

HX系列 SERIES

Downsized

RoHS



- 小型化产品 Downsized
- 保证105°C、2000小时寿命。(叠加纹波电流)
Endurance with ripple current: 2000 hours at 105°C
- 额定工作电压范围: 160V ~ 450V
Rated voltage range: 160V-450V



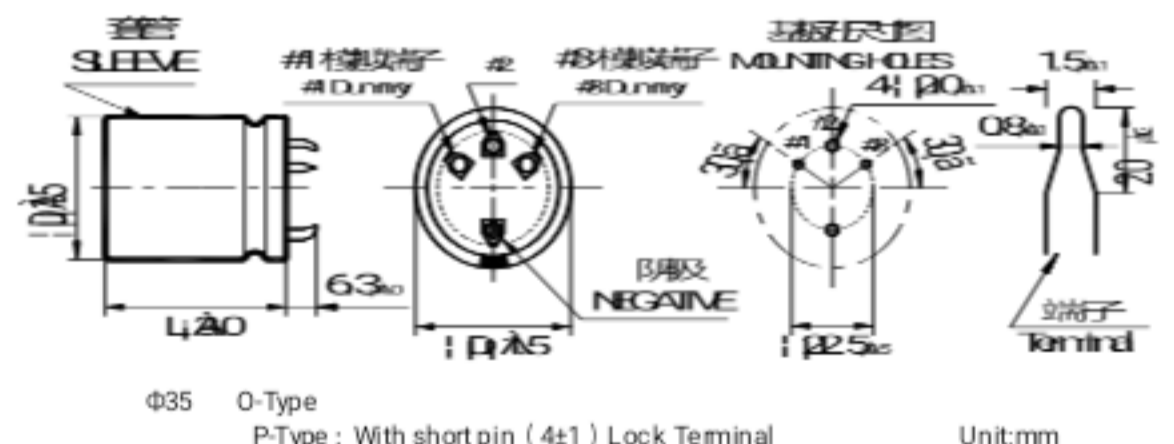
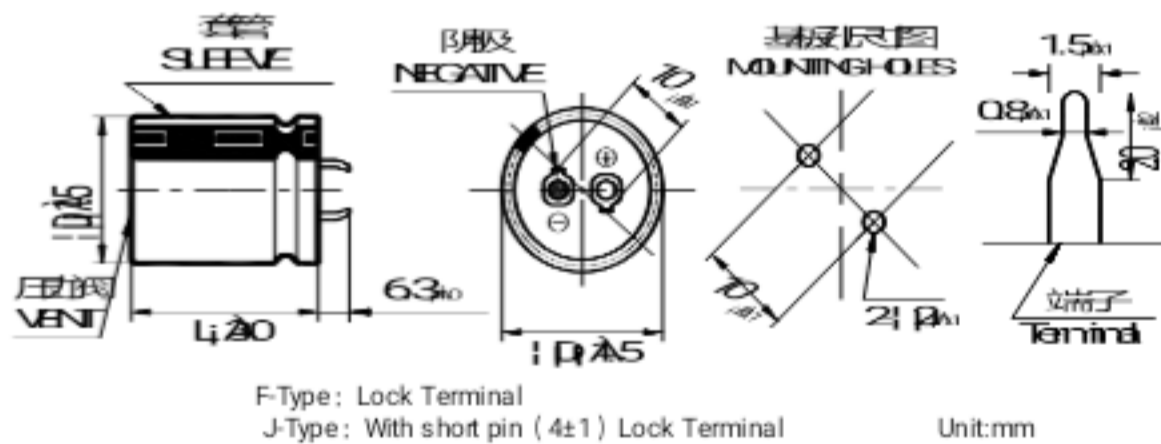
规格表 SPECIFICATIONS

