

HBP series

Bi-polar RoHS compliant

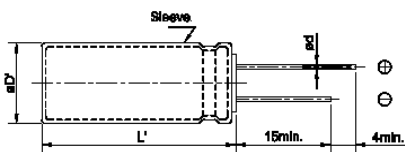


- 105°C 1,000Hrs assured.
- Bi-polar, Wide temperature
- For Digital Household Appliances.
- RoHS compliant
- Halogen-free capacitors are also available.

Specifications

Item	Characteristics	
Rated Voltage Range	6.3 ~ 100Vdc	160 ~ 250Vdc
Operating Temperature Range	-55 ~ +105°C	-40~ +105°C
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	I=0.03CV(μA)or 3μA, whichever is greater Where, C:Nominal capacitance(μF), V:Rated voltage(VDC) (at 20°C, 5 minutes)	
Dissipation Factor(Tanδ)	Rated Voltage(VDC)	6.3 10 16~25 35 50 63~100 160 200~250
	Tanδ(Max.)	0.25 0.24 0.20 0.16 0.14 0.12 0.15 0.20
Temperature characteristics (Max,impedance ratio)	When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20°C, 120Hz)	
	Rated Voltage(VDC)	6.3 10 16 25~100 160 160~250
	Z(-25°C)/Z(20°C)	4 3 2 2 2 3
	Z(-40°C)/Z(20°C)	8 6 4 3 3 4
	(at ,120Hz)	
Load life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 105°C. During this test, the rated voltage shall be reversed on the capacitor every 250 hours. Capacitance change ≤ ±20% of the initial value (where, ±25% for ≤ 16 VDC) Tanδ ≤ 150% of the initial specified value Leakage current ≤ 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 85°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. (Refer to JIS C 5141-4.4.1) Capacitance change ≤ ±20% of the initial value (where, ±25% for ≤ 16 VDC) Tanδ ≤ 150% of the initial specified value Leakage current ≤ 150% of the initial specified value	

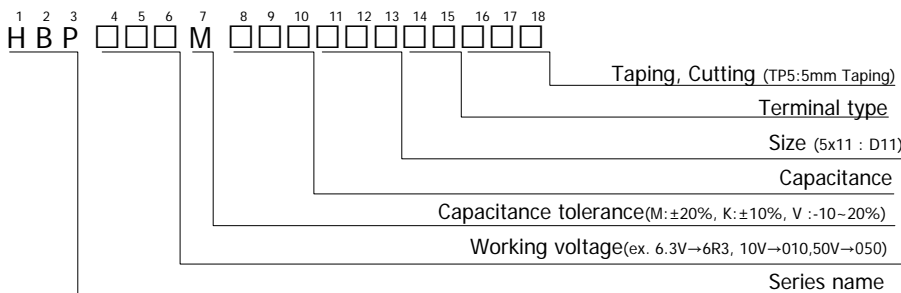
Dimension



	Unit (mm)							
ØD	5	6.3	8	10	12.5	16	18	22
Ød	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0
ØD'	ØD+0.5 max.							
L'	L+1.5 max.				L+2.0 max.			

