

RVT-VT Series

WIDE TEMPERATURE 宽温品

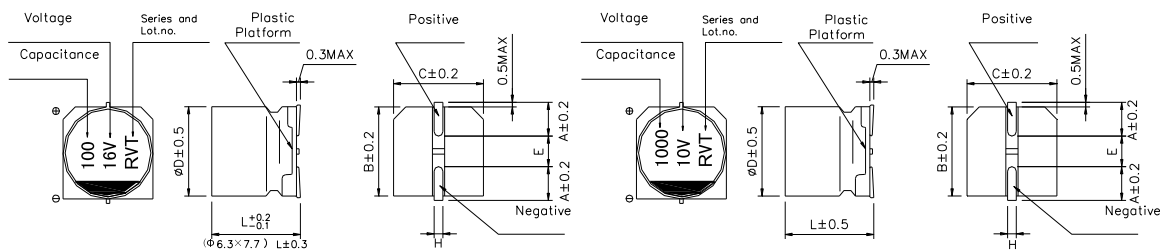
- Operating with wide temperature range -40 ~ +105°C
适用于 -40 ~ +105°C 的宽温范围
- Load life of 1000~2000 hours
负荷寿命1000~2000小时
- Comply with the RoHS directive
符合RoHS指令



■ 主要技术性能 Specification

项目 Item	特性 Performance Characteristics																																																																							
使用温度范围 Operating temperature range	-40 ~ +105°C																																																																							
额定电压范围 Rated voltage range	4 ~ 100V																																																																							
标称电容量范围 Nominal capacitance range	0.1 ~ 6800μF																																																																							
标称电容量允许偏差 Capacitance tolerance	± 20% (120Hz, +20°C)																																																																							
漏电流 Leakage current	$I \leq 0.01CV$ 或 $3(\mu A)$ 2分钟 取较大者 (at 20°C, after 2 minutes) (whichever is greater)	$I \leq 0.02CV + 15(\mu A)$ 1分钟 (1 minute)																																																																						
损耗角正切值 (tg δ) Dissipation factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th rowspan="2">U_R (V)</th> <th colspan="10"></th> </tr> <tr> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">∅4~∅10</td> <td>Z(-25°C) / Z(20°C)</td> <td>0.35</td> <td>0.26</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>15</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> <td></td> </tr> <tr> <td rowspan="2">∅12.5~∅16</td> <td>Z(-25°C) / Z(20°C)</td> <td>0.42</td> <td>0.38</td> <td>0.34</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.14</td> <td>0.12</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>7</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> </tbody> </table>										U _R (V)											4	6.3	10	16	25	35	50	63	100	∅4~∅10	Z(-25°C) / Z(20°C)	0.35	0.26	0.20	0.16	0.14	0.12	0.12	0.12	0.12	Z(-40°C) / Z(20°C)	15	8	6	4	4	3	3	4		∅12.5~∅16	Z(-25°C) / Z(20°C)	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.12	Z(-40°C) / Z(20°C)	7	5	4	3	2	2	2	2	2
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温度特性 Temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th colspan="2"></th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50-63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">∅4~∅10</td> <td>Z(-25°C) / Z(20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>15</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> </tr> <tr> <td rowspan="2">∅12.5~∅16</td> <td>Z(-25°C) / Z(20°C)</td> <td>7</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>17</td> <td>12</td> <td>10</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> </tr> </tbody> </table>												4	6.3	10	16	25	35	50-63	100	∅4~∅10	Z(-25°C) / Z(20°C)	7	4	3	2	2	2	2	3	Z(-40°C) / Z(20°C)	15	8	6	4	4	3	3	4	∅12.5~∅16	Z(-25°C) / Z(20°C)	7	5	4	3	2	2	2	2	Z(-40°C) / Z(20°C)	17	12	10	8	5	4	3	3														
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耐久性 Load life	After 2000 hrs. (1000 hrs. for ∅4~∅6.3x5.4) application of the rated voltage at 105°C, they meet the characteristics listed below. 在105°C环境中施加额定工作电压2000小时 (∅4~∅6.3x5.4 为1000小时)后, 电容器的特性符合下表的要求。 电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value																																																																							
高温贮存 Shelf life	+105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±10%初始测量值以内 10% of the initial measured value 漏电流 Leakage current : ≤ 2倍初始规定值 ≤2times of the initial specified value 损耗角正切值 Dissipation factor : ≤ 2倍初始规定值 ≤2times of the initial specified value																																																																							

