



series

Super Ultra.Low Impedance,High Ripple Current

- Low impedance at 100kHz with selected materials
- Load life:105°C 4000 hours
- High quality
- ROHS Directive

■ SPECIFICATIONS

Item	Performance Characteristics																		
Operating Temperature Range	-55°C~105°C																		
Rated Voltage Range	6.3~35V																		
Capacitance Range	100~2700uF																		
Capacitance Tolerance	±20%,120Hz,20°C																		
Leakage Current (MAX)	$I \leq 0.01CV$ or $3\mu A$ whichever is greater.(after 2minutes) I =Leakage Current(μA), C =Nominal Capacitance(μF), V =Rated Voltage(V)																		
Dissipation Factor (tan δ)	When nominal capacitance is over 1000uF,tan δ shall be added 0.02 to the listed value with increase of every 1000uF. MAX (20°C120Hz) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Rated voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </tbody> </table>	Rated voltage(V)	6.3	10	16	25	35	Tan δ	0.22	0.19	0.16	0.14	0.12						
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Low Temperature Stability Impedance Ratio	MAX (20°C 120Hz) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Rated voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C) / Z (+20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C) / Z (+20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Rated voltage(V)	6.3	10	16	25	35	Z(-25°C) / Z (+20°C)	2	2	2	2	2	Z(-55°C) / Z (+20°C)	3	3	3	3	3
Rated voltage(V)	6.3	10	16	25	35														
Z(-25°C) / Z (+20°C)	2	2	2	2	2														
Z(-55°C) / Z (+20°C)	3	3	3	3	3														
Load Life	After life test at conditions stated in the table below, the capacitors shall meet the following requirement. <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>Leakage Current</td> <td>Not more than the specified</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified</td> </tr> </tbody> </table>	Leakage Current	Not more than the specified	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Not more than 200% of the specified												
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Shelf Life	After leaving capacitors under no load at 105°C for 1000hours and applying voltage according to JIS C-5102 4-3,they meet the specified value for load life characteristics listed above.																		
Standard	According to JIS C 5141																		

■ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

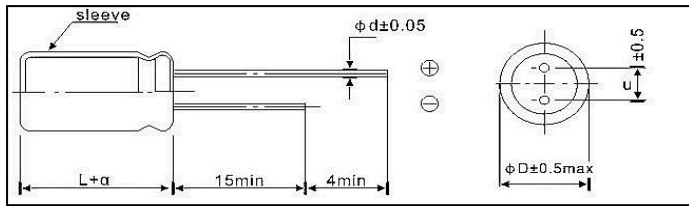
Frequency(Hz) Cap(uF)	60(50)	120	1k	10k	≥100k
1.0-33	0.45	0.55	0.75	0.90	1.00
47-330	0.60	0.70	0.85	0.95	1.00
470-1000	0.65	0.75	0.90	0.98	1.00
1200-6800	0.75	0.80	0.95	1.00	1.00



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■DIMENSIONS(mm)



ΦD	5	6.3	8	10
Φd	0.5			0.6
F	2.0	2.5	3.5	5.0
α	L≤16 : α=1.5 L≥16 : α=2.0			

■STANDARD SIZE,MAXIUM PERMISSIBLE RIPPLE CURRENT,IMPEDANCE

Ripple Current(mA 105°C,100kHz)r.m.s

Rated voltage 6.3V				
Nominal capacitance (uF)	Size ΦD×L(mm)	Ripple Current	Impedance(QMAX)	
			20°C,100kHz	-10°C , 100kHz
330	8×12	360	0.298	0.685
470	8×12	432	0.187	0.411
680	8×14	600	0.145	0.334
820	8×14	756	0.105	0.242
1000	10×13	904	0.090	0.207
1200	10×13	1064	0.077	0.170
1500	8×20	1200	0.056	0.130
1800	10×16	1408	0.055	0.127
2200	10×20	1568	0.034	0.075
2700	10×25	1800	0.032	0.074

Ripple Current(mA 105°C,100kHz)r.m.s

Rated voltage 10V				
Nominal capacitance (uF)	Size ΦD×L(mm)	Ripple Current	Impedance(QMAX)	
			20°C,100kHz	-10°C , 100kHz
220	8×12	360	0.298	0.685
330	8×12	432	0.187	0.411
470	8×14	592	0.146	0.335
680	8×14	756	0.105	0.242
820	8×14	904	0.090	0.207
1000	8×15	980	0.085	0.187
	10×13	1064	0.077	0.170
1200	10×13	1232	0.065	0.150
1500	10×16	1408	0.055	0.127
1800	10×20	1568	0.034	0.075
2200	10×25	1800	0.032	0.074



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Ripple Current(mA 105°C,100kHz)r.m.s

Rated voltage 16V				
Nominal capacitance (uF)	Size	Ripple Current	Impedance(ΩMAX)	
	ΦD×L(mm)		20°C,100kHz	-10°C , 100kHz
150	8×12	352	0.298	0.685
220	8×12	432	0.187	0.411
330	8×14	592	0.146	0.335
470	8×14	756	0.105	0.242
680	10×13	1064	0.077	0.170
820	10×13	1232	0.065	0.150
1000	8×25	1450	0.045	0.108
	10×16	1300	0.055	0.127
1200	10×16	1488	0.044	0.101
1500	10×20	1568	0.034	0.075
1800	10×25	1776	0.031	0.071

Ripple Current(mA 105°C,100kHz)r.m.s

Rated voltage 25V				
Nominal capacitance (uF)	Size	Ripple Current	Impedance(ΩMAX)	
	ΦD×L(mm)		20°C,100kHz	-10°C , 100kHz
100	8×12	352	0.298	0.685
150	8×12	432	0.187	0.411
220	8×14	592	0.146	0.335
330	8×14	756	0.105	0.242
390	8×16	1000	0.090	0.207
470	10×13	1064	0.077	0.170
560	8×20	1200	0.056	0.130
680	10×16	1500	0.050	0.102
820	10×20	1568	0.034	0.075
1000	10×25	1800	0.032	0.074
1200	10×25	1888	0.031	0.071



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Ripple Current(mA 105°C,100kHz)r.m.s

Rated voltage 35V

Nominal capacitance (uF)	Size	Ripple Current	Impedance(Ω MAX)	
	Φ D×L(mm)		20°C,100kHz	-10°C , 100kHz
100	8×12	432	0.187	0.411
150	8×12	592	0.146	0.335
220	8×20	756	0.105	0.242
330	10×13	1064	0.077	0.170
390	8×20	1200	0.056	0.130
470	10×16	1300	0.055	0.127
560	10×20	1568	0.034	0.075
680	10×25	1800	0.032	0.074
820	10×25	1888	0.031	0.071