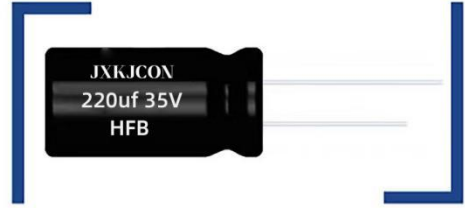


HFB 系列 Series

特点 Features

- 双极性, 标准品, 用于极性翻转或极性变换的电路中。
Bi-polar Standard series, used in polarity reverse and change circuits.
- RoHS指令已对应完毕。
Adapted to the RoHS directive.



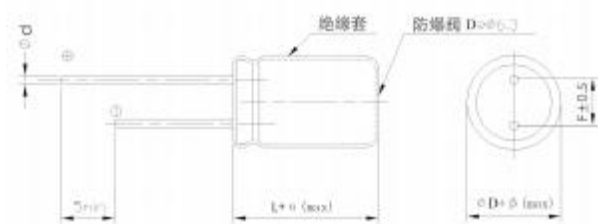
主要技术性能 Specifications

项目 Items	特性 Characteristics																											
使用温度范围 Operating Temperature Range	-40~+105°C																											
额定电压范围 Rated Voltage Range	6.3~100V																											
标称电容量范围 Nominal Capacitance Range	0.47~4700μF																											
标称电容量允许偏差 Capacitance Tolerance	±20%(120Hz, +20°C)																											
正反向漏电流 Leakage Current	$I \leq 0.03CV + 3(\mu A)$ 2分钟(at 20°C, after 2 minutes)																											
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>UR (V)</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>tgδ</td> <td>0.28</td> <td>0.24</td> <td>0.22</td> <td>0.20</td> <td>0.15</td> <td>0.14</td> <td>0.13</td> <td>0.13</td> </tr> </tbody> </table>	UR (V)	6.3	10	16	25	35	50	63	100	tgδ	0.28	0.24	0.22	0.20	0.15	0.14	0.13	0.13									
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温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>UR (V)</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>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</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>10</td> <td>8</td> <td>6</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	UR (V)	6.3	10	16	25	35	50	63	100	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	Z-40°C / Z+20°C	10	8	6	5	4	4	3	3
UR (V)	6.3	10	16	25	35	50	63	100																				
Z-25°C / Z+20°C	4	3	2	2	2	2	2	2																				
Z-40°C / Z+20°C	10	8	6	5	4	4	3	3																				
耐久性 Load Life	105°C加额定电压2000小时(每250小时反转极性一次)恢复16小时后: After applying rated voltage for 2000 hours at 105°C(with the polarity inverted every 250 hours) and then resumed 16 hours: 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 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°Cand then resumed 16 hours 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 : ≤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																											

频率修正系数 Frequency Coefficient

F(Hz)	60	120	1K	≥10k
0.47~68	0.8	1	1.45	1.7
100~470	0.8	1	1.35	1.5
680~4700	0.8	1	1.2	1.3

外形图及尺寸表 Case Size Table



单位 Unit: mm

D	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.5, 0.6	0.6	0.6	0.8	0.8
αMAX	c L < 20 > 1.5		βMAX				
	c L ≥ 20 > 2.0						
				c D < 20 > 0.5		c D ≥ 20 > 1.0	

尺寸 Dimensions

WV		6.3V(0J)		10V(1A)		16V(1C)		25V(1E)		35V(1V)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7	4R7									5×11	34
10	100					5×11	38	5×11	42	5×11	43
22	220			5×11	48	5×11	55	6.3×11	65	6.3×11	73
33	330	5×11	58	5×11	60	5×11	64	6.3×11	80	8×11.5	100
47	470	5×11	76	5×11	76	6.3×11	95	6.3×11	95	8×11.5	120
100	101	5×11	100	6.3×11	125	6.3×11	130	8×11.5	160	10×12.5	200
220	221	8×11.5	155	8×11.5	160	8×11.5	205	10×12.5	255	10×20	325
330	331	8×11.5	205	8×11.5	215	10×12.5	260	10×16	320	13×20	380
470	471	10×12.5	280	10×12.5	310	10×16	365	13×20	435	13×25	520
1000	102	10×16	360	10×20	445	13×20	535	13×25	580	16×25	780
2200	222	13×20	680	16×25	885	16×30	1050				
3300	332	16×25	1050	16×30	1150						
4700	472	16×30	1250								

WV		50V(1H)		63V(1J)		100V(2A)	
		Size	Ripple	Size	Ripple	Size	Ripple
0.47	R47	5×11	8	5×11	9	5×11	10
1	010	5×11	12	5×11	15	5×11	16
2.2	2R2	5×11	18	5×11	22	6.3×11	24
3.3	3R3	5×11	27	5×11	28	6.3×11	30
4.7	4R7	5×11	34	6.3×11	34	6.3×11	35
10	100	5×11	34	6.3×11	57	8×11.5	71
		6.3×11	52				
22	220	8×11.5	89	8×11.5	95	10×16	135
33	330	8×11.5	105	10×12.5	135	10×20	185
47	470	10×12.5	150	10×16	180	13×20	200
100	101	10×16	205	13×20	320	16×25	425
220	221	13×20	360	13×25	430	16×35	520
330	331	16×25	550	16×30	580		
470	471	16×30	580	18×35	760		

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz