

# HD Series

## FEATURES

- Long Life, High Ripple Current and High Reliability
- Load Life 10000 hours at 105°C
- Suitable for Frequency converters, Traction and Professional power supplies
- Compliant to the RoHS directive

- 长寿命、高纹波、高可靠性
- 105°C 10000小时
- 适用于变频器、机车牵引装置和专业电源等
- RoHS指令对策品



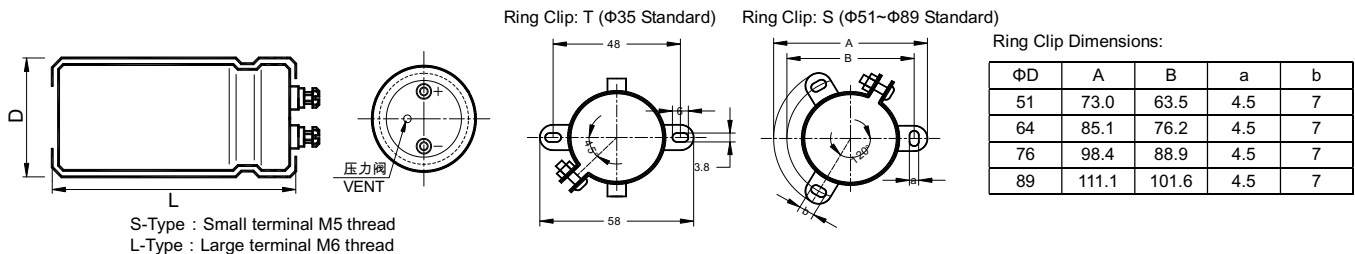
## 规格表 SPECIFICATIONS

项目 Items	特性 Characteristics			
工作温度范围 Operating Temperature Range	- 40 ~ +105°C			
额定工作电压范围 Rated Working Voltage Range	350 ~ 450V			
静电容量范围 Capacitance Range	1000 ~ 15000µF			
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	U <sub>R</sub> (V)	350	400	450
	tanδ	0.15		
漏电流 Leakage Current ( MAX )	I = 0.01C <sub>R</sub> U <sub>R</sub> 或 5mA 取小者 ( 20°C, 施加额定电压5 分钟后 ) I = 0.01C <sub>R</sub> U <sub>R</sub> or 5mA whichever is minimum. ( at 20°C, After 5 minutes application of rated voltage ) I = 漏电流 ( µA )      U <sub>R</sub> = 额定电压 ( V )      C <sub>R</sub> = 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	12000h	>250000h	10000h	10000h	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300% ≤300% of specified value	≤规定值的175% ≤175% of specified value	≤规定值的150% ≤150% 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±30%以内 Within±30% of initial value	初始值±15%以内 Within±15% of initial value	初始值±15%以内 Within±15% 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 <sub>R</sub> I <sub>R</sub> 105°C ≤1% Failure rate	U <sub>R</sub> 1.2×I <sub>R</sub> 40°C ≤1% Failure rate	U <sub>R</sub> I <sub>R</sub> 105°C 0%	U <sub>R</sub> I <sub>R</sub> =0 105°C 0%	U <sub>R</sub> =0 I <sub>R</sub> =0 105°C 0% Back up to 20 °C and placed more than 24 hours. U <sub>R</sub> to be applied for 60 min before measurement.

