

### SKM SERIES +105°C(標準品)

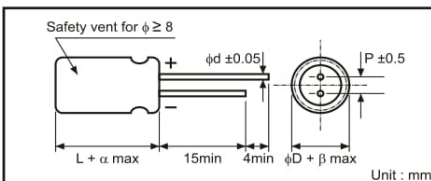
- For general purpose, -40°C to +105°C.
- This series is for communication equipments, switching power supply, industrial measuring instruments, etc.



#### ◆ SPECIFICATIONS

Item	Performance Characteristics																																														
Operating temperature range	-40 to +105°C	-25 to +105°C																																													
Rated Working Voltage Range	6.3 to 100V	160 to 450V																																													
Nominal Capacitance Range	0.1 to 33000μF	1.0 to 330μF																																													
Capacitance Tolerance	±20(120Hz,+20°C)																																														
Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ after 2 minutes whichever is greater measured with rated working voltage applied at +20 °C	$I \leq 0.03CV + 40(\mu A)$ after 2 minutes application of rated working voltage at +20 °C																																													
Dissipation Factor tan δ(120Hz,+20°C)	<table border="1"> <tr> <td>Working Voltage(V)</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>tan δ(max)</td> <td>0.26</td><td>0.22</td><td>0.18</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.1</td><td>0.08</td> </tr> </table> <table border="1"> <tr> <td>Working Voltage(V)</td> <td>160</td><td>200</td><td>220</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td> </tr> <tr> <td>tan δ(max)</td> <td>0.2</td><td>0.2</td><td>0.2</td><td>0.2</td><td>0.24</td><td>0.24</td><td>0.24</td><td>0.24</td> </tr> </table> <p>For capacitance value &gt; 1000μF, add 0.02 per another 1000μF</p>		Working Voltage(V)	6.3	10	16	25	35	50	63	100	tan δ(max)	0.26	0.22	0.18	0.16	0.14	0.12	0.1	0.08	Working Voltage(V)	160	200	220	250	350	400	420	450	tan δ(max)	0.2	0.2	0.2	0.2	0.24	0.24	0.24	0.24									
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Low Temperature Characteristics	<p>Impedance ratio max at 120Hz</p> <table border="1"> <tr> <td>Working Voltage(V)</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>5</td><td>4</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>10</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td> </tr> </table> <table border="1"> <tr> <td>Working Voltage(V)</td> <td>160</td><td>200</td><td>220</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>3</td><td>3</td><td>3</td><td>4</td><td>4</td><td>6</td><td>6</td><td>15</td> </tr> </table> <p>For capacitance value &gt; 1000μF, Add 0.5 per another 1000μF for Z-25°C/Z+20°C Add 1.0 per another 1000μF for Z-40°C/Z+20°C</p>		Working Voltage(V)	6.3	10	16	25	35	50	63	100	Z-25°C/Z+20°C	5	4	3	2	2	2	2	2	Z-40°C/Z+20°C	10	8	6	4	3	3	3	3	Working Voltage(V)	160	200	220	250	350	400	420	450	Z-25°C/Z+20°C	3	3	3	4	4	6	6	15
Working Voltage(V)	6.3	10	16	25	35	50	63	100																																							
Z-25°C/Z+20°C	5	4	3	2	2	2	2	2																																							
Z-40°C/Z+20°C	10	8	6	4	3	3	3	3																																							
Working Voltage(V)	160	200	220	250	350	400	420	450																																							
Z-25°C/Z+20°C	3	3	3	4	4	6	6	15																																							
High Temperature Loading	<p>Test conditions</p> <p>Duration : <table border="1"><tr><td>ΦD</td><td>≤8</td><td>≥10</td></tr><tr><td>Life</td><td>1000</td><td>2000</td></tr></table></p> <p>Ambient temp : +105°C</p> <p>Applied voltage: Rated DC working voltage with max. ripple current.</p>	ΦD	≤8	≥10	Life	1000	2000	<p>Post test requirements at +20°C</p> <p>Leakage current : ≤ Initial specified value</p> <p>Cap . Change : ≤ ±20% of Initial measured value</p> <p>tan δ : ≤ 200% of Initial specified value</p>																																							
ΦD	≤8	≥10																																													
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Shelf Life	<p>Test conditions</p> <p>Duration : 1000 hours</p> <p>Ambient temp : +105°C</p> <p>Applied voltage: (None)</p>	<p>Post test requirements at +20°C</p> <p>Leakage current : ≤ Initial specified value</p> <p>Cap . Change : ≤ ±20% of Initial measured value</p> <p>tan δ : ≤ 200% of Initial specified value</p>																																													

