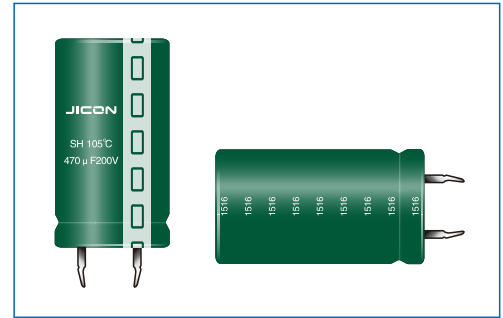


SH系列 SERIES

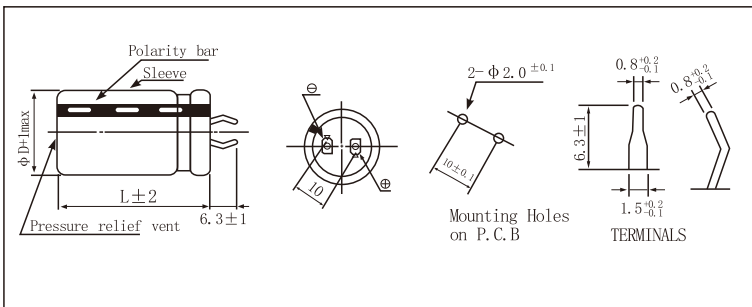
- 2000h at 105°C
- Standard 105°C
- General industry



◆ SPECIFICATION

Items	Characteristics																			
Operating Temperature Range(°C)	-40~+105°C	-25~+105°C																		
Voltage range (V)	10~100V	160~500V																		
Capacitance Range (μF)	39~47000 μF																			
Capacitance Tolerance	±20% (at 20°C, 120Hz)																			
leakage current (μA)	After 5 minutes at 20°C application of rated voltage ,leakage current is not more than 0.01CV or 1.5mA, whichever is smaller. C:Nominal Capacitance (μF) V :Rated Voltage (V)																			
Dissipation Factor(Tan δ)	<table border="1"> <thead> <tr> <th>WV(V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63~100</th> <th>160~400</th> <th>450~500</th> </tr> </thead> <tbody> <tr> <td>Tan δ (max)</td> <td>0.55</td> <td>0.50</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.20</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> (at 20°C, 120Hz)		WV(V)	10	16	25	35	50	63~100	160~400	450~500	Tan δ (max)	0.55	0.50	0.40	0.35	0.30	0.20	0.15	0.20
WV(V)	10	16	25	35	50	63~100	160~400	450~500												
Tan δ (max)	0.55	0.50	0.40	0.35	0.30	0.20	0.15	0.20												
Low Temperature Characteristics	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>10~100</th> <th>160~200</th> <th>250~500</th> </tr> </thead> <tbody> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>4</td> <td>6</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>15</td> <td>--</td> <td>--</td> </tr> </tbody> </table> (at 20°C, 120Hz)		Rated Voltage (V)	10~100	160~200	250~500	Z-25°C/Z+20°C	4	4	6	Z-40°C/Z+20°C	15	--	--						
Rated Voltage (V)	10~100	160~200	250~500																	
Z-25°C/Z+20°C	4	4	6																	
Z-40°C/Z+20°C	15	--	--																	
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated rippled current is applied for 2000 hours at 105°C <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±20%initial value</td> </tr> <tr> <td>D. F. (Tan δ)</td> <td>Not more than 200% of specified value</td> </tr> <tr> <td>leakage current</td> <td>Not more than specified value</td> </tr> </tbody> </table>		Capacitance change	Within ±20%initial value	D. F. (Tan δ)	Not more than 200% of specified value	leakage current	Not more than specified value												
Capacitance change	Within ±20%initial value																			
D. F. (Tan δ)	Not more than 200% of specified value																			
leakage current	Not more than specified value																			
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied .Before the measurement ,the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±20%initial value</td> </tr> <tr> <td>D. F. (Tan δ)</td> <td>Not more than 200% of specified value</td> </tr> <tr> <td>leakage current</td> <td>Not more than specified value</td> </tr> </tbody> </table>		Capacitance change	Within ±20%initial value	D. F. (Tan δ)	Not more than 200% of specified value	leakage current	Not more than specified value												
Capacitance change	Within ±20%initial value																			
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leakage current	Not more than specified value																			

◆ DIMENSIONS(mm)



◆ Frequency Coefficient

Frequency	50/60Hz	120Hz	1KHz	10KHz	100KHz
Rated Voltage (V) 10~100WV	0.95	1.00	1.10	1.15	1.15
160~250WV	0.87	1.00	1.11	1.18	1.20
315~450WV	0.80	1.00	1.14	1.14	1.20