## 尺寸图 Dimensions

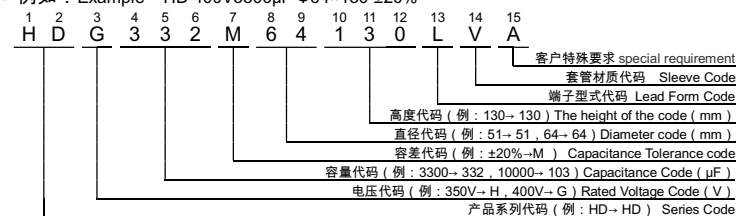
- 常用端子型式代码：Terminal Code



- 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

- 例如：Example HD 400V3300µF Φ64×130 ±20%



## 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	1.10	1.30	1.40

### 温度修正系数 Temperature coefficient

温度 Temperature ( °C )	+40	+60	+85	+105
系数 Coefficient	2.44	2.16	2.00	1.00

# HD Series

◆ 产品一览表 Standard Ratings

WV <sub>DC</sub> (Surge Voltage) (V)	Cap ( $\mu$ F)	Size D×L (mm)	tan $\delta$ 20°C/120Hz	Ripple Current 105°C/120Hz (Arms)	Catalog Part Number
350 (400)	1000	51×80	0.15	3.9	HDH102M51080□VA
	1200	51×95	0.15	4.5	HDH122M51095□VA
	1500	51×115	0.15	5.5	HDH152M51115□VA
	1800	51×130	0.15	6.2	HDH182M51130□VA
	2200	64×95	0.15	7.1	HDH222M64095□VA
	2700	64×115	0.15	8.3	HDH272M64115□VA
	3300	64×130	0.15	10.2	HDH332M64130□VA
	3900	76×115	0.15	11.3	HDH392M76115□VA
	4700	76×130	0.15	13.1	HDH472M76130□VA
	5600	76×155	0.15	14.7	HDH562M76155□VA
	6800	89×157	0.15	17.0	HDH682M89157□VA
	8200	89×157	0.15	19.1	HDH822M89157□VA
	10000	89×195	0.15	22.2	HDH103M89195□VA
	12000	89×235	0.15	25.5	HDH123M89235□VA
15000	89×250	0.15	29.3	HDH153M89250□VA	
400 (450)	1000	51×95	0.15	4.0	HDG102M51095□VA
	1200	51×115	0.15	4.8	HDG122M51115□VA
	1500	51×130	0.15	5.7	HDG152M51130□VA
	1800	64×95	0.15	6.4	HDG182M64095□VA
	2200	64×115	0.15	6.9	HDG222M64115□VA

WV <sub>DC</sub> (Surge Voltage) (V)	Cap ( $\mu$ F)	Size D×L (mm)	tan $\delta$ 20°C/120Hz	Ripple Current 105°C/120Hz (Arms)	Catalog Part Number
400 (450)	2700	64×130	0.15	8.7	HDG272M64130□VA
	3300	76×130	0.15	10.6	HDG332M76130□VA
	3900	76×155	0.15	12.1	HDG392M76155□VA
	4700	76×155	0.15	13.4	HDG472M76155□VA
	5600	89×157	0.15	15.6	HDG562M89157□VA
	6800	89×157	0.15	17.3	HDG682M89157□VA
	8200	89×195	0.15	19.8	HDG822M89195□VA
	10000	89×235	0.15	22.9	HDG103M89235□VA
450 (500)	1000	51×130	0.15	4.7	HDE102M51130□VA
	1200	64×115	0.15	5.5	HDE122M64115□VA
	1500	64×130	0.15	6.5	HDE152M64130□VA
	1800	76×115	0.15	7.5	HDE182M76115□VA
	2200	76×130	0.15	8.7	HDE222M76130□VA
	2700	76×155	0.15	9.9	HDE272M76155□VA
	3300	89×130	0.15	11.1	HDE332M89130□VA
	3900	89×157	0.15	13.0	HDE392M89157□VA
	4700	89×170	0.15	14.4	HDE472M89170□VA
	5600	89×195	0.15	16.7	HDE562M89195□VA
	6800	89×235	0.15	19.2	HDE682M89235□VA
	8200	89×250	0.15	19.5	HDE822M89250□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.

Note: All design and specification are for reference only and is subject to change without prior notice. If any doubt about safety for your application, please contact KNSCHA immediately for technical assistance before for purchase.

备注：以上所提供的设计及特性参数仅供参考，任何修改不作预先通知。如果在使用上有疑问，请再购买前与科尼盛联系，以便我们提供技术上的服务和协助。