项目 Items	特性 Characteristics																
工作温度范围 Operating Temperature Range	- 25 ~ +105°C																
额定工作电压范围 Rated Working Voltage Range	160 ~ 450V																
静电容量允许偏差 Capacitance Tolerance	±20% (20°C, 120Hz)																
损耗角正切值 Dissipation Factor (MAX) 20°C, 120Hz	<table border="1"> <tr> <td>U_R(V)</td> <td>160</td> <td>200</td> <td>250</td> <td>315</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>tanδ</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.18</td> <td>0.18</td> <td>0.20</td> </tr> </table>	U _R (V)	160	200	250	315	350	400	450	tanδ	0.15	0.15	0.15	0.15	0.18	0.18	0.20
U _R (V)	160	200	250	315	350	400	450										
tanδ	0.15	0.15	0.15	0.15	0.18	0.18	0.20										
阻抗比 Impedance Ratio (MAX) 120Hz	<table border="1"> <tr> <td>U_R(V)</td> <td>160</td> <td>200</td> <td>250</td> <td>315</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z_{25°C/20°C}</td> <td>4</td> <td>4</td> <td>4</td> <td>7</td> <td>7</td> <td>7</td> <td>8</td> </tr> </table>	U _R (V)	160	200	250	315	350	400	450	Z _{25°C/20°C}	4	4	4	7	7	7	8
U _R (V)	160	200	250	315	350	400	450										
Z _{25°C/20°C}	4	4	4	7	7	7	8										
漏电流 Leakage Current (MAX)	I = 0.01C _R U _R 或1.5mA取小者 (20°C, 施加额定电压5分钟后) I = 0.01C _R U _R or 1.5mA whichever is minimum. (at 20°C, After 5 minutes application of rated voltage) I = 漏电流 (μA) U _R = 额定电压 (V) C _R = 静电容量 (μF) Leakage Current Rated Voltage Rated Capacitance																

	使用寿命 Useful Life	负荷寿命 Load Life	耐久性特性 Endurance Test	高温无负荷特性 Shelf Life
产品寿命 Life Time	3000h >180000h	2000h	2000h	1000h
漏电流 Leakage Current	≤规定值 ≤Specified value	≤规定值 ≤Specified value	≤规定值 ≤Specified value	≤规定值 ≤Specified value
损耗角正切值变化率 Tgδ Change	≤规定值的300% ≤300% of specified value	≤规定值的200% ≤200% of specified value	≤规定值的200% ≤200% of specified value	≤规定值的200% ≤200% of specified value
静电容量变化率 Capacitance Change	初始值±30%以内 Within±30% of initial value	初始值±20%以内 Within±20% of initial value	初始值±20%以内 Within±20% of initial value	初始值±20%以内 Within±20% of initial value
施加条件 Condition 施加电压 Applied Voltage 施加纹波电流 Applied Ripple Current 环境温度 Applied Temperature 失效等级 Failure Rate Level	U _R I _R 105°C ≤1% Failure rate	U _R 1.4×I _R 40°C ≤1% Failure rate	U _R I _R 105°C 0%	U _R I _R 105°C 0% Back up to 20°C and placed more than 24 hours. U _R to be applied for 60 min before measurement.

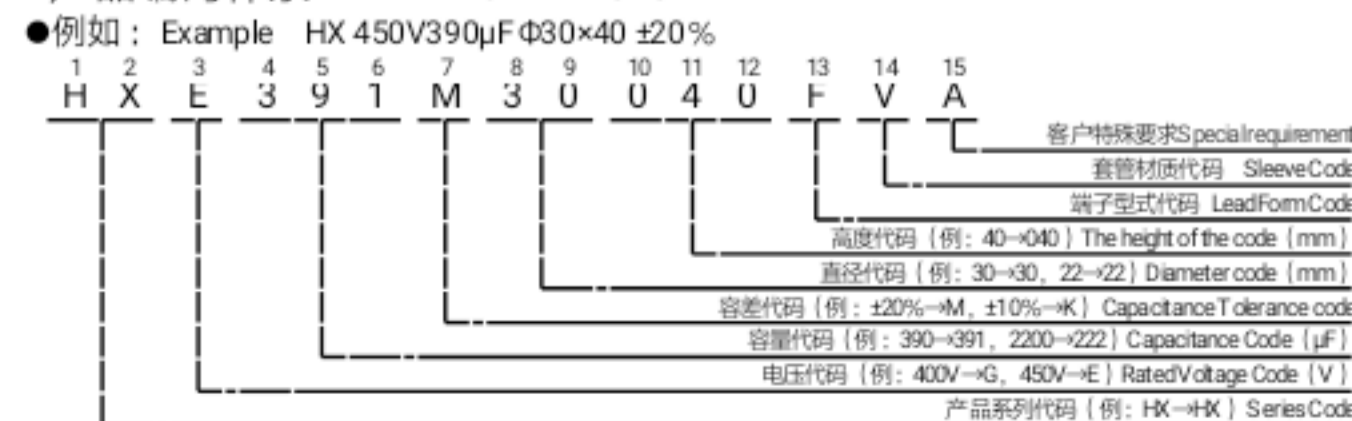
尺寸图 Dimensions

- 常用端子型式代码: Terminal Code



- 记载以外的端子形状, 请另行咨询。Please consult to us for the terminal type not displayed in content.