- Printed black color letter on PET/PVC sky blue sleeve

Code numbering system



Ø5	D
Ø6.3	E
Ø8	F
Ø10	G
Ø12.5	X
Ø16	J
Ø18	K
Ø22	M

HBP series

Standard Rating

VV (Vdc)	Cap (µF)	Size ØxL (mm)	Tanδ	Ripple Current (mA _{RMS} /105°C, 120Hz)	Code No
6.3	100	5 x 11	0.25	80	HBP6R3□100D11CS□□□
	220	6.3 x 11	0.25	135	HBP6R3□221E11CS□□□
	330	8 x 11.5	0.25	190	HBP6R3□331F12CS□□□
	470	10 x 12.5	0.25	267	HBP6R3□471G13CS□□□
	1,000	10 x 20	0.25	465	HBP6R3□102G20CS□□□
	2,200	12.5 x 25	0.25	831	HBP6R3□222X25CS□□□
	3,300	16 x 20	0.25	1,018	HBP6R3□332J20CS□□□
	4,700	16 x 31.5	0.25	1,446	HBP6R3□472J32CS□□□
6,800	18 x 31.5	0.25	1,796	HBP6R3□682K32CS□□□	
10	47	5 x 11	0.24	58	HBP010□470D11CS□□□
	100	6.3 x 11	0.24	95	HBP010□100E11CS□□□
	220	8 x 11.5	0.24	162	HBP010□221F12CS□□□
	330	10 x 12.5	0.24	233	HBP010□331G13CS□□□
	470	10 x 16	0.24	307	HBP010□471G16CS□□□
	1,000	12.5 x 20	0.24	538	HBP010□102X20CS□□□
	2,200	16 x 20	0.24	868	HBP010□222J20CS□□□
	3,300	16 x 31.5	0.24	1,266	HBP010□332J32CS□□□
4,700	18 x 31.5	0.24	1,559	HBP010□472K32CS□□□	
6,800	18 x 40	0.24	1,968	HBP010□682K40CS□□□	
16	47	5 x 11	0.20	65	HBP016□470D11CS□□□
	100	6.3 x 11	0.20	108	HBP016□101E11CS□□□
	220	10 x 12.5	0.20	217	HBP016□221G13CS□□□
	330	10 x 16	0.20	293	HBP016□331G16CS□□□
	470	10 x 20	0.20	379	HBP016□471G20CS□□□
	1,000	12.5 x 25	0.20	629	HBP016□102X25CS□□□
	2,200	16 x 31.5	0.20	1,112	HBP016□222J32CS□□□
	3,300	18 x 35.5	0.20	1,452	HBP016□332K36CS□□□
25	22	5 x 11	0.20	47	HBP025□220D11CS□□□
	33	6.3 x 11	0.20	67	HBP025□330E11CS□□□
	47	6.3 x 11	0.20	79	HBP025□470E11CS□□□
	100	8 x 11.5	0.20	132	HBP025□101F12CS□□□
	220	10 x 16	0.20	255	HBP025□221G16CS□□□
	330	10 x 20	0.20	338	HBP025□331G20CS□□□
	470	12.5 x 20	0.20	433	HBP025□471X20CS□□□
	1,000	16 x 20	0.20	686	HBP025□102J20CS□□□
2,200	18 x 31.5	0.20	1,250	HBP025□222K32CS□□□	
3,300	18 x 40	0.20	1,608	HBP025□332K40CS□□□	
35	10	5 x 11	0.16	33	HBP035□100D11CS□□□
	22	6.3 x 11	0.16	56	HBP035□220E11CS□□□
	33	6.3 x 11	0.16	69	HBP035□330E11CS□□□
	47	8 x 11.5	0.16	94	HBP035□470F12CS□□□
	100	10 x 12.5	0.16	161	HBP035□101G13CS□□□
	220	10 x 20	0.16	286	HBP035□221G20CS□□□
	330	12.5 x 20	0.16	375	HBP035□331X20CS□□□
	470	12.5 x 25	0.16	486	HBP035□471X25CS□□□
1,000	16 x 31.5	0.16	844	HBP035□102X20CS□□□	
2,200	18 x 40	0.16	1,355	HBP035□222K40CS□□□	
50	10	5 x 11	0.14	37	HBP050□100D11CS□□□
	22	6.3 x 11	0.14	64	HBP050□220E11CS□□□
	33	8 x 11.5	0.14	89	HBP050□330F12CS□□□
	47	10 x 12.5	0.14	124	HBP050□470G13CS□□□
	100	10 x 16	0.14	200	HBP050□101G16CS□□□
	220	12.5 x 20	0.14	358	HBP050□221X20CS□□□
	330	16 x 20	0.14	476	HBP050□331J20CS□□□
	470	16 x 25	0.14	626	HBP050□471J25CS□□□
1,000	18 x 35.5	0.14	1,006	HBP050□102K36CS□□□	
63	4.7	5 x 11	0.12	28	HBP063□4R7D11CS□□□
	10	6.3 x 11	0.12	47	HBP063□100E11CS□□□
	22	8 x 11.5	0.12	80	HBP063□220F12CS□□□
	33	8 x 11.5	0.12	98	HBP063□330F12CS□□□
	47	10 x 12.5	0.12	137	HBP063□470G13CS□□□
	100	10 x 20	0.12	240	HBP063□101G20CS□□□
220	12.5 x 20	0.12	407	HBP063□221X20CS□□□	

VV (Vdc)	Cap (µF)	Size ØxL (mm)	Tanδ	Ripple Current (mA _{RMS} /105°C, 120Hz)	Code No
63	330	16 x 25	0.12	550	HBP063□331J25CS□□□
	470	16 x 31.5	0.12	709	HBP063□471J32CS□□□
	1,000	18 x 40	0.12	1,119	HBP063□102K40CS□□□
100	3.3	5 x 11	0.12	25	HBP100□3R3D11CS□□□
	4.7	6.3 x 11	0.12	34	HBP100□4R7E11CS□□□
	10	8 x 11.5	0.12	58	HBP100□100F12CS□□□
	22	10 x 12.5	0.12	98	HBP100□220G13CS□□□
	33	10 x 16	0.12	137	HBP100□330G16CS□□□
	47	10 x 20	0.12	175	HBP100□470G20CS□□□
	100	12.5 x 25	0.12	307	HBP100□101X25CS□□□
	220	16 x 31.5	0.12	542	HBP100□221J32CS□□□
330	18 x 35.5	0.12	668	HBP100□331K36CS□□□	
160	10	10 x 16	0.15	67	HBP160□100G11CS□□□
	22	12.5 x 20	0.15	179	HBP160□220X11CS□□□
	33	12.5 x 25	0.15	156	HBP160□330X11CS□□□
	47	16 x 25	0.15	208	HBP160□470J11CS□□□
	100	18 x 31.5	0.15	337	HBP160□101K11CS□□□
200	4.7	10 x 12.5	0.20	41	HBP200□4R7G13CS□□□
	10	10 x 20	0.20	72	HBP200□100G16CS□□□
	22	12.5 x 25	0.20	126	HBP200□220X25CS□□□
	33	16 x 20	0.20	158	HBP200□330J20CS□□□
	47	16 x 25	0.20	208	HBP200□470J25CS□□□
100	18 x 40	0.20	354	HBP200□101K40CS□□□	
250	3.3	10 x 12.5	0.20	34	HBP250□3R3G13CS□□□
	4.7	10 x 16	0.20	45	HBP250□4R7G16CS□□□
	10	12.5 x 20	0.20	80	HBP250□100X20CS□□□
	22	16 x 20	0.20	128	HBP250□220J20CS□□□
	33	16 x 25	0.20	174	HBP250□330J25CS□□□
47	18 x 31.5	0.20	231	HBP250□470K40CS□□□	