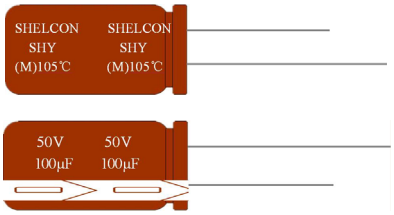
SHY SERIES

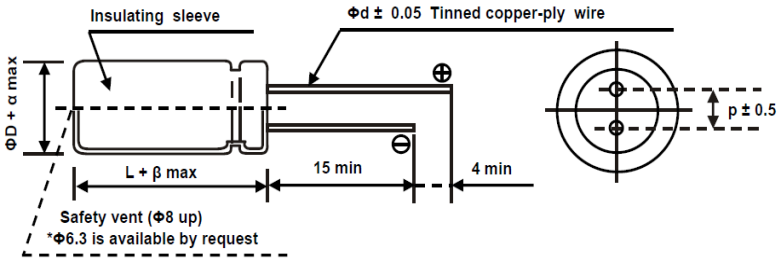


- 105℃ High Frequency, High Ripple, Low Impedance.
- Load life of 2000 ~ 8000 hours at 105℃.

◆ SPECIFICATIONS

Item	Characteristics
Operating Temperature Range	-40~+105℃
Voltage Range	6.3 ~ 50V.DC
Nominal Cap. Range	22~18000μF
Capacitance Tolerance	- 20% ~ + 20% (at 20℃, 120Hz)
Leakage Current	I = 0.01CV or 3(μA) whichever is greater.(after 2 minutes) where, I: Max Leakage Current (μA); C: Nominal Capacitance (μF); V: Rated Voltage (V) (at 20℃)
Dissipation Factor (tanδ) (at 120Hz, +20℃)	Rated voltage(V.DC): 6.3V / 10V / 16V / 25V / 35V / 50V tanδ (max): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 0.02 is added to every 1000μF increase over 1000μF.
Low Temp. Impedance Stability at 120Hz	W.V.: 6.3V / 10V / 16V / 25V / 35V / 50V Z-25℃/Z+20℃: 4 / 3 / 2 / 2 / 2 / 2 Z-40℃/Z+20℃: 8 / 6 / 4 / 3 / 3 / 3
Impedance(Ω)	See case size table
High Temp.Load Test	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105℃. Time: 6.3~10V.DC: Φ5 & Φ6.3: 2000 hrs; Φ8 & Φ10: 5000 hrs; ΦD≧Φ13: 6000 hrs, application of DC rated working. Time: 16~50V.DC: Φ5 & Φ6.3: 3000 hrs; Φ8 & Φ10: 5000 hrs; ΦD≧Φ13: 8000 hrs, application of DC rated working. Capacitance change --- ≦± 25% of the initial measured value Tanδ --- ≦ 200% of the initial specified value DC leakage current --- ≦ the initial specified value
High Temp.Non-Load Test	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 105℃ without voltage applied. Capacitance change --- ≦± 25% of the initial measured value Tanδ --- ≦200% of the initial specified value DC leakage current --- ≦the initial specified value

◆ DRAWING



Unit: (mm)

ΦD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.5						
α	0.5						

▼ MULTIPLIER FOR RIPPLE CURRENT

(1) Frequeny coefficient

Freq.(HZ) / Cap(μF)	120	1K	10K	100K
22 ~ 180	0.40	0.75	0.90	1.00
220 ~ 560	0.50	0.85	0.94	1.00
680 ~ 1800	0.60	0.87	0.95	1.00
2200 ~ 3900	0.75	0.90	0.95	1.00
4700 ~18000	0.85	0.95	0.98	1.00

(2) Temperature coefficient

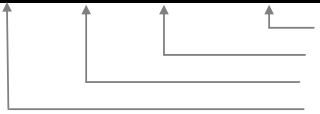
Ambient Temperature(℃)	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00