产品编码体系 PART NUMBER SYSTEM



纹波电流修正系数 Rated Ripple Current Multiplies

● 频率修正系数 Frequency coefficient

电压范围 (v) Rated voltage	频率 (Hz) Frequency	50 (60)	100 (120)	300	1k	≥10k
160 ~ 250V		0.80	1.00	1.17	1.32	1.45
315 ~ 450V		0.70	1.00	1.16	1.30	1.41

● 温度修正系数 Temperature coefficient

电压范围 (v) Rated voltage	温度 (°C) Temperature	+40	+55	+70	+85	+105
160 ~ 450V		2.7	2.5	2.1	1.7	1.0

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◆产品一览表 Standard Ratings

W _{DC} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C/120Hz	Ripple Current 105°C/120Hz (Ams)	Catalog Part Number	
100(125)	4700	35×40	0.2	3.8	HXO472M35040□VA	
	560	22×25	0.15	1.58	HXN561M22025□VA	
	680	22×30	0.15	1.83	HXN681M22030□VA	
	820	22×35	0.15	2.06	HXN821M22035□VA	
	820	25×25	0.15	1.89	HXN821M25025□VA	
	1000	22×40	0.15	2.33	HXN102M22040□VA	
	1000	25×30	0.15	2.15	HXN102M25030□VA	
	1200	22×45	0.15	2.61	HXN122M22045□VA	
	1200	22×50	0.15	2.69	HXN122M22050□VA	
	1200	25×35	0.15	2.45	HXN122M25035□VA	
	1500	25×40	0.15	2.82	HXN152M25040□VA	
	1500	25×45	0.15	2.88	HXN152M25045□VA	
	1500	30×30	0.15	2.39	HXN152M30030□VA	
	1500	35×25	0.15	2.17	HXN152M35025□VA	
	1800	25×50	0.15	3.22	HXN182M25050□VA	
	1800	30×35	0.15	2.73	HXN182M30035□VA	
	1800	30×40	0.15	2.82	HXN182M30040□VA	
	1800	35×30	0.15	2.47	HXN182M35030□VA	
	160 (200)	2200	30×45	0.15	3.23	HXN222M30045□VA
		2200	35×35	0.15	2.79	HXN222M35035□VA
2700		30×50	0.15	3.66	HXN272M30050□VA	
2700		35×40	0.15	3.23	HXN272M35040□VA	
3300		35×45	0.15	3.68	HXN332M35045□VA	
3900		35×50	0.15	4.12	HXN392M35050□VA	
200 (250)		470	22×25	0.15	1.20	HXL471M22025□VA
		560	22×30	0.15	1.48	HXL561M22030□VA
		560	25×25	0.15	1.48	HXL561M25025□VA
		680	22×35	0.15	1.62	HXL681M22035□VA
		680	25×30	0.15	1.60	HXL681M25030□VA
		820	22×40	0.15	1.75	HXL821M22040□VA
	820	25×35	0.15	1.75	HXL821M25035□VA	
	820	30×25	0.15	1.75	HXL821M30025□VA	
	1000	22×50	0.15	2.19	HXL102M22050□VA	
	1000	25×40	0.15	2.04	HXL102M25040□VA	
	1000	30×30	0.15	1.95	HXL102M30030□VA	
	1200	25×45	0.15	2.30	HXL122M25045□VA	
	1200	30×35	0.15	2.23	HXL122M30035□VA	
	1200	35×25	0.15	1.94	HXL122M35025□VA	
	1500	25×50	0.15	2.57	HXL152M25050□VA	
	1500	30×40	0.15	2.57	HXL152M30040□VA	
	1500	35×30	0.15	2.25	HXL152M35030□VA	
	1800	30×45	0.15	2.68	HXL182M30045□VA	
	1800	35×35	0.15	2.53	HXL182M35035□VA	
	2200	30×50	0.15	2.92	HXL222M30050□VA	
2200	35×40	0.15	2.92	HXL222M35040□VA		
2700	35×45	0.15	3.27	HXL272M35045□VA		
2700	35×50	0.15	3.33	HXL272M35050□VA		
250 (300)	330	22×25	0.15	1.21	HXJ331M22025□VA	
	390	22×30	0.15	1.38	HXJ391M22030□VA	
	470	22×35	0.15	1.56	HXJ471M22035□VA	
	560	22×40	0.15	1.74	HXJ561M22040□VA	
	560	25×30	0.15	1.61	HXJ561M25030□VA	
	680	22×45	0.15	1.97	HXJ681M22045□VA	
	680	25×35	0.15	1.85	HXJ681M25035□VA	
	820	25×40	0.15	2.08	HXJ821M25040□VA	
	820	25×45	0.15	2.13	HXJ821M25045□VA	
	820	30×30	0.15	1.77	HXJ821M30030□VA	
	820	35×25	0.15	1.60	HXJ821M35025□VA	

