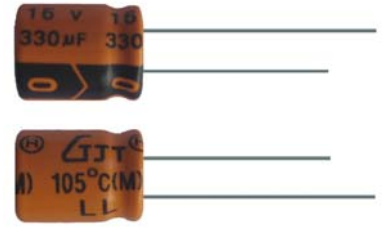




105°C, Low leakage current
低漏电品

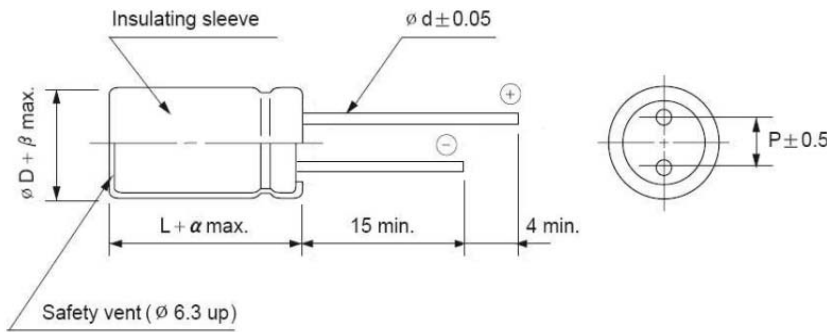
- 105°C, 2000 hours assured.
105°C, 2000 小时寿命品。
- Extremely low and stable leakage current characteristics.
稳定的低漏电流特性
- Use in high temperature industrial equipment.
适用于工业设备



Specifications 特性表

Items 项目	Characteristics 主要特性																											
Rated Voltage Range 额定工作电压范围	6.3~100V _{dc}																											
Category Temperature Range 使用温度范围	-40 ~ +105°C																											
Capacitance Tolerance 静电容量允许偏差	±20% (M), at 20°C, 120Hz																											
Leakage Current 漏电流, 20°C环境下施加工作电压 2 分钟后. (at 20°C, After 2 minutes)	I ≤ 0.01CV or 3µA, whichever is greater 漏电流 ≤ 0.01CV or 3µA, 取较大值 Where, I : Max. leakage current (漏电流, µA), C : Nominal capacitance (静电容量, µF), V : Rated voltage (额定电压 V)																											
Dissipation Factor (Tanδ, at 20°C, 120Hz) 损耗角正切值 (测试条件为 20°C, 120Hz)	<table border="1"> <tr> <td>Rated voltage (V) 额定工作电压</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Tanδ (Max.) 最大损耗角正切</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.10</td> </tr> </table> <p>When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase. 静电容量大于1000µF, 每增加1000µF, 损耗角正切增加0.02</p>	Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	63	100	Tanδ (Max.) 最大损耗角正切	0.24	0.20	0.16	0.14	0.12	0.10	0.10	0.10									
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Low Temperature Characteristics (Max. Impedance Ratio, 120Hz) 低温特性最大阻抗比	<table border="1"> <tr> <td>Rated voltage (V) 额定工作电压</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	63	100	Z(-25°C)/Z(20°C)	4	3	3	2	2	2	2	2	Z(-40°C)/Z(20°C)	8	6	6	4	4	3	3	3
Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	63	100																				
Z(-25°C)/Z(20°C)	4	3	3	2	2	2	2	2																				
Z(-40°C)/Z(20°C)	8	6	6	4	4	3	3	3																				
Endurance 耐久性	<p>The following specification shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the ripple current is applied for the specified period of time at 105°C. 在 105°C 环境中, 不超过额定电压的范围下叠加额定纹波电流, 连续加载规定时间的额定电压后, 待温度恢复到 20°C 进行测量时, 应满足以下要求。</p> <table border="1"> <tr> <td>Test Time 测试时间</td> <td>2,000Hrs</td> </tr> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% initial value 初始值的±20%以内</td> </tr> <tr> <td>Dissipation Factor 损耗角正切</td> <td>≤200% of specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>≤The initial specified value 不大于规范值</td> </tr> </table>	Test Time 测试时间	2,000Hrs	Capacitance Change 静电容量变化率	Within ±20% initial value 初始值的±20%以内	Dissipation Factor 损耗角正切	≤200% of specified value 不大于规范值的 200%	Leakage Current 漏电流	≤The initial specified value 不大于规范值																			
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Shelf Life 高温贮存	<p>The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of IEC 60384-4. 在 105°C 环境中, 无负荷放置 1,000 小时后待温度恢复到 20°C, 进行试验前处理(IEC 60384-4 4.1 项)后进行测量时, 应满足以下要求。</p> <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% initial value 初始值的±20%以内</td> </tr> <tr> <td>Dissipation Factor 损耗角正切值</td> <td>≤200% of specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>≤The initial specified value 不大于规范值</td> </tr> </table>	Capacitance Change 静电容量变化率	Within ±20% initial value 初始值的±20%以内	Dissipation Factor 损耗角正切值	≤200% of specified value 不大于规范值的 200%	Leakage Current 漏电流	≤The initial specified value 不大于规范值																					
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Drawing(Unit: mm) 外形图



ΦD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5		0.6		0.8		
α	1.0			1.5			
β	0.5						

Rated ripple current multipliers(Unit: mm) 额定纹波修正系数

Frequency 频率 (Hz)	60Hz	120Hz	300Hz	1KHz	10KHz~	
Coefficient 系数	Under 100µF	0.75	1.00	1.15	1.55	1.75
	100 to 1,000	0.80	1.00	1.18	1.25	1.45
	1,000 up above	0.85	1.00	1.05	1.12	1.15