■ 外形图及尺寸图 Case size table



*1. Voltage mark for 6.3V is [6V] 6.3V的产品标识为 [6V]
 *2. Applicable to ∅6.3x7.7 适用于∅6.3x7.7
 *3. Applicable to ∅8x10.5~∅10 适用于∅8x10.5~∅10
 *4. Applicable to ∅12.5~∅16 适用于∅12.5~∅16

V-Chip

RVT-VT Series

∅D x L	4 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 7.7	8 x 6.2	8 x 10.5	10 x 10.5	10 x 13.5	12.5 x 13.5	12.5 x 16	16 x 16.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7	4.7	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
E ± 0.2	1.0	1.3	2.2	2.2	2.2	3.1	4.4	4.4	4.4	4.4	6.7
L	5.4	5.4	5.4	7.7	6.2	10.5	10.5	13.5	13.5	16.0	16.5

■ 尺寸 Dimensions

μF	WV Code 代码	4		6.3		10		16		25	
		0G		0J		1A		1C		1E	
4.7	4R7									4 x 5.4	13
10	100							4 x 5.4	18	5 x 5.4 (4 x 5.4)	20 (14)
22	220			4 x 5.4	22	5 x 5.4 (4 x 5.4)	25 (20)	5 x 5.4 (4 x 5.4)	27 (20)	6.3 x 5.4 (5 x 5.4)	36 (25)
33	330	5 x 5.4 (4 x 5.4)	30 (18)	5 x 5.4 (4 x 5.4)	27 (22)	5 x 5.4 (4 x 5.4)	30 (22)	6.3 x 5.4 (5 x 5.4)	40 (28)	6.3 x 5.4 (5 x 5.4)	44 (29)
47	470	5 x 5.4 (4 x 5.4)	36 (24)	5 x 5.4 (4 x 5.4)	33 (25)	6.3 x 5.4 (5 x 5.4)	41 (30)	6.3 x 5.4 (5 x 5.4)	48 (31)	6.3 x 5.4 (8 x 6.2)	48 (91)
100	101	6.3 x 5.4 (5 x 5.4)	60 (43)	6.3 x 5.4 (5 x 5.4)	50 (39)	6.3 x 5.4 (8 x 6.2)	53 (110)	6.3 x 5.4 (8 x 6.2)	60 (120)	6.3 x 7.7	91
150	151	6.3 x 5.4	52	6.3 x 5.4	55	6.3 x 5.4	62	6.3 x 7.7	95	8 x 10.5 (6.3 x 7.7)	140 (100)
220	221	6.3 x 5.4	57	6.3 x 7.7 (6.3 x 5.4)	105 (67)	6.3 x 7.7 (8 x 6.2)	105 (105)	8 x 10.5 (6.3 x 7.7) (8 x 6.2)	150 (105) (85)	8 x 10.5	175
330	331	6.3 x 7.7	100	6.3 x 7.7	105	8 x 10.5	196	8 x 10.5	195	10 x 10.5 (8 x 10.5)	240 (220)
470	471	6.3 x 7.7	105	8 x 10.5 (6.3 x 7.7)	210 (120)	10 x 10.5 (8 x 10.5)	260 (210)	10 x 10.5 (8 x 10.5)	295 (230)	10 x 10.5	280
680	681	8 x 10.5	210	8 x 10.5	210	10 x 10.5	270	10 x 10.5	315	10 x 13.5	400
1000	102	8 x 10.5	230	10 x 10.5 (8 x 10.5)	300 (230)	10 x 10.5	315	12.5 x 13.5 (10 x 13.5) (10 x 10.5)	500 (390) (340)	12.5 x 13.5	580
1500	152	10 x 10.5	315	10 x 13.5 (10 x 10.5)	450 (315)	10 x 13.5	460	12.5 x 13.5	550	12.5 x 16	850
2200	222	10 x 13.5 (10 x 10.5)	440 (340)	12.5 x 13.5 (10 x 13.5)	620 (500)	12.5 x 13.5	680	16 x 16.5 (12.5 x 16)	950 (750)	16 x 16.5	1050
3300	332	10 x 13.5	490	12.5 x 16 (12.5 x 13.5)	700 (660)	16 x 16.5	1000	16 x 16.5	1000		
4700	472	12.5 x 13.5	600	16 x 16.5	1000						
6800	682	16 x 16.5 (12.5 x 16)	950 (650)							Case size 尺寸	Ripple current 纹波电流