#### ◆ CASE SIZE TABLE



ΦD	5	6.3	8	10	12.5	16	18	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	12.5
φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	1.0
α	(L < 20) 1.5				(L ≥ 20) 2.0				
β	(D < 20) 0.5				(D ≥ 20) 1.0				

#### ◆ RIPPLE CURRENT MULTIPLIER

##### (1) Frequency Coefficient

Rated Voltage(V)	cap(μf)	freq. (Hz)					
		50	120	300	1k	10k~	
6.3~100	≤47	0.75	1	1.35	1.57	2	
	56	~470	0.8	1	1.23	1.34	1.5
	≥560	0.85	1	1.1	1.13	1.15	
160~450	0.47~220	0.8	1	1.25	1.4	1.6	
	>220	0.9	1	1.1	1.13	1.15	

##### (2) Temperature Coefficient

Temperature	-55	60	70	85	105
FACTOR	2.23	2.17	2	1.75	1

### SKM SERIES +105°C(標準品)

#### ◆ DIMENSIONS

Voltage Cap(μF)	6.3V		10V		16V		25V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7							5*11	25
10					5*11	35	5*11	37
22			5*11	48	5*11	53	5*11	56
33	5*11	52	5*11	56	5*11	60	5*11	75
47	5*11	61	5*11	66	5*11	80	5*11	84
68	5*11	70	5*11	75	5*11	90	5*11	92
100	5*11	94	5*11	105	5*11	125	6.3*11	159
220	5*11	153	6.3*11	193	6.3*11	213	8*12	285
330	6.3*11	216	6.3*11	239	8*12	315	8*12	340
470	6.3*11	258	6.3*11	285	8*12	366	10*12.5	471
680	8*12	365	10*12.5	472	10*12.5	480	10*16	620
1000	8*12	443	8*14	560	8*16	680	10*17	720
			10*12.5	571	10*16	680	10*20	821
2200	10*16	720	10*20	886	10*20	940	12.5*20	1090
	10*20	817			12.5*20	1108	12.5*25	1297
3300	10*20	1032	10*25	1190	12.5*20	1268	16*25	1646
			12.5*20	1205	12.5*25	1389		
4700	12.5*20	1280	12.5*25	1492	16*25	1740	16*30	2012
6800	12.5*25	1554	16*25	1824	16*30	2080	16*40	2452
10000	16*25	1897	16*30	1980	16*40	2527	18*35	2500
15000	16*35	2344	16*40	2180	18*35	2600		
22000	18*35	2500	18*35	2264				
33000	18*40	2555						

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

Case Size ΦD X L (mm)

Voltage Cap(μF)	35V		50V		63V		100V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1			5*11	1				
0.22			5*11	2.5				
0.33			5*11	4				
0.47			5*11	7			5*11	8
1			5*11	13			5*11	16
2.2			5*11	20			5*11	21
3.3			5*11	30			5*11	34
4.7	5*11	27	5*11	37			5*11	40
10	5*11	40	5*11	54	5*11	59	6.3*11	61
22	5*11	67	5*11	79	6.3*11	87	8*12	110
33	5*11	80	6.3*11	115	6.3*11	122	8*12	144
47	5*11	101	6.3*11	155	6.3*11	146	10*12.5	199
100	6.3*11	168	8*12	229	8*12	251	10*20	349
220	8*12	294	10*16	509	10*12.5	504	12.5*25	662
330	10*12.5	419	10*20	650	10*20	688	12.5*25	800
470	10*16	547	12.5*20	801	12.5*20	897	16*30	1072
1000	12.5*20	1023	12.5*25	1287	12.5*25	1568	18*40	1020
2200	16*25	1497	16*35	1884	16*30	1890		
3300	16*30	1808	18*40	2300	18*40	2352		
4700	18*35	2335						
6800	18*40	2400						

