

Surface Mount Type

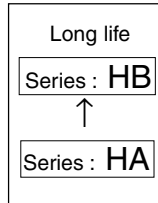
Series: HB

■ Features

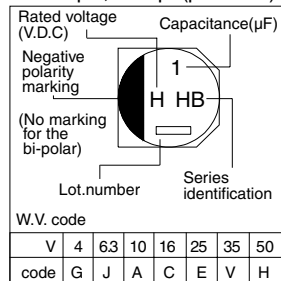
- Life time: 105°C 2000 h
- 6.1 mm height ($\leq \phi 6.3$)

■ Specifications

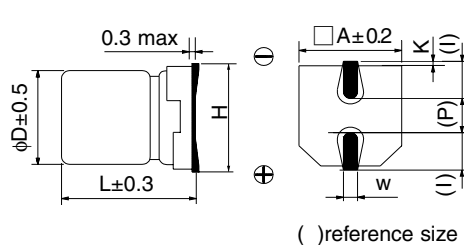
Operating Temp. Range	-40 to +105°C								
Rated W.V. Range	4 to 50 V .DC								
Nominal Cap. Range	0.1 to 220μF								
Capacitance Tolerance	± 20 % (120Hz/+20°C)								
D.C. leakage Current	I ≤ 0.01 CV or 3 (μA) after 2 minutes (Bi-polar I=0.02 CV or 6 (μA) after 2 minutes) (Whichever is greater)								
Dissipation Factor (tan δ)	Refer to standard products table.								
Characteristics at Low Temperature	W.V. (V)	4	6.3	10	16	25	35	50	(Impedance ratio max at 120Hz)
	-25 / +20 °C	7	4	3	2	2	2	2	
	-40 / +20 °C	15	8	6	4	4	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105°C and then being stabilized at +20°C , capacitor shall meet the following limits. (Bi-polar; Rated D.C. working voltage to each polarity for 1000 hours)								
	Capacitance change	±20% of initial measured value (4 W.V.: ± 35%; 6.3 W.V.: ±25 %)							
	D.F.	≤ 200% of initial specified value							
	D.C leakage current	≤ initial specified value							
Shelf Life	After storage for 1000 hours at +105°C with no voltage applied and then being stabilized at +20°C, capacitor shall meet the limits specified in “Endurance.” (With voltage treatment)								
Resistance to Soldering Heat	After reflow soldering (refer to application guidelines) and then being stabilized at +20°C, capacitor shall meet the following limits.								
	Capacitance change	±10% of initial measured value							
	D.F.	≤ initial specified value							
	D.C leakage current	≤ initial specified value							



■ Marking

Example; 50V1 μ F(polarized)

■ Dimensions in mm (not to scale)



Size code	D	L	A	H	I	W	P	K
B	4.0	5.8	4.3	5.5MAX	1.8	0.65 $\pm$ 0.1	1.0	0.35 ^{+0.15} _{-0.20}
C	5.0	5.8	5.3	6.5MAX	2.2	0.65 $\pm$ 0.1	1.5	0.35 ^{+0.15} _{-0.20}
D	6.3	5.8	6.6	7.8MAX	2.6	0.65 $\pm$ 0.1	1.8	0.35 ^{+0.15} _{-0.20}

■ Standard Products

● Polarized

W.V.	4	6.3	10	16	25	35	50
Cap.(μ F)	(0G)	(0J)	(1A)	(1C)	(1E)	(1V)	(1H)
0.1							B
0.22							B
0.33							B
0.47							B
1.0							B
2.2							B
3.3							B
4.7					B		C
6.8					B		C
10				B		C	D
22		B		C		D	
33		B	C		D		
47	B	C		D			
100	C	D					
220	D						

● Bi-polar

W.V.	6.3	10	16	25	35	50
Cap.(μ F)	(0J)	(1A)	(1C)	(1E)	(1V)	(1H)
0.22						B
0.33						B
0.47						B
1.0						B
2.2					B	
3.3				B		D
4.7				B		D
10		B	C	D		
22				D		
33		D				
47	D					

Standard Products (Polarized)

W.V. [V.DC]	Cap. [μF]	Part No.	tan δ	R.C. [mA rms]	Size [mm]	
					D	L
4	47	EEVHB0G470R	0.50	34	4	5.8
	100	EEVHB0G101R	0.50	61	5	5.8
	220	EEVHB0G221P	0.50	82	6	5.8
6.3	22	EEVHB0J220R	0.30	26	4	5.8
	33	EEVHB0J330R	0.30	29	4	5.8
	47	EEVHB0J470R	0.30	46	5	5.8
	100	EEVHB0J101P	0.30	71	6.3	5.8
	33	EEVHB1A330R	0.22	43	5	5.8
10	10	EEVHB1C100R	0.16	28	4	5.8
	22	EEVHB1C220R	0.16	39	5	5.8
	47	EEVHB1C470P	0.16	70	6.3	5.8
25	4.7	EEVHB1E4R7R	0.14	22	4	5.8
	6.8	EEVHB1E6R8R	0.14	25	4	5.8
	33	EEVHB1E330P	0.14	65	6.3	5.8