◆ Temperature Coefficient

Temperature (°C)	+40	+55	+70	+85	+105
Rated Voltage (V) <160	2.7	2.5	2.1	1.7	1.0

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◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120Hz	Rated Ripple Current 105°C 120Hz	Size ΦD×L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
10V	8200	89	1360	22×25
	10000	73	1650	22×30
	12000	61	1850	22×35
		61	1820	25×25
	15000	49	2120	22×40
		49	2110	25×30
		49	2140	30×25
	18000	41	2400	22×45
		41	2320	25×35
	22000	33	2590	25×40
		33	2730	30×30
	27000	27	3010	25×45
		27	3130	30×35
		27	3050	35×30
	33000	22	3430	25×50
22		3530	30×40	
22		3490	35×35	
39000	19	3780	30×45	
	19	3960	35×40	
47000	16	4580	30×50	
	16	4600	35×45	
56000	13	5060	35×50	
16 (1C)	6800	98	1600	22×25
	10000	66	1990	22×30
	12000	66	1990	25×25
		55	2280	22×35
	15000	55	2300	25×30
		55	2380	30×25
		44	2640	22×40
	18000	44	2680	25×35
		37	2980	22×45
		37	3040	25×40
		37	3000	30×30
		37	3100	35×25
	22000	30	3400	25×45
		30	3390	30×35
	27000	25	3810	25×50
25		3830	30×40	
25		3740	35×30	
33000	20	4300	30×45	
	20	4240	35×35	
39000	17	4740	30×50	
	17	4720	35×40	
47000	14	5270	35×45	
25 (1E)	4700	113	1550	22×25
	6800	78	1910	22×30
		78	1910	25×25
	8200	65	2140	22×35
		65	2160	25×30
		65	2250	30×25
10000	53	2400	22×40	
	53	2440	25×35	

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◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120Hz	Rated Ripple Current 105°C 120Hz	Size Φ D × L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
25 (1E)	12000	44	2690	22 × 45
		44	2740	25 × 40
		44	2700	30 × 30
		44	2800	35 × 25
	15000	35	3150	25 × 45
		35	3130	30 × 35
		35	3220	35 × 30
	18000	30	3540	25 × 50
		30	3540	30 × 40
	22000	24	4240	30 × 45
24		3960	35 × 35	
27000	20	4750	35 × 45	
33000	16	5390	35 × 50	
35 (1V)	3300	141	1430	22 × 25
	3900	119	1650	22 × 30
	4700	99	1780	25 × 25
	5600	83	2020	22 × 35
		83	2040	25 × 30
		83	2120	30 × 25
	6800	68	2280	22 × 40
		68	2310	25 × 35
	8200	57	2670	22 × 50
		57	2600	25 × 40
		57	2560	30 × 30
		57	2780	35 × 25
	10000	46	2920	25 × 45
		46	2920	30 × 35
	12000	39	3260	25 × 50
		39	3280	30 × 40
		39	3200	35 × 30
	15000	31	3740	30 × 45
31		3690	35 × 35	
18000	26	4160	35 × 40	
22000	21	4920	35 × 50	
50 (1H)	1800	221	1310	22 × 25
	2200	181	1450	22 × 30
	2700	147	1700	22 × 30
		147	1700	25 × 25
	3300	121	1980	22 × 35
		121	2000	25 × 30
	3900	102	2250	22 × 40
		102	2280	25 × 35
		102	2220	30 × 25
	4700	85	2560	22 × 45
		85	2580	30 × 30
		85	2670	35 × 25
	5600	71	2890	22 × 50
		71	2810	25 × 40
		71	2950	30 × 35
	6800	59	3370	25 × 50
		59	3390	30 × 40
		59	3310	35 × 30
	8200	49	3710	30 × 45
		49	3660	35 × 35
10000	40	4090	30 × 50	
	40	4070	35 × 40	
12000	33	4500	35 × 45	

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◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120Hz	Rated Ripple Current 105°C120Hz	Size ΦD×L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
63 (1J)	1200	221	1250	22×25
	1800	147	1520	22×30
			1520	25×25
	2200	121	1730	22×35
			1750	25×30
	2700	98	1970	22×40
			1990	25×35
			1930	30×25
	3300	80	2320	22×50
			2270	25×40
			2240	30×30
			2410	35×25
	3900	68	2540	25×45
			2550	30×35
	4700	57	2880	25×50
2900			30×40	
2830			35×30	
5600	47	3280	30×45	
		3240	35×35	
6800	39	3730	30×50	
		3710	35×40	
8200	32	4160	35×45	
10000	27	4690	35×50	
80 (100) 1K	820	324	1110	22×25
	1000	266	1250	22×25
	1200	221	1390	22×30
			1390	25×25
	1500	177	1610	22×35
			1620	25×30
	1800	147	1830	22×40
			1810	30×25
	2200	121	2090	22×45
			2010	25×35
			2100	30×30
	2700	98	2170	35×25
			2430	25×45
			2430	30×35
	3300	80	2760	25×50
2780			30×40	
2710			35×30	
3900	68	3120	30×45	
		3070	35×35	
4700	57	3560	30×50	
		3500	35×40	
5600	47	3870	35×45	
6800	39	4190	35×50	
100 (125) 2A	560	474	1070	22×25
	820	324	1350	22×30
			1350	25×25
	1000	265	1540	22×35
			1560	25×30
	1200	221	1740	22×40
1760			25×35	
		221	1710	30×25

