

HR 系列 SERIES



- 全焊结构，确保可靠的电气接触性
All-welded construction ensures reliable electrical contact
- 高可靠性及高耐纹波电流能力
High reliability and high ripple current capability.
- 保证 105℃、3000 小时寿命。(叠加纹波电流)
Endurance with ripple current: 3000 hours at 105℃
- 应用：变频器、专业电源和太阳能
Applications: Frequency converters, Professional power supplies and Solar



规格表 SPECIFICATIONS

项目 Items	特性 Characteristics												
工作温度范围 Operating Temperature Range	-40~+105℃												
额定工作电压范围 Rated Working Voltage Range	350~520V												
静电容量范围 Capacitance Range	1000~15000 µF												
静电容量允许偏差 Capacitance Tolerance	±20% (20℃, 120Hz)												
损耗角正切值 Dissipation Factor (MAX) 20℃, 120Hz	<table border="1"> <tr> <td>U_R(V)</td> <td>350</td> <td>400</td> <td>450</td> <td>500</td> <td>520</td> </tr> <tr> <td>tanδ</td> <td colspan="5">0.15</td> </tr> </table>	U _R (V)	350	400	450	500	520	tanδ	0.15				
U _R (V)	350	400	450	500	520								
tanδ	0.15												
漏电流 Leakage Current (MAX)	$I = 0.01C_R U_R$ 或 5mA 取小者 (20℃, 施加额定电压 5 分钟后) $I = 0.01C_R U_R$ or 5mA whichever is minimum. (at 20℃, 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	6000h	>200000h	3000h	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 tanδ Change	≤规定值的 300% ≤300% of specified value	≤规定值的 200% ≤200% of specified value	≤规定值的 130% ≤ 130% of specified	≤规定值的 150% ≤ 150% of specified
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±10%以内 Within±10% of initial	初始值±15%以内 Within±15% of initial
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℃ ≤1% Failure rate	U _R 1.2×I _R 40℃ ≤1% Failure rate	U _R I _R 105℃ 0%	U _R I _R =0 105℃ 0%
				Back up to 20℃ 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

L-Type: Small terminal M5 thread
S-Type: Large terminal M6 thread

Ring Clip: T (Φ35 Standard)

Ring Clip: S (Φ51~Φ89 Standard)

Ring Clip Dimensions:

ΦD	A	B	a	b
51	73.0	63.5	4.5	7
64	85.1	76.2	4.5	7
76	98.4	88.9	4.5	7
89	111.1	101.6	4.5	7

产品详细尺寸和公差请参照 P130
For detailed dimension & tolerance, please refer to P130

- 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

●例如：Example HR 500V3300µF Φ76×130 ±20%

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
H	R	C	3	3	2	M	7	6	1	3	0	S	V	A

客户特殊要求 special requirement
套管材质代码 Sleeve Code
端子型式代码 Lead Form Code
高度代码 (例: 130→130) The height of the code (mm)
直径代码 (例: 64→64, 76→76) Diameter code (mm)
容差代码 (例: ±20%→M) Capacitance Tolerance code
容量代码 (例: 3300→332, 12000→123) Capacitance Code (µF)
电压代码 (例: 400V→G, 500V→C) Rated Voltage Code (V)
产品系列代码 (例: HR→HR) Series Code

纹波电流修正系数 Rated Ripple Current Multiplies

●频率修正系数 Frequency coefficient

频率 Frequency (Hz)	50(60)	100(120)	300	1k	≥10k
系数 Coefficient	0.80	1.00	1.18	1.30	1.40