W.V. [V.DC]	Cap. [μF]	Part No.	tan δ	R.C. [mA rms]	Size [mm]	
					D	L
35	10	EEVHB1V100R	0.12	28	5	5.8
	22	EEVHB1V220P	0.12	55	6.3	5.8
50	0.1	EEVHB1HR10R	0.12	1	4	5.8
	0.22	EEVHB1HR22R	0.12	2	4	5.8
	0.33	EEVHB1HR33R	0.12	3	4	5.8
	0.47	EEVHB1HR47R	0.12	5	4	5.8
	1	EEVHB1H1R0R	0.12	10	4	5.8
	2.2	EEVHB1H2R2R	0.12	16	4	5.8
	3.3	EEVHB1H3R3R	0.12	16	4	5.8
	4.7	EEVHB1H4R7R	0.12	23	5	5.8
	6.8	EEVHB1H6R8R	0.12	23	5	5.8
	10	EEVHB1H100P	0.12	35	6.3	5.8

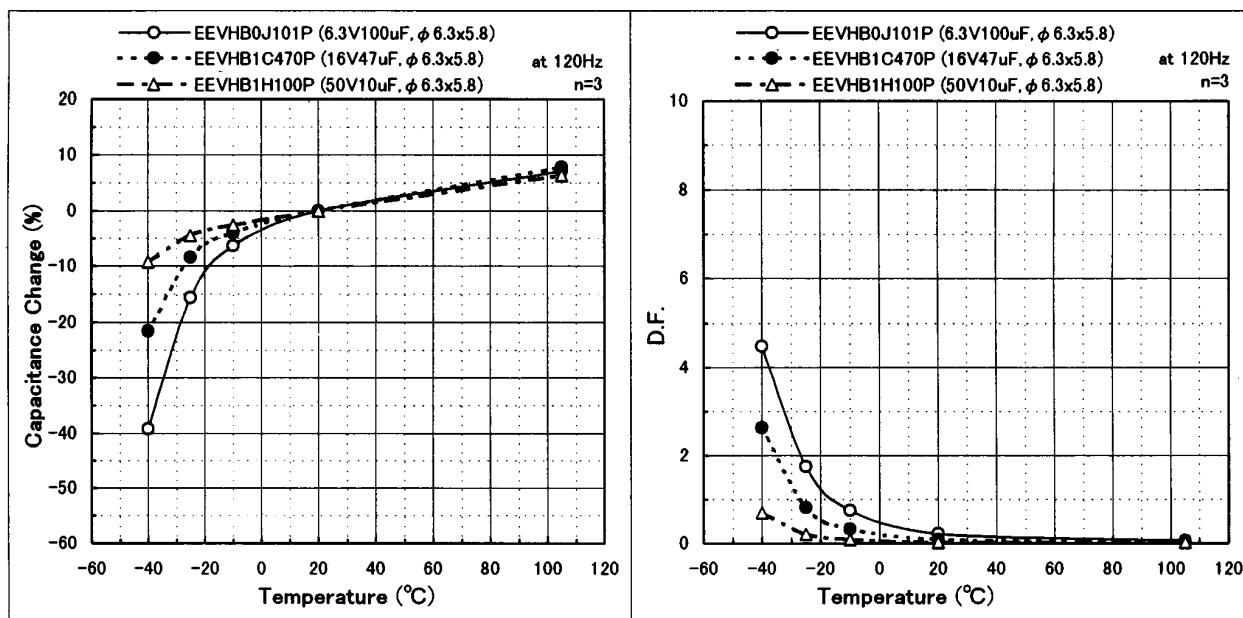
Standard Products (Bi-polar)

W.V. [V.DC]	Cap. [μF]	Part No.	tan δ	R.C. [mA rms]	Size [mm]	
					D	L
6.3	47	EEVHP0J470P	0.60	35	6.3	5.8
10	10	EEVHP1A100R	0.44	20	4	5.8
	33	EEVHP1A330P	0.44	26	6.3	5.8
16	10	EEVHP1C100R	0.32	25	5	5.8
25	3.3	EEVHP1E3R3R	0.28	12	4	5.8
	4.7	EEVHP1E4R7R	0.28	12	4	5.8
	10	EEVHP1E100P	0.28	28	6.3	5.8
	22	EEVHP1E220P	0.28	55	6.3	5.8

