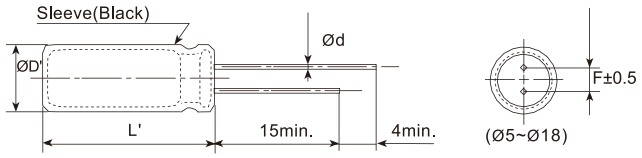
HP series

- Standard bi-polarized series
- Endurance: +105°C 1,000 hours
- **RoHS Compliant**

SPECIFICATIONS

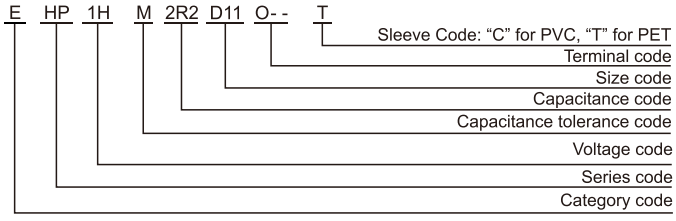
Items	Characteristics								
Category Temperature Range	-40~+105°C								
Rated Voltage Range	6.3~100 Vdc								
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)								
Leakage Current	I 0.06CV or 10μA, whichever is greater.(at 20°C after 2 minutes) I 0.03CV or 3μA, whichever is greater.(at 20°C after 5 minutes) Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V)								
Dissipation Factor (tanδ)	Rated Voltage(Vdc)	6.3	10	16	25	35	50	63	100
	tanδ (max.)	0.24	0.24	0.20	0.20	0.16	0.14	0.12	0.10
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C,120Hz)								
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(Vdc)	6.3	10	16	25	35	50	63	100
	Z(-25°C)/Z(+20°C)	4	3	2					
	Z(-40°C)/Z(+20°C)	10	8	6	4	3			(at 120Hz)
Endurance	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 with the polarity inverted every 250 hours.								
	Capacitance Change	≤±20% of the initial value							
	D.F. (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 500 hours at 105°C without voltage applied.								
	Capacitance Change	≤±20% of the initial value							
	D.F. (tanδ)	≤150% of the initial specified value							
	Leakage Current	≤200% of the initial specified value							

DIMENSIONS[mm]



ØD	5	6.3	8		10	12.5	16	18
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
ØD'	ØD+0.5max.							
L'	L+2max.							

PART NUMBERING SYSTEM



HP series

■ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size DxL(mm)	tanδ	Rated ripple current (mArms/105°C, 120Hz)	Part Number
6.3(0J)	33	5×11	0.24	45	EHP0JM330D11OT
	47	5×11	0.24	54	EHP0JM470D11OT
	100	6.3×11	0.24	90	EHP0JM101E11OT
	220	8×11	0.24	150	EHP0JM221F11OT
	330	8×11	0.24	185	EHP0JM331F11OT
	470	10×12.5	0.24	260	EHP0JM471G1BOT
	1000	10×20	0.24	460	EHP0JM102G20OT
	2200	12.5×25	0.26	820	EHP0JM222W25OT
	3300	16×25	0.28	1110	EHP0JM332L25OT
	4700	16×30	0.30	1430	EHP0JM472L30OT
	6800	18×35	0.34	1830	EHP0JM682M35OT
10(1A)	22	5×11	0.24	37	EHP1AM220D11OT
	33	5×11	0.24	45	EHP1AM330D11OT
	47	5×11	0.24	54	EHP1AM470D11OT
	100	6.3×11	0.24	90	EHP1AM101E11OT
	220	8×11	0.24	150	EHP1AM221F11OT
	330	10×16	0.24	240	EHP1AM331G16OT
	470	10×16	0.24	290	EHP1AM471G16OT
	1000	12.5×20	0.24	510	EHP1AM102W20OT
	2200	16×25	0.26	910	EHP1AM222L25OT
	3300	16×30	0.28	1200	EHP1AM332L30OT
	4700	18×35	0.30	1520	EHP1AM472M35OT
16(1C)	10	5×11	0.20	27	EHP1CM100D11OT
	22	5×11	0.20	40	EHP1CM220D11OT
	33	5×11	0.20	49	EHP1CM330D11OT
	47	6.3×11	0.20	67	EHP1CM470E11OT
	100	8×11	0.20	110	EHP1CM101F11OT
	220	10×12.5	0.20	195	EHP1CM221G1BOT
	330	10×16	0.20	265	EHP1CM331G16OT
	470	10×20	0.20	345	EHP1CM471G20OT
	1000	12.5×25	0.20	605	EHP1CM102W25OT
	2200	16×30	0.22	1070	EHP1CM222L30OT
	3300	18×35	0.24	1400	EHP1CM332M35OT
25(1E)	10	5×11	0.20	27	EHP1EM100D11OT
	22	5×11	0.20	46	EHP1EM220D11OT
	33	6.3×11	0.20	56	EHP1EM330E11OT
	47	6.3×11	0.20	67	EHP1EM470E11OT
	100	8×11	0.20	110	EHP1EM101F11OT
	220	10×16	0.20	215	EHP1EM221G16OT
	330	12.5×20	0.20	320	EHP1EM331W20OT
	470	12.5×20	0.20	380	EHP1EM471W20OT
	1000	16×25	0.20	670	EHP1EM102L25OT
	2200	18×35	0.22	1140	EHP1EM222M35OT
35(1V)	4.7	5×11	0.16	21	EHP1VM4R7D11OT
	10	5×11	0.16	30	EHP1VM100D11OT
	22	6.3×11	0.16	51	EHP1VM220E11OT
	33	8×11	0.16	72	EHP1VM330F11OT
	47	8×11	0.16	86	EHP1VM470F11OT
	100	10×16	0.16	160	EHP1VM101G16OT