μF	WV Code 代码	35		50		63		100	
		1V		1H		1J		2A	
0.1	0R1			4 x 5.4	0.7	4 x 5.4	0.7		
0.22	R22			4 x 5.4	1.6	4 x 5.4	1.6		
0.33	R33			4 x 5.4	2.5	4 x 5.4	2.5		
0.47	R47			4 x 5.4	3.5	4 x 5.4	3.5		
1	010			4 x 5.4	7	4 x 5.4	7	4 x 5.4	7
2.2	2R2			4 x 5.4	11	4 x 5.4	11	6.3 x 5.4	14
3.3	3R3	4 x 5.4	13	4 x 5.4	13	5 x 5.4	13	6.3 x 7.7 (6.3 x 5.4) (8 x 6.2)	32 (20) (30)
4.7	4R7	4 x 5.4	14	5 x 5.4 (4 x 5.4)	16 (13)	5 x 5.4	16	6.3 x 7.7 (6.3 x 5.4)	35 (21)
10	100	5 x 5.4 (4 x 5.4)	21 (14)	6.3 x 5.4	24	6.3 x 7.7 (6.3 x 5.4) (8 x 6.2)	39 (24) (25)	8 x 10.5 (6.3 x 7.7)	77 (35)
22	220	6.3 x 5.4	38	6.3 x 7.7 (6.3 x 5.4) (8 x 6.2)	51 (42) (70)	8 x 10.5 (6.3 x 7.7)	98 (49)	10 x 10.5 (8 x 10.5)	126 (84)
33	330	6.3 x 5.4 (8 x 6.2)	42 (84)	6.3 x 7.7	60	8 x 10.5	112	10 x 10.5	133
47	470	6.3 x 7.7 (6.3 x 5.4)	70 (50)	8 x 10.5 (6.3 x 7.7)	120 (63)	10 x 10.5 (8 x 10.5)	160 (119)	12.5 x 13.5 (10 x 13.5) (10 x 10.5)	250 (160) (140)
68	680					Case size 尺寸	Ripple current 纹波电流	12.5 x 13.5 (10 x 13.5)	300 (180)

•Case size ∅D×L(mm), ripple current (mA rms) at 105°C 120Hz •尺寸∅D×L(mm), 纹波电流(mA rms)於 105°C 120Hz

RVT-VT Series

■ 尺寸 Dimensions

μF	WV Code 代码	35		50		63		100	
		1V		1H		1J		2A	
100	101	8 × 10.5 (6.3 × 7.7)	120 (84)	10 × 10.5 (8 × 10.5)	170 (140)	12.5 × 13.5 (10 × 13.5) (10 × 10.5)	270 (210) (196)	16 × 16.5 (12.5 × 13.5)	450 (380)
150	151	8 × 10.5	155	10 × 10.5	170	10 × 13.5	225		
220	221	10 × 10.5 (8 × 10.5)	220 (190)	10 × 13.5 (10 × 10.5)	280 (220)	16 × 16.5 (12.5 × 13.5) (10 × 13.5)	560 (470) (235)	16 × 16.5	550
330	331	10 × 10.5	245	16 × 16.5 (12.5 × 13.5) (10 × 13.5)	600 (420) (295)	16 × 16.5 (12.5 × 16)	700 (510)		
470	471	12.5 × 13.5 (10 × 13.5) (10 × 10.5)	520 (375) (280)	16 × 16.5 (12.5 × 16)	700 (520)	16 × 16.5	750		
680	681	12.5 × 13.5 (10 × 13.5)	530 (395)	16 × 16.5	750			Case size 尺寸	Ripple current 纹波电流
1000	102	16 × 16.5 (12.5 × 16)	750 (600)						

•Case size $\varnothing D \times L$ (mm), ripple current (mA rms) at 105°C 120Hz •尺寸 $\varnothing D \times L$ (mm) 纹波电流 (mA rms)於 105°C 120Hz

■ 纹波电流的相关参数 Multiplier For Ripple Current

Frequency 频率		50Hz	120Hz	300Hz	1KHz	10KHz-	
Coefficient 系数	Φ4-Φ10	0.1-68uF	0.70	1.00	1.17	1.36	1.50
		100-300uF	0.85	1.00	1.08	1.20	1.30
	Φ12.5-Φ16	-68uF	0.75	1.00	1.35	1.57	2.00
		100-680uF	0.80	1.00	1.23	1.34	1.50
		1000-6800uF	0.85	1.00	1.10	1.13	1.15