

HP series

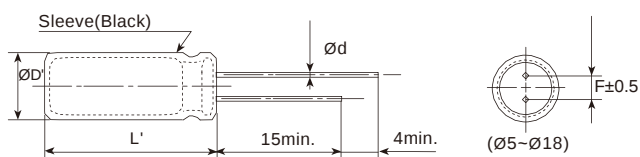
- Standard bi-polarized series
- Endurance: +105°C 1,000 hours
- RoHS Compliant



SPECIFICATIONS

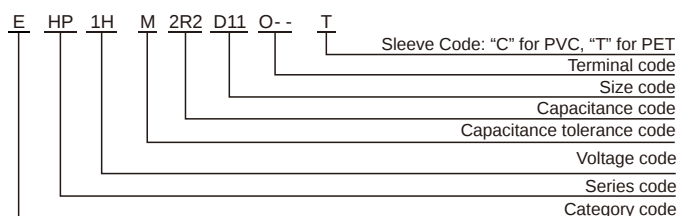
Items	Characteristics										
Category Temperature Range	-40~+105°C										
Rated Voltage Range	6.3~100 V _{dc}										
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)										
Leakage Current	I≤0.06CV or 10μA, whichever is greater.(at 20°C after 2 minutes) I≤0.03CV or 3μA, whichever is greater.(at 20°C after 5 minutes) Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V)										
Dissipation Factor (tanδ)	Rated Voltage(V _{dc})	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(V _{dc})	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	0.8	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 (V _{dc})	Cap (μF)	Size ΦD×L(mm)	tanδ	Rated ripple current (mA _{rms} /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	EHP1VM47R7D11OT
	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 (V _{dc})	Cap (μF)	Size ΦD×L(mm)	tanδ	Rated ripple current (mA _{rms} /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	EHP1HMR2R2D11OT
	3.3	5×11	0.14	18	EHP1HMR3R3D11OT
	4.7	5×11	0.14	22	EHP1HMR4R7D11OT
	10	6.3×11	0.14	37	EHP1HM100E11OT
	22	8×11	0.14	63	EHP1HMR220F11OT
	33	8×11	0.14	77	EHP1HMR330F11OT
	47	10×12.5	0.14	105	EHP1HMR470G1BOT
	100	10×20	0.14	190	EHP1HM101G20OT
	220	12.5×25	0.14	340	EHP1HMR221W25OT
	330	16×25	0.14	460	EHP1HMR331L25OT
	470	16×30	0.14	590	EHP1HMR471L30OT
	3.3	5×11	0.12	20	EHP1JMR3R3D11OT
	4.7	6.3×11	0.12	24	EHP1JMR4R7E11OT
63(1J)	10	6.3×11	0.12	40	EHP1JMR100E11OT
	22	8×11	0.12	68	EHP1JMR220F11OT
	33	10×12.5	0.12	98	EHP1JMR330G1BOT
	47	10×16	0.12	130	EHP1JMR470G16OT
	100	12.5×20	0.12	225	EHP1JMR101W20OT
	220	16×25	0.12	405	EHP1JMR221L25OT
	330	16×30	0.12	535	EHP1JMR331L30OT
	470	18×35	0.12	680	EHP1JMR471M35OT
	2.2	5×11	0.12	16	EHP1BMR2R2D11OT
	3.3	6.3×11	0.12	23	EHP1BMR3R3E11OT
80(1B)	4.7	6.3×11	0.12	27	EHP1BMR4R7E11OT
	10	8×11	0.12	46	EHP1BMR100F11OT
	22	10×16	0.12	89	EHP1BMR220G16OT
	33	10×16	0.12	105	EHP1BMR330G16OT
	47	10×20	0.12	140	EHP1BMR470G20OT
	100	12.5×25	0.12	245	EHP1BMR101W25OT
	220	16×30	0.12	435	EHP1BMR221L30OT
	330	18×35	0.12	570	EHP1BMR331M35OT
	0.47	5×11	0.10	8.0	EHP1KMR47D11OT
	1.0	5×11	0.10	12	EHP1KMR010D11OT
100(1K)	2.2	6.3×11	0.10	20	EHP1KMR2R2E11OT
	3.3	6.3×11	0.10	25	EHP1KMR3R3E11OT
	4.7	6.3×11	0.10	30	EHP1KMR4R7E11OT
	10	8×11	0.10	50	EHP1KMR100F11OT
	22	10×16	0.10	97	EHP1KMR220G16OT
	33	12.5×20	0.10	140	EHP1KMR330W20OT
	47	12.5×20	0.10	170	EHP1KMR470W20OT
	100	16×25	0.10	300	EHP1KMR101L25OT
	220	18×35	0.10	510	EHP1KMR221M35OT