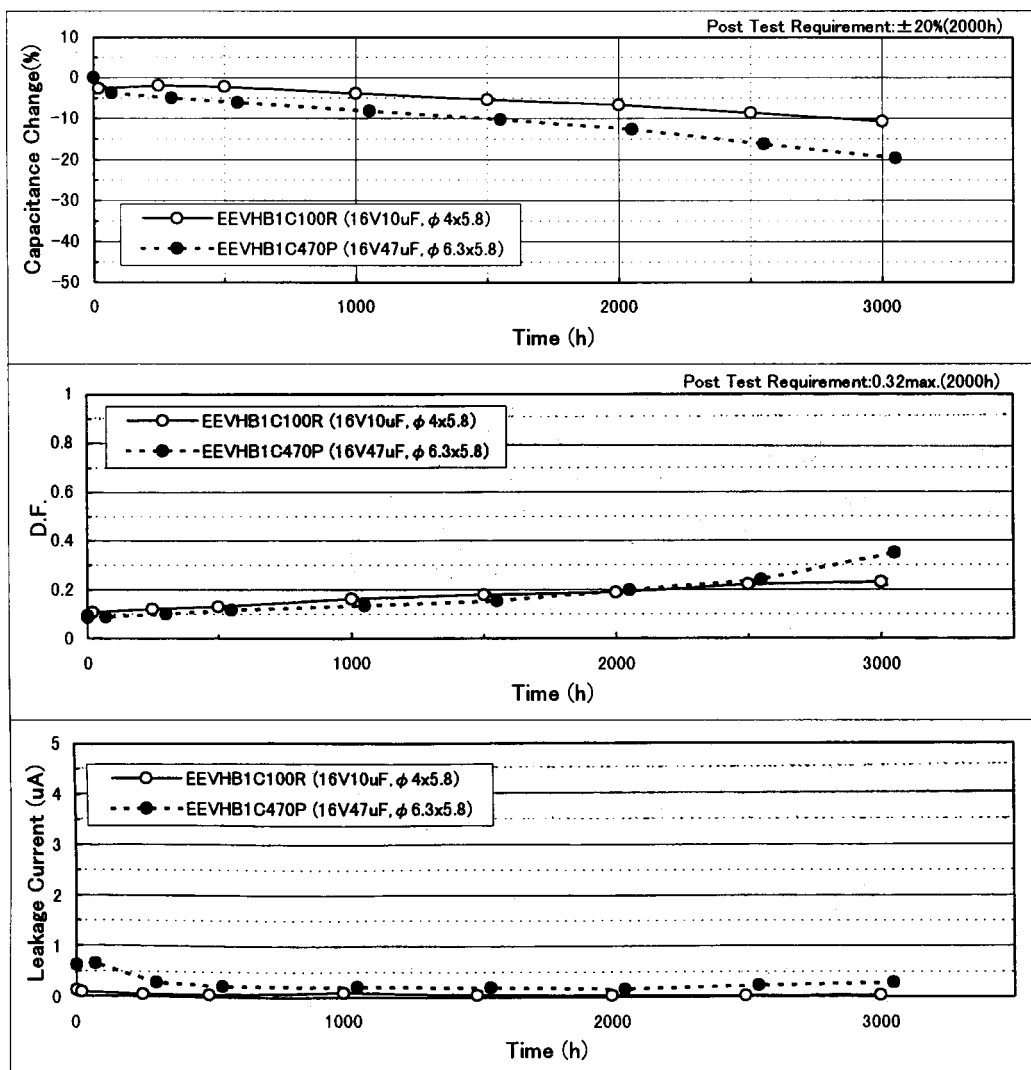
W.V. [V.DC]	Cap. [μF]	Part No.	tan δ	R.C. [mA rms]	Size [mm]	
					D	L
35	2.2	EEVHP1V2R2R	0.24	10	4	5.8
50	0.22	EEVHP1HR22R	0.24	2	4	5.8
	0.33	EEVHP1HR33R	0.24	3	4	5.8
	0.47	EEVHP1HR47R	0.24	5	4	5.8
	1	EEVHP1H1R0R	0.24	10	4	5.8
	3.3	EEVHP1H3R3P	0.24	16	6.3	5.8
	4.7	EEVHP1H4R7P	0.24	23	6.3	5.8