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◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C120Hz	Rated Ripple Current 105°C120Hz	Size ΦD×L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
100 (125) 2A	1500	177	1990	22×45
		177	2030	25×40
		177	2000	30×30
		177	2070	35×25
	1800	147	2280	25×45
		147	2270	30×35
	2200	121	2570	25×50
		121	2590	30×40
		121	2520	35×30
	2700	98	2940	30×45
98		2900	35×35	
3300	80	3320	30×50	
	80	3310	35×40	
3900	68	3690	35×45	
4700	57	4140	35×50	
160 (200) 2C	330	603	1160	22×25
	390	510	1430	22×30
	470	424	1520	22×35
		424	1550	25×25
	560	355	1620	22×40
		355	1730	25×30
	680	293	1700	22×45
		293	1810	25×35
		293	1820	30×25
	820	243	1810	22×50
		243	1980	25×40
		243	1980	30×30
		243	1930	35×25
	1000	199	2040	25×45
		199	2140	30×35
	1200	166	2120	25×50
166		2220	30×40	
166		2400	35×30	
1500	133	2460	30×45	
	133	2530	35×35	
1800	111	2980	35×45	
2200	91	3100	35×50	
200 (250) 2D	220	905	1080	22×25
	270	737	1200	22×30
	330	603	1300	22×30
		603	1350	25×25
	390	510	1410	22×35
		424	1500	22×40
	470	424	1470	25×30
		424	1560	30×25
		355	1580	22×45
	560	355	1650	25×35
		293	1680	22×50
	680	293	1800	25×40
		293	1820	30×30
		293	1960	35×25
		243	1870	25×50
	820	243	1990	30×35
243		2070	35×30	

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◆ STANDARD RATINGS

UR (Surge Voltge) Code	Rated Capacitance	Max ESR 20°C120Hz	Rated Ripple Current 105°C120Hz	Size φD×L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
200 (250) 2D	1000	199	2170	30×45
		199	2220	35×35
	1200	166	2220	30×50
		166	2420	35×40
	1500	133	2590	35×45
1800	111	2700	35×50	
250 (300) 2E	180	1106	940	22×25
	220	905	1100	22×30
		905	1150	25×25
	270	737	1130	22×35
	330	603	1200	22×40
		603	1300	25×30
	390	603	1300	30×25
		510	1260	22×45
	470	510	1410	25×35
		424	1370	22×50
	560	424	1520	25×40
		424	1360	30×30
		424	1400	35×25
	680	355	1590	25×45
		355	1570	30×35
		355	1560	35×30
	820	293	1660	25×50
		293	1760	30×40
	1000	243	1830	30×45
		243	1820	35×35
1200	199	1870	30×50	
	199	1990	35×40	
350 (400) 2V	166	2100	35×45	
	68	2927	560	22×25
	100	1990	700	22×30
		1990	700	25×25
	120	1659	730	22×35
	150	1327	790	22×40
		1327	820	25×30
		1327	820	30×25
	180	1106	810	22×45
		1106	890	25×35
		1106	900	30×30
	220	905	930	22×50
		905	970	25×40
		905	980	35×25
	270	737	1010	25×50
		737	1050	30×35
		737	1010	35×30
	330	603	1160	30×45
		603	1160	35×35
	390	510	1260	30×50
510		1260	35×40	
470	424	1350	35×45	
560	355	1510	35×50	
400 (450) 2G	68	2927	470	22×25
	82	2427	560	22×30
		2427	650	25×25
100	1990	600	22×30	

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◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C120Hz	Rated Ripple Current 105°C120Hz	Size ΦD×L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
400 (450) 2G	120	1659	640	22×35
		1659	700	25×30
		1659	780	30×25
	150	1327	700	22×40
		1327	730	25×35
	180	1106	780	22×50
		1106	820	25×40
		1106	830	30×30
		1106	860	35×25
	220	905	870	25×45
		905	960	30×35
	270	737	940	25×50
		737	950	30×40
		737	910	35×30
	330	603	1110	30×45
603		1130	35×35	
390	510	1150	30×50	
	510	1260	35×40	
470	424	1310	35×45	
560	355	1500	35×50	
450 (500) 2W	56	4739	470	22×25
	68	3903	560	22×30
		3903	650	25×25
	82	3237	640	22×35
		2654	700	22×40
	100	2654	700	25×30
		2654	780	30×25
		2212	730	22×45
	120	2212	730	25×35
		1769	780	22×50
	150	1769	820	25×40
		1769	830	30×30
		1769	860	35×25
		1474	870	25×45
	180	1474	860	30×35
		1206	940	25×50
		1206	950	30×40
	220	1206	910	35×30
983		1110	30×45	
983		1130	35×35	
270	804	1150	30×50	
	804	1260	35×40	
330	681	1310	35×45	
	470	565	1500	35×50
500 (550) 2H	39	6805	350	22×30
	47	5647	410	22×35
	56	4739	470	22×40
	68	3903	540	22×45
	82	3237	620	25×40
	100	2654	670	25×45
		2212	770	25×50
	120	2212	720	35×30
		1769	850	30×40
	180	1474	1010	30×50
	220	1206	1120	35×45
	270	983	1290	35×50