042	0.47	1.57
8	WBR8-450A	26.00	0.053	0.47	1.57
10	WBR10-450A	20.00	0.058	0.52	1.57
12	WBR12-450A	17.00	0.062	0.65	1.83
16	WBR16-450A	12.50	0.084	0.65	1.83
20	WBR20-450A	10.00	0.105	0.65	1.83
30	WBR30-450A	6.70	0.130	0.74	1.69