tan δ = at 120Hz/+20°C
Ripple current = at 120Hz/+105°C

Temperature Characteristics

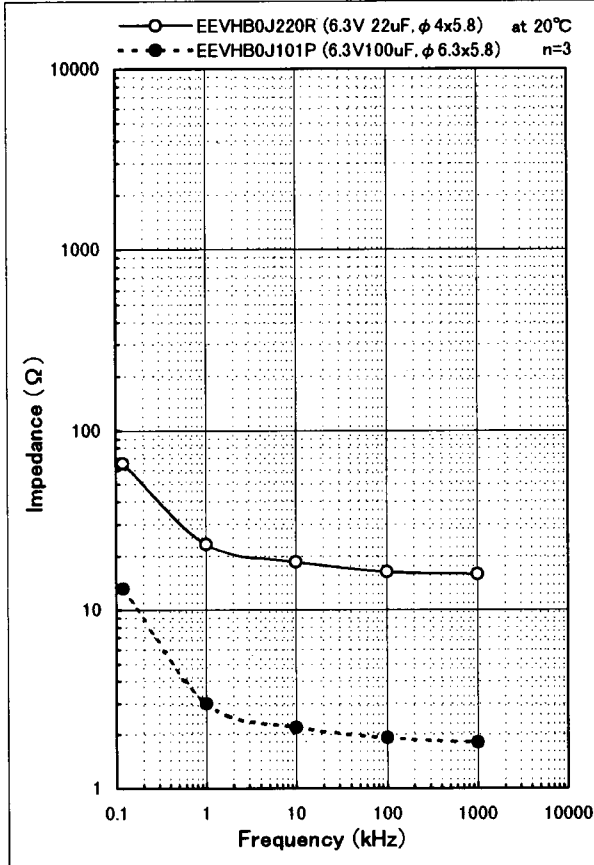


Load Life Data

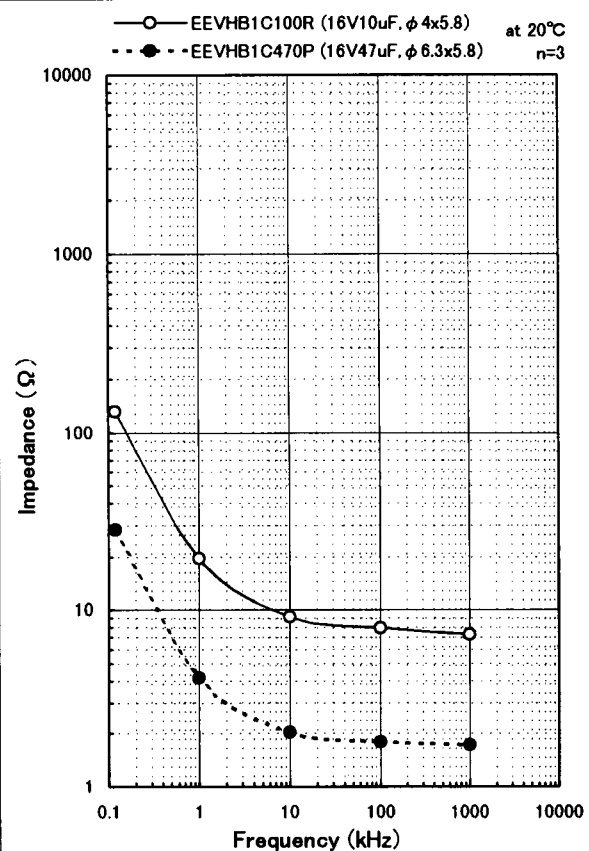


Frequency Characteristics

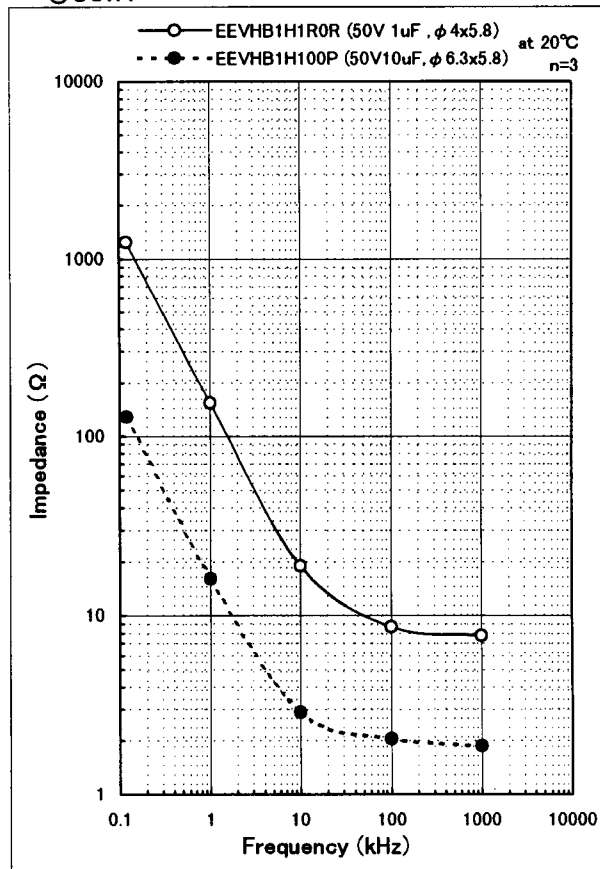
◎6.3WV



◎16WV



◎50WV



■ Temperature Characteristics