●温度修正系数 Temperature coefficient

温度 Temperature (℃)	+40	+55	+70	+85	+105
系数 Coefficient	3.30	2.85	2.40	2.00	1.00

◆ 产品一览表 Standard Ratings

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D×L (mm)	tan δ 20°C120Hz	Ripple Current 105°C120Hz z (Amps)	Catalog Part Number
350 (400)	1000	51×80	0.15	3.7	HRH102M51080□VA
	1200	51×80	0.15	4.0	HRH122M51080□VA
	1500	51×95	0.15	4.9	HRH152M51095□VA
	1800	51×95	0.15	5.2	HRH182M51095□VA
	2200	51×115	0.15	6.2	HRH222M51115□VA
	2700	64×95	0.15	6.7	HRH272M64095□VA
	3300	64×115	0.15	8.6	HRH332M64115□VA
	3900	64×130	0.15	9.9	HRH392M64130□VA
	4700	76×115	0.15	11.4	HRH472M76115□VA
	5500	76×130	0.15	13.0	HRH552M76130□VA
	5600	76×130	0.15	13.1	HRH562M76130□VA
	6800	76×155	0.15	15.2	HRH682M76155□VA
	8200	89×130	0.15	17.7	HRH822M89130□VA
	10000	89×157	0.15	19.5	HRH103M89157□VA
	12000	89×195	0.15	23.0	HRH123M89195□VA
15000	89×220	0.15	28.0	HRH153M89220□VA	
400 (450)	1000	51×80	0.15	3.9	HRG102M51080□VA
	1200	51×95	0.15	4.6	HRG122M51095□VA
	1500	51×95	0.15	5.6	HRG152M51095□VA
	1800	51×115	0.15	6.4	HRG182M51115□VA
	2200	64×95	0.15	6.9	HRG222M64095□VA
	2700	64×115	0.15	8.2	HRG272M64115□VA
	3300	64×130	0.15	9.5	HRG332M64130□VA
	3900	76×115	0.15	10.4	HRG392M76115□VA
	4700	76×130	0.15	12.0	HRG472M76130□VA
	5600	76×155	0.15	14.0	HRG562M76155□VA
	6800	89×130	0.15	16.5	HRG682M89130□VA
	8200	89×157	0.15	18.1	HRG822M89157□VA
	10000	89×195	0.15	21.7	HRG103M89195□VA
	12000	89×220	0.15	25.8	HRG123M89220□VA
	450 (500)	1000	51×95	0.15	4.2
1200		51×95	0.15	4.8	HRE122M51095□VA
1500		51×115	0.15	5.6	HRE152M51115□VA

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D×L (mm)	tan δ 20°C120Hz	Ripple Current 105°C120Hz z (Amps)	Catalog Part Number	
450 (500)	1800	64×95	0.15	6.5	HRE182M64095□VA	
	2200	64×115	0.15	7.4	HRE222M64115□VA	
	2700	64×130	0.15	8.6	HRE272M64130□VA	
	3300	76×115	0.15	10.2	HRE332M76115□VA	
	3900	76×130	0.15	11.3	HRE392M76130□VA	
	4700	76×155	0.15	12.9	HRE472M76155□VA	
	5600	89×130	0.15	14.7	HRE562M89130□VA	
	6800	89×157	0.15	17.8	HRE682M89157□VA	
	8200	89×195	0.15	19.3	HRE822M89195□VA	
	10000	89×220	0.15	22.4	HRE103M89220□VA	
	500 (550)	1000	51×115	0.15	4.4	HRC102M51115□VA
		1200	51×130	0.15	4.9	HRC122M51130□VA
		1500	64×95	0.15	5.7	HRC152M64095□VA
		1800	64×115	0.15	6.5	HRC182M64115□VA
		2200	64×130	0.15	7.5	HRC222M64130□VA
2700		76×115	0.15	8.7	HRC272M76115□VA	
3300		76×130	0.15	10.0	HRC332M76130□VA	
3900		76×155	0.15	11.5	HRC392M76155□VA	
4700		89×157	0.15	13.5	HRC472M89157□VA	
5600		89×157	0.15	14.8	HRC562M89157□VA	
520 (570)	6800	89×195	0.15	17.0	HRC682M89195□VA	
	8200	89×235	0.15	19.7	HRC822M89235□VA	
	1000	51×115	0.15	4.4	HR2102M51115□VA	
	1200	51×130	0.15	5.0	HR2122M51130□VA	
	1500	64×115	0.15	5.7	HR2152M64115□VA	
	1800	64×130	0.15	6.7	HR2182M64130□VA	
	2200	76×115	0.15	7.8	HR2222M76115□VA	
	2700	76×130	0.15	9.1	HR2272M76130□VA	
	3300	76×155	0.15	11.2	HR2332M76155□VA	
	3900	89×130	0.15	12.3	HR2392M89130□VA	
	4700	89×157	0.15	14.2	HR2472M89157□VA	
	5600	89×170	0.15	15.7	HR2562M89170□VA	
	6800	89×195	0.15	18.1	HR2682M89195□VA	

*产品编码中□内为产品端子引出型式代码

*□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.