WV (Vdc)	Cap (μF)	Size DxL(mm)	tanδ	Rated ripple current (mArms/105°C, 120Hz)	Part Number
35(1V)	220	12.5×20	0.16	290	EHP1VM221W20OT
	330	12.5×20	0.16	350	EHP1VM331W20OT
	470	12.5×25	0.16	465	EHP1VM471W25OT
	1000	16×30	0.16	805	EHP1VM102L30OT
50(1H)	0.47	5×11	0.14	7.0	EHP1HMR47D11OT
	1.0	5×11	0.14	10	EHP1HM010D11OT
	2.2	5×11	0.14	15	EHP1HM2R2D11OT
	3.3	5×11	0.14	18	EHP1HM3R3D11OT
	4.7	5×11	0.14	22	EHP1HM4R7D11OT
	10	6.3×11	0.14	37	EHP1HM100E11OT
	22	8×11	0.14	63	EHP1HM220F11OT
	33	8×11	0.14	77	EHP1HM330F11OT
	47	10×12.5	0.14	105	EHP1HM470G1BOT
	100	10×20	0.14	190	EHP1HM101G20OT
	220	12.5×25	0.14	340	EHP1HM221W25OT
	330	16×25	0.14	460	EHP1HM331L25OT
	470	16×30	0.14	590	EHP1HM471L30OT
63(1J)	3.3	5×11	0.12	20	EHP1JM3R3D11OT
	4.7	6.3×11	0.12	24	EHP1JM4R7E11OT
	10	6.3×11	0.12	40	EHP1JM100E11OT
	22	8×11	0.12	68	EHP1JM220F11OT
	33	10×12.5	0.12	98	EHP1JM330G1BOT
	47	10×16	0.12	130	EHP1JM470G16OT
	100	12.5×20	0.12	225	EHP1JM101W20OT
	220	16×25	0.12	405	EHP1JM221L25OT
	330	16×30	0.12	535	EHP1JM331L30OT
	470	18×35	0.12	680	EHP1JM471M35OT
80(1B)	2.2	5×11	0.12	16	EHP1BM2R2D11OT
	3.3	6.3×11	0.12	23	EHP1BM3R3E11OT
	4.7	6.3×11	0.12	27	EHP1BM4R7E11OT
	10	8×11	0.12	46	EHP1BM100F11OT
	22	10×16	0.12	89	EHP1BM220G16OT
	33	10×16	0.12	105	EHP1BM330G16OT
	47	10×20	0.12	140	EHP1BM470G20OT
	100	12.5×25	0.12	245	EHP1BM101W25OT
	220	16×30	0.12	435	EHP1BM221L30OT
	330	18×35	0.12	570	EHP1BM331M35OT
100(1K)	0.47	5×11	0.10	8.0	EHP1KMR47D11OT
	1.0	5×11	0.10	12	EHP1KM010D11OT
	2.2	6.3×11	0.10	20	EHP1KM2R2E11OT
	3.3	6.3×11	0.10	25	EHP1KM3R3E11OT
	4.7	6.3×11	0.10	30	EHP1KM4R7E11OT
	10	8×11	0.10	50	EHP1KM100F11OT
	22	10×16	0.10	97	EHP1KM220G16OT
	33	12.5×20	0.10	140	EHP1KM330W20OT
	47	12.5×20	0.10	170	EHP1KM470W20OT
	100	16×25	0.10	300	EHP1KM101L25OT
	220	18×35	0.10	510	EHP1KM221M35OT