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.
铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化, 每升温 5°C 寿命减少一半。
When long life performance is required in actual use, the rms ripple current has to be reduced.
要想保持长寿命请在使用过程中降低纹波电流。

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

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, 如有使用上任何疑问, 请在采购前与我们联系, 以便提供技术上的协助。

LL Series

■ Standard ratings 标准品一览表

WV μF	6.3		10		16		25	
	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.
4.7							5x11	30
10					5x11	40	5x11	45
22	5x11	35	5x11	50	5x11	60	5x11	65
33	5x11	45	5x11	65	5x11	70	5x11	75
47	5x11	55	5x11	75	5x11	105	6.3x11	115
100	5x11	75	5x11	105	6.3x11	140	8x11.5	150
220	6.3x11	130	8x11.5	190	8x11.5	220	10x12.5	245
330	6.3x11	160	8x11.5	255	8x11.5	265	10x12.5	350
470	8x11.5	240	8x11.5	320	10x12.5	405	10x16	480
1000	10x12.5	390	10x16	605	10x20	705	13x20	845
2200	13x20	665	13x20	860	13x25	890		
3300	10x20	960	13x20	1100	13x25	1200	16x25	1460
4700	13x20	1150	13x25	1350	16x25	1600	16x31.5	1780
10000	16x25	1680	16x31.5	1900	18x31.5	2060		
12000	16x31.5	1750	16x35.5	2050	18x35.5	2150		
15000	16x31.5	2075	18x31.5	2180				
18000	18x31.5	2150	18x35.5	2205				
22000	18x35.5	2300						

WV μF	35		50		63		100	
	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.
0.1			5x11	8.5	5x11	8.5	5x11	8.5
0.22			5x11	8.5	5x11	8.5	5x11	8.5
0.33			5x11	8.5	5x11	8.5	5x11	8.5
0.47			5x11	13	5x11	13	5x11	13
1			5x11	18	5x11	18	5x11	18
2.2			5x11	25	5x11	25	5x11	25
3.3			5x11	30	5x11	32	5x11	32
4.7	5x11	32	5x11	35	5x11	40	6.3x11	40
10	5x11	48	5x11	55	6.3x11	58	8x11.5	60
22	6.3x11	70	6.3x11	78	6.3x11	95	8x11.5	105
33	6.3x11	80	6.3x11	100	8x11.5	110	10x12.5	140
47	6.3x11	125	8x11.5	140	8x11.5	150	10x16	185
100	8x11.5	190	10x12.5	215	10x16	260	13x20	300
220	10x12.5	330	10x20	380	13x20	440	13x30	535
330	10x16	440	13x20	505	13x25	595		
470	13x20	590	13x25	705				

Note1: Case size ΦD x L(mm), ripple current (mA, rms) at 105°C, 120Hz. 尺寸 ΦD x L(mm), 纹波电流於 105°C, 120Hz

Note2: Produce custom product too, which are not found in these tables. 客户定制品不在标准品一览表内

RG Series

■ Standard ratings 标准品一览表

WV μF	100		160		200		250		350		400		450	
	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L	R.C.
0.47	5x11	8					6.3x11	8	6.3x11	8				
1	5x11	15					6.3x11	16	6.3x11	16	6.3x11	16	6.3x11	15
2.2	5x11	21					6.3x11	30	6.3x11	25	8x11.5	31	8x11.5	20
3.3	5x11	30			6.3x11	36	6.3x11	30	8x11.5	30	8x11.5	34	10x12.5	33
4.7	5x11	35	6.3x11	43	6.3x11	40	8x11.5	45	8x11.5	45	10x12.5	42	10x12.5	35
10	5x11	60	8x11.5	77	8x11.5	57	10x12.5	90	10x16	95	10x16	64	10x20	37
22	6.3x11	98	10x12.5	92	10x16	105	10x16	105	13x20	175	13x20	140	13x25	100
33	8x11.5	140	10x16	125	10x20	140	10x20	140	13x25	220	16x25	170	16x25	125
47	8x11.5	185	10x20	150	10x20	195	13x20	190	16x25	240	16x25	200	16x31.5	155
56	10x12.5	200	13x20	200	13x20	220	13x20	200	16x25	260	16x25	240	18x25	160
68	10x12.5	230	13x20	220	13x20	240	13x25	240	16x25	290	16x31.5	280	18x25	170
82	10x16	260	13x20	240	13x25	260	13x30	290	16x31.5	340	16x31.5	295	18x31.5	185
100	10x16	290	13x25	295	13x25	320	16x25	310	18x31.5	370	18x31.5	310	18x35.5	200
120	10x20	370	13x25	320	16x25	330	16x25	360	18x31.5	420				
150	10x20	400	16x25	370	16x25	400	16x31.5	440	18x35.5	480				
180	13x20	480	16x25	390	16x25	490	16x31.5	470						
220	13x20	560	16x31.5	410	16x31.5	580	18x35.5	485						
330	13x25	690	18x31.5	570	18x35.5	675								
470	16x25	880	18x40	855										
680	16x31.5	900												
1000	18x35.5	985												

Note1: Case size ΦD x L(mm), ripple current (mA, rms) at 105°C, 120Hz. 尺寸 ΦD x L(mm), 纹波电流於 105°C, 120Hz

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