W _{DC} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C/120Hz	Ripple Current 105°C/120Hz (Ams)	Catalog Part Number
250 (300)	1000	25×50	0.15	2.40	HXJ102M25050□VA
	1000	30×35	0.15	2.03	HXJ102M30035□VA
	1200	30×40	0.15	2.31	HXJ122M30040□VA
	1200	30×45	0.15	2.38	HXJ122M30045□VA
	1200	35×35	0.15	2.38	HXJ122M35035□VA
	1500	30×50	0.15	2.73	HXJ152M30050□VA
	1500	35×40	0.15	2.41	HXJ152M35040□VA
	1800	35×45	0.15	2.72	HXJ182M35045□VA
	2200	35×50	0.15	3.10	HXJ222M35050□VA
	315 (365)	180	22×25	0.15	0.91
220		22×30	0.15	1.06	HXI221M22030□VA
270		22×35	0.15	1.20	HXI271M22035□VA
270		25×25	0.15	1.15	HXI271M25025□VA
330		22×40	0.15	1.37	HXI331M22040□VA
330		25×30	0.15	1.30	HXI331M25030□VA
390		22×45	0.15	1.52	HXI391M22045□VA
390		25×35	0.15	1.48	HXI391M25035□VA
390		30×25	0.15	1.39	HXI391M30025□VA
470		22×50	0.15	1.72	HXI471M22050□VA
470		25×40	0.15	1.67	HXI471M25040□VA
470		30×30	0.15	1.57	HXI471M30030□VA
470		35×25	0.15	1.52	HXI471M35025□VA
560		25×45	0.15	1.86	HXI561M25045□VA
560		30×35	0.15	1.78	HXI561M30035□VA
680	25×50	0.15	2.10	HXI681M25050□VA	
680	30×40	0.15	2.03	HXI681M30040□VA	
680	35×30	0.15	1.90	HXI681M35030□VA	
820	30×45	0.15	2.31	HXI821M30045□VA	
820	35×35	0.15	2.13	HXI821M35035□VA	
1000	30×50	0.15	2.61	HXI102M30050□VA	
1000	35×40	0.15	2.46	HXI102M35040□VA	
1200	35×45	0.15	2.78	HXI122M35045□VA	
1200	35×50	0.15	2.86	HXI122M35050□VA	
350 (400)	150	22×35	0.18	0.84	HXH151M22035□VA
	220	22×30	0.18	1.06	HXH221M22030□VA
	220	25×25	0.18	1.04	HXH221M25025□VA
	270	22×35	0.18	1.20	HXH271M22035□VA
	270	25×30	0.18	1.18	HXH271M25030□VA
	330	22×40	0.18	1.37	HXH331M22040□VA
	330	22×45	0.18	1.40	HXH331M22045□VA
	330	25×35	0.18	1.36	HXH331M25035□VA
	330	30×25	0.18	1.28	HXH331M30025□VA
	390	22×50	0.18	1.56	HXH391M22050□VA
	390	25×40	0.18	1.52	HXH391M25040□VA
	390	30×30	0.18	1.43	HXH391M30030□VA
	390	35×25	0.18	1.38	HXH391M35025□VA
	470	25×45	0.18	1.71	HXH471M25045□VA
	560	25×50	0.18	1.90	HXH561M25050□VA
	560	30×35	0.18	1.78	HXH561M30035□VA
	560	30×40	0.18	1.84	HXH561M30040□VA
	680	30×45	0.18	2.10	HXH681M30045□VA
	680	35×35	0.18	1.94	HXH681M35035□VA
	820	30×50	0.18	2.26	HXH821M30050□VA
820	35×40	0.18	2.23	HXH821M35040□VA	
1000	35×45	0.18	2.54	HXH102M35045□VA	
1000	35×50	0.18	2.56	HXH102M35050□VA	
1200	35×50	0.18	2.86	HXH122M35050□VA	

*产品编码中□内为产品端子引出型式代码
*Enter the appropriate terminal code

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◆ 产品一览表 Standard Ratings

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D \times L (mm)	tan δ 20°C120Hz	Ripple Current 105°C120Hz (Arms)	Catalog Part Number	WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D \times L (mm)	tan δ 20°C120Hz	Ripple Current 105°C120Hz (Arms)	Catalog Part Number
400 (450)	120	22 \times 25	0.18	0.70	HXG121M22025□VA	450 (500)	100	22 \times 25	0.20	0.71	HXE101M22025□VA
	120	22 \times 30	0.18	0.75	HXG121M22030□VA		120	22 \times 30	0.20	0.82	HXE121M22030□VA
	180	22 \times 30	0.18	0.96	HXG181M22030□VA		150	22 \times 30	0.20	0.88	HXE151M22030□VA
	180	25 \times 25	0.18	0.94	HXG181M25025□VA		150	22 \times 35	0.20	0.94	HXE151M22035□VA
	220	22 \times 35	0.18	1.09	HXG221M22035□VA		150	25 \times 25	0.20	0.89	HXE151M25025□VA
	220	25 \times 30	0.18	1.07	HXG221M25030□VA		180	22 \times 35	0.20	0.99	HXE181M22035□VA
	270	22 \times 40	0.18	1.24	HXG271M22040□VA		180	22 \times 40	0.20	1.05	HXE181M22040□VA
	270	22 \times 45	0.18	1.26	HXG271M22045□VA		180	25 \times 30	0.20	1.00	HXE181M25030□VA
	270	25 \times 35	0.18	1.23	HXG271M25035□VA		220	22 \times 40	0.20	1.13	HXE221M22040□VA
	270	30 \times 25	0.18	1.16	HXG271M30025□VA		220	22 \times 45	0.20	1.19	HXE221M22045□VA
	330	22 \times 45	0.18	1.37	HXG331M22045□VA		220	25 \times 35	0.20	1.16	HXE221M25035□VA
	330	22 \times 50	0.18	1.44	HXG331M22050□VA		220	30 \times 25	0.20	1.11	HXE221M30025□VA
	330	25 \times 40	0.18	1.40	HXG331M25040□VA		270	22 \times 50	0.20	1.36	HXE271M22050□VA
	330	30 \times 30	0.18	1.31	HXG331M30030□VA		270	25 \times 40	0.20	1.32	HXE271M25040□VA
	330	35 \times 25	0.18	1.27	HXG331M35025□VA		270	25 \times 45	0.20	1.35	HXE271M25045□VA
	390	25 \times 40	0.18	1.47	HXG391M25040□VA		270	30 \times 30	0.20	1.26	HXE271M30030□VA
	390	25 \times 45	0.18	1.55	HXG391M25045□VA		270	35 \times 25	0.20	1.26	HXE271M35025□VA
	390	30 \times 35	0.18	1.49	HXG391M30035□VA		330	25 \times 45	0.20	1.35	HXE331M25045□VA
	470	25 \times 50	0.18	1.74	HXG471M25050□VA		330	25 \times 50	0.20	1.52	HXE331M25050□VA
	470	30 \times 40	0.18	1.69	HXG471M30040□VA		330	30 \times 35	0.20	1.45	HXE331M30035□VA
	470	35 \times 30	0.18	1.58	HXG471M35030□VA		330	35 \times 30	0.20	1.45	HXE331M35030□VA
	560	30 \times 45	0.18	1.91	HXG561M30045□VA		390	30 \times 40	0.20	1.63	HXE391M30040□VA
	560	35 \times 35	0.18	1.76	HXG561M35035□VA		470	30 \times 45	0.20	1.85	HXE471M30045□VA
	680	30 \times 50	0.18	2.15	HXG681M30050□VA		470	30 \times 50	0.20	1.90	HXE471M30050□VA
	680	35 \times 40	0.18	2.03	HXG681M35040□VA		470	35 \times 35	0.20	1.77	HXE471M35035□VA
	820	35 \times 45	0.18	2.30	HXG821M35045□VA		560	35 \times 40	0.20	2.02	HXE561M35040□VA
	820	35 \times 50	0.18	2.37	HXG821M35050□VA		560	35 \times 45	0.20	2.08	HXE561M35045□VA
	1000	35 \times 50	0.18	2.60	HXG102M35050□VA		680	35 \times 45	0.20	2.26	HXE681M35045□VA
					680	35 \times 50	0.20	2.36	HXE681M35050□VA		

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*□ Enter the appropriate terminal code

*记载之外的体积，请另行咨询。
* Please ask for advice for other sizes.

*铝电解电容器由于承受纹波电流而发热，随着温升而发生性能劣化。请在使用中降低产品承受的纹波电流。
*Aluminum electrolytic capacitor will emit heat when ripple current is applied, the performance will deteriorate when temp. rises. Please reduce the ripple current when using capacitor.