

KP Bi-Polar with Wide Temperature 宽温双极性

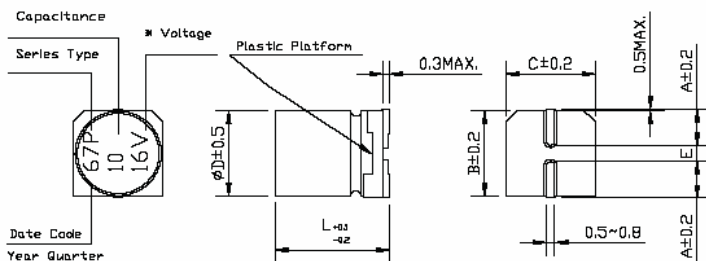
- Bi-polar with wide temperature range -55°C to +105°C.
- Lead-free reflow soldering is available subject to customers' request.



◆ Specifications 特性

Items 项目	Performance Characteristics 主要特性																				
Operating Temperature Range 使用温度范围	-55~+105°C																				
Voltage Range 额定工作电压范围	6.3~50V																				
Capacitance Range 静电容量范围	0.1~47 μ F																				
Capacitance Tolerance 静电容量允许偏差	±20% at 120 Hz, 20°C																				
Leakage Current 漏电流	After 2 minutes' application of rated voltage, leakage current is not more than 0.05CV or 10(μ A) whichever is greater. 施加额定工作电压 2 分钟, LC≤0.05CV 或 10(μ A), 取较大值。																				
Tan δ 损耗角正切	Measurement frequency 测试频率: 120Hz, Temperature 温度: 20°C <table border="1"> <tr> <td>Rated voltage (V.DC) 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> </tr> <tr> <td>Tan δ 损耗角正切 (max)</td> <td>0.24</td> <td>0.20</td> <td>0.17</td> <td>0.17</td> <td>0.15</td> <td>0.15</td> </tr> </table>	Rated voltage (V.DC) 额定工作电压	6.3	10	16	25	35	50	Tan δ 损耗角正切 (max)	0.24	0.20	0.17	0.17	0.15	0.15						
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Stability at Low Temperature 低温特性	Measurement frequency 测试频率: 120Hz <table border="1"> <tr> <td>Rated voltage (V.DC) 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> </tr> <tr> <td rowspan="2">Impedance ratio 阻抗比 ZT/Z20 (max)</td> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</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>4</td> <td>4</td> <td>3</td> </tr> </table>	Rated voltage (V.DC) 额定工作电压	6.3	10	16	25	35	50	Impedance ratio 阻抗比 ZT/Z20 (max)	Z-25°C/Z+20°C	4	3	2	2	2	Z-40°C/Z+20°C	8	6	4	4	3
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Load Life 高温负荷特性	After 1000 hours' application of rated voltage at 105°C with the polarity inverted every 250 hours, capacitors meet the characteristics requirements listed at right. 在 105°C 环境中施加额定工作电压 1000 小时(每 250 小时电源转换一次极性)后, 电容器的特性符合右表的要求。 <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% of the initial value 初始值的±20%以内</td> </tr> <tr> <td>Tan δ 损耗角正切</td> <td>200% or less of the initial specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>Initial specified value or less 不大于规范值</td> </tr> </table>	Capacitance Change 静电容量变化率	Within ±20% of the initial value 初始值的±20%以内	Tan δ 损耗角正切	200% or less of the initial specified value 不大于规范值的 200%	Leakage Current 漏电流	Initial specified value or less 不大于规范值														
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Shelf Life 高温储存特性	After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for load life characteristics listed above. 在 105°C 环境中无负荷放置 1000 小时后, 电容器的特性符合高温负荷特性中所列的规定值。																				
Resistance to Soldering Heat 耐焊接热特性	After reflow soldering according and restored at room temperature, they meet the characteristics requirements listed at right. 经过回流焊并冷却至室温后, 电容器的特性符合右表的要求。 <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±10% of the initial value 初始值的±10%以内</td> </tr> <tr> <td>Tan δ 损耗角正切</td> <td>Initial specified value or less 不大于规范值</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>Initial specified value or less 不大于规范值</td> </tr> </table>	Capacitance Change 静电容量变化率	Within ±10% of the initial value 初始值的±10%以内	Tan δ 损耗角正切	Initial specified value or less 不大于规范值	Leakage Current 漏电流	Initial specified value or less 不大于规范值														
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Applicable Standards 适用标准	JIS C-5141 and JIS C-5102																				

◆ Dimensions & Marking 尺寸及印字



	(mm)		
D×L	Φ4×5.4	Φ5×5.4	Φ6.3×5.4
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E ± 0.2	1.0	1.3	2.2
L	5.4	5.4	5.4

* Voltage mark for 6.3V is [6V]

Re: Date code and series type — 1st digit for Year; 2nd digit for Quarter, 4 quarter codes in one year are 1, 4, 7, 0;
3rd character for Series; KP Series = P.

KP Series

◆ **Standard size & Maximum permissible ripple current** 规格壳号及最大允许纹波电流

WV 电压 容量 Cap. (μF)		6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
0.1	0R1											4×5.4	1.0
0.22	R22											4×5.4	2.0
0.33	R33											4×5.4	2.8
0.47	R47											4×5.4	4.0
1	010											4×5.4	8.4
2.2	2R2									4×5.4	8.4	5×5.4	13
3.3	3R3							5×5.4	12	5×5.4	16	5×5.4	17
4.7	4R7					4×5.4	12	5×5.4	16	5×5.4	18	6.3×5.4	20
10	100			4×5.4	17	5×5.4	23	6.3×5.4	27	6.3×5.4	29		
22	220	5×5.4	28	6.3×5.4	33	6.3×5.4	37						
33	330	6.3×5.4	37	6.3×5.4	41	6.3×5.4	49						
47	470	6.3×5.4	45									Case Size	Ripple Current

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

◆ **Frequency Coefficient Factor of Rated Ripple Current** 纹波电流频率补偿系数

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
Coefficient	0.70	1.00	1.17	1.36	1.50