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

Case Size ΦD X L (mm)

### SKM SERIES +105°C(標準品)

#### ◆ DIMENSIONS

Voltage Cap(μF)	160V		200V		220V		250V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1							6.3*11	17
2.2							6.3*11	27
3.3			6.3*11	30	6.3*11	30	6.3*11	35
4.7	6.3*11	41	6.3*11	40	8*12	40	8*12	45
10	8*12	60	10*12.5	72	10*12.5	70	10*12.5	75
22	10*16	110	10*20	105	10*20	125	10*20	130
33	10*20	156	10*20	165	12.5*20	165	12.5*20	184
47	10*20	195	12.5*20	220	12.5*20	220	12.5*25	238
68	12.5*20	250	12.5*25	250	12.5*25	245	16*25	270
82	12.5*25	310	10*30	320	12.5*30	280	16*30	380
100	12.5*25	360	16*25	386	16*25	335	16*30	422
150	12.5*30	380	12.5*30	496	16*30	265	18*30	440
180	12.5*35	420	12.5*35	560	16*35	500	18*35	469
220	16*30	680	16*35	580	16*40	615	18*35	562
330	18*40	783	18*45	757			22*40	686
470	22*40	880	22*45	856			22*50	769

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

Case Size ΦD X L (mm)

Voltage Cap(μF)	350V		400V		420V		450V	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47	6.3*11	8						
1	6.3*11	18	6.3*11	19	6.3*11	15	6.3*11	16
2.2	6.3*11	25	8*12	30	8*12	29	10*12.5	28
3.3	8*12	40	8*12	34	8*12	33	8*12	31
			10*12.5	41	10*12.5	40	10*12.5	33
4.7	8*12	45	8*12	40	10*12.5	48	8*16	35
	10*12.5	50	10*16	52	10*16	52	10*16	42
6.8	10*12.5	56	8*16	51	8*20	53	8*20	53
			10*12.5	52	10*16	53	10*16	53
10	10*16	76	10*16	74	10*20	72	10*20	70
	10*20	80	10*20	86			12.5*20	84
15	10*20	84	10*20	92	12.5*16	97	12.5*16	97
18	12.5*20	100	12.5*20	105	12.5*25	124	10*30	108
22	12.5*16	148	12.5*16	147	12.5*20	130	12.5*20	108
	12.5*20	150	12.5*25	163	10*30	160	16*25	151
27	12.5*25	177	10*30	192	12.5*25	170	12.5*30	164
33	12.5*20	200	12.5*20	210	12.5*30	205	12.5*30	203
	16*25	200	16*25	222	16*20	200	16*20	203
39	16*25	258	16*25	251	12.5*30	248	12.5*35	224
47	16*25	305	16*25	298	12.5*35	288	12.5*35	276
	18*20	310	18*20	303	16*25	296	16*25	289
56	16*30	280	12.5*35	336	12.5*40	344	16*30	352
68	16*30	366	16*30	358	16*30	352	16*30	348
	18*20	372	18*20	371	16*30	358	18*25	352
82	16*30	393	16*30	380	16*35	368	16*35	360
	18*25	396	18*25	390	18*30	380	18*30	370
100	16*35	408	16*35	388	16*45	379	18*35	370
	18*31	412	18*32	395	18*35	383	18*40	376
120	18*35	446	18*35	435	18*40	422	22*40	405
150	18*35	603	18*40	616	22*40	568	22*45	640
180	22*35	736	22*35	704				
220	22*40	878	22*45	800				

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

Case Size ΦD X L (mm)