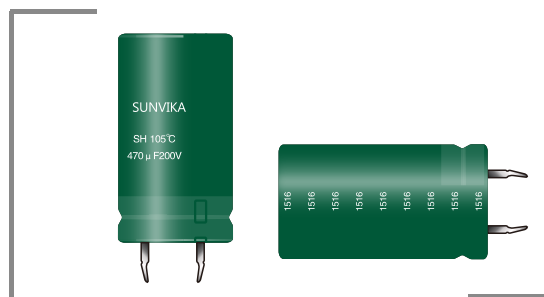


SH 系列 SERIES

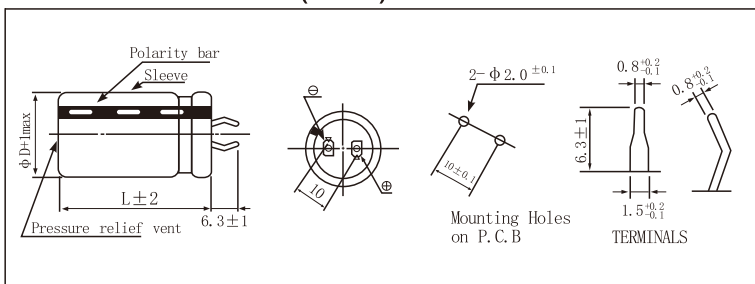
- 2000h at 105°C
- Standard 105°C
- General industry

◆ SPECIFICATION



Items	Characteristics								
Operating Temperature Range(℃)	-40 ~ +105℃						-25 ~ +105℃		
Voltage range (V)	10 ~ 100V						160 ~ 500V		
Capacitance Range (μ F)	39 ~ 47000 μ F								
Capacitance Tolerance	± 20% (at 20℃,120Hz)								
leakage current (μ A)	After 5 minutes at 20℃ application of rated voltage ,leakage current is not more than 0.01CVor 1.5mA,whichever is smaller. C:Nominal Capacitance (μ F) V:Rated Voltage (V)								
Dissipation Factor(Tan δ)	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	(at 20℃,120Hz)								
	Rated Voltage (V)	10~100			160~200			250~500	
	Z-25℃/ Z+20℃	4			4			6	
	Z-40℃/ Z+20℃	15			—			—	
Load Life	(at 20℃,120Hz)								
	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated rippled current is applied for 2000 hours at 105℃								
	Capacitance change	Within ± 20%initial value							
	D.F.(Tan δ)	Not more than 200% of specified value							
Shelf Life	leakage current	Not more than specified value							
	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours at 105℃without voltage applied .Before the measurement ,the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.								
	Capacitance change	Within ± 20%initial value							
	D.F.(Tan δ)	Not more than 200% of specified value							
	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

◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120H	Rated Ripple Current 105°C 120Hz	Size φ D × 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
16	47000	16	4580	30 × 50
		16	4600	35 × 45
	56000	13	5060	35 × 50
	6800	98	1600	22 × 25
	10000	66	1990	22 × 30
		66	1990	25 × 25
	12000	55	2280	22 × 35
		55	2300	25 × 30
		55	2380	30 × 25
	15000	44	2640	22 × 40
		44	2680	25 × 35
	18000	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	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

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120H	Rated Ripple Current 105°C 120Hz	Size φ D × L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
25	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
35	33000	16	5390	35 × 50
	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
	15000	39	3200	35 × 30
		31	3740	30 × 45
		31	3690	35 × 35
	18000	26	4160	35 × 40
	22000	21	4920	35 × 50
50	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

◆ STANDARD RATINGS

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

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120H	Rated Ripple Current 105°C 120Hz	Size φ D × L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
100 (125)	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
160 (200)	4700	57	4140	35 × 50
	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
200 (250)	2200	91	3100	35 × 50
	220	905	1080	22 × 25
	270	737	1200	22 × 30
	330	603	1300	22 × 30
		603	1350	25 × 25
	390	510	1410	22 × 35
	470	424	1500	22 × 40
		424	1470	25 × 30
		424	1560	30 × 25
	560	355	1580	22 × 45
		355	1650	25 × 35
	680	293	1680	22 × 50
		293	1800	25 × 40
		293	1820	30 × 30
		293	1960	35 × 25
	820	243	1870	25 × 50
		243	1990	30 × 35
		243	2070	35 × 30

◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120H	Rated Ripple Current 105°C 120Hz	Size φ D × L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
200 (250)	1000	199	2170	30 × 45
		199	2220	35 × 35
	1200	166	2220	30 × 50
		166	2420	35 × 40
	1500	133	2590	35 × 45
250 (300)	1800	111	2700	35 × 50
	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
		603	1300	30 × 25
	390	510	1260	22 × 45
		510	1410	25 × 35
	470	424	1370	22 × 50
		424	1520	25 × 40
		424	1360	30 × 30
		424	1400	35 × 25
	560	355	1590	25 × 45
		355	1570	30 × 35
		355	1560	35 × 30
	680	293	1660	25 × 50
		293	1760	30 × 40
	820	243	1830	30 × 45
		243	1820	35 × 35
	1000	199	1870	30 × 50
		199	1990	35 × 40
	1200	166	2100	35 × 45
350 (400)	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)	68	2927	470	22 × 25
	82	2427	560	22 × 30
		2427	650	25 × 25
	100	1990	600	22 × 30

UR (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C120H	Rated Ripple Current 105°C 120Hz	Size φ D × L
(V)	(μF)	(mΩ)	(mA rms)	(mm)
400 (450)	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
450 (500)	390	510	1150	30 × 50
		510	1260	35 × 40
	470	424	1310	35 × 45
	560	355	1500	35 × 50
	56	4739	470	22 × 25
	68	3903	560	22 × 30
		3903	650	25 × 25
	82	3237	640	22 × 35
	100	2654	700	22 × 40
		2654	700	25 × 30
		2654	780	30 × 25
	120	2212	730	22 × 45
		2212	730	25 × 35
	150	1769	780	22 × 50
		1769	820	25 × 40
		1769	830	30 × 30
		1769	860	35 × 25
	180	1474	870	25 × 45
		1474	860	30 × 35
	220	1206	940	25 × 50
		1206	950	30 × 40
		1206	910	35 × 30
	270	983	1110	30 × 45
		983	1130	35 × 35
	330	804	1150	30 × 50
		804	1260	35 × 40
500 (550)	390	681	1310	35 × 45
	470	565	1500	35 × 50
	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