SHY SERIES

■STANDARD RATINGS

WV(Vdc) / Parameter / ΦDxL	6.3				10				16			
	cap (μF)	Impedance		Ripple current	cap (μF)	Impedance		Ripple current	cap (μF)	Impedance		Ripple current
5x11	150	1.16	4.6	215	100	1.16	4.6	215	56	1.16	4.6	215
6.3x11	330	0.44	1.74	345	220	0.44	1.74	345	120	0.44	1.74	345
8x11.5	680	0.26	1.04	645	470	0.26	1.04	645	330	0.26	1.04	645
10x12.5	820	0.160	0.64	870	680	0.160	0.064	870	470	0.174	0.700	845
10x16	1200	0.120	0.48	1215	1000	0.120	0.480	1215	680	0.138	0.540	1055
10x20	1500	0.092	0.36	1410	1200	0.092	0.360	1410	1000	0.092	0.360	1410
10x25	2200	0.084	0.34	1655	1500	0.084	0.340	1655	1200	0.084	0.340	1655
10x30	2700	0.062	0.24	1915	2200	0.062	0.240	1915	1500	0.062	0.240	1915
13x20	3300	0.070	0.24	1905	2200	0.070	0.120	1905	1500	0.070	0.240	1905
13x25	3900	0.054	0.178	2235	3300	0.054	0.178	2235	2200	0.054	0.178	2235
13x30	4700	0.048	0.156	2655	3900	0.048	0.156	2655	2700	0.048	0.156	2655
13x35	5600	0.040	0.130	2885	4700	0.040	0.130	2885	3300	0.040	0.130	2885
16x20	5600	0.054	0.156	2535	3900	0.054	0.156	2535	2700	0.054	0.140	2535
16x25	6800	0.042	0.120	2935	5600	0.042	0.120	2935	3900	0.042	0.120	2935
16x31.5	8200	0.034	0.100	3455	6800	0.034	0.100	3455	4700	0.034	0.100	3455
16x35.5	10000	0.030	0.088	3615	8200	0.030	0.088	3615	5600	0.030	0.088	3615
16x40	12000	0.026	0.076	4085	10000	0.026	0.076	4085	6800	0.026	0.076	4085
18x20	6800	0.052	0.134	2865	5600	0.052	0.134	2865	3900	0.052	0.134	2865
18x25	10000	0.038	0.098	3145	6800	0.038	0.098	3145	4700	0.038	0.049	3145
18x31.5	12000	0.030	0.080	4175	8200	0.030	0.080	4175	5600	0.030	0.040	4175
18x35.5	15000	0.028	0.076	4225	10000	0.028	0.076	4225	8200	0.028	0.038	4225
18x40	18000	0.024	0.064	4285	12000	0.024	0.064	4285	10000	0.024	0.032	4285

WV(Vdc) / Parameter / ΦDxL	25				35				50			
	cap (μF)	Impedance		Ripple current	cap (μF)	Impedance		Ripple current	cap (μF)	Impedance		Ripple current
5x11	47	1.16	4.6	215	33	1.16	2.3	215	22	1.4	5.6	185
6.3x11	100	0.44	1.74	345	56	0.44	1.74	345	56	0.6	2.4	300
8x11.5	220	0.26	1.04	645	150	0.26	1.04	645	100	0.34	1.36	560
10x12.5	330	0.160	0.64	870	220	0.160	0.640	865	150	0.240	0.960	785
10x16	470	0.120	0.48	1215	330	0.100	0.480	1215	220	0.168	0.680	1055
10x20	680	0.092	0.36	1410	470	0.080	0.360	1410	270	0.090	0.480	1225
10x25	820	0.084	0.34	1655	560	0.084	0.340	1655	330	0.110	0.440	1445
10x30	1000	0.062	0.24	1915	680	0.062	0.240	1915	470	0.086	0.340	1695
13x20	1000	0.070	0.24	1905	680	0.070	0.240	1905	470	0.090	0.300	1665
13x25	1500	0.054	0.178	2235	1000	0.054	0.178	2235	560	0.068	0.220	1955
13x30	1800	0.048	0.156	2650	1200	0.048	0.156	2655	680	0.060	0.200	2315
13x35	2200	0.040	0.130	2885	1500	0.040	0.130	2885	820	0.070	0.166	2515
16x20	1800	0.054	0.156	2535	1200	0.054	0.156	2535	820	0.068	0.200	2215
16x25	2700	0.042	0.120	2935	1800	0.042	0.120	2935	1000	0.050	0.150	2560
16x31.5	3300	0.034	0.100	3455	2200	0.034	0.100	3455	1200	0.044	0.132	3015
16x35.5	3900	0.030	0.088	3615	2700	0.030	0.088	3615	1500	0.038	0.114	3155
16x40	4700	0.026	0.076	4085	3300	0.026	0.076	4085	1800	0.032	0.960	2715
18x20	2200	0.052	0.134	2865	1800	0.052	0.134	2865	1000	0.072	0.194	2495
18x25	3300	0.038	0.098	3145	2200	0.038	0.098	3145	1200	0.052	0.140	2745
18x31.5	3900	0.030	0.080	4175	2700	0.030	0.080	4175	1800	0.042	0.114	3640
18x35.5	4700	0.028	0.076	4225	3300	0.028	0.076	4225	2200	0.034	0.092	3685
18x40	5600	0.024	0.064	4285	3900	0.024	0.064	4285	2700	0.028	0.076	3805



Rated Ripple Current (mArms / 105℃. 100KHZ)
(Ω max / -10℃. 100KHZ)
(Ω max / 20℃. 100KHZ)
Cap (μF)