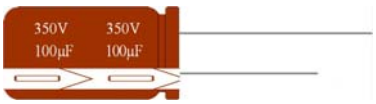
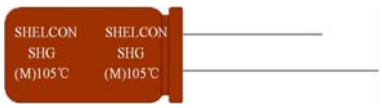
SHG SERIES





● Load life: 105℃ 5000 ~ 10000 Hours.

■ SPECIFICATIONS

Item	Characteristics
Operating Temperature Range	16V-250V(- 40 ~ +105℃):(350V-450V - 25 ~ +105℃)
Voltage Range	16 ~450 V.DC
Nominal Cap. Range	1.0 ~ 4700 μF
Capacitance Tolerance	- 20% ~ + 20% (at 20℃, 120Hz)
Leakage Current	CV≦1000: I≦0.1CV＋40μA whichever is greater (after 2 min); I≦0.03CV＋15μA whichever is greater (after 5 min). CV＞1000: I=0.02CV+25μA (after 5 min). where,I: Max Leakage Current(μA), C: Nominal Capacitance(μF), V: Rated Voltage(V) (at 2
Dissipation Factor (tanδ) (at 120Hz, +20℃)	Capacitance＞1000μF : tanδ increase by 0.02 for each 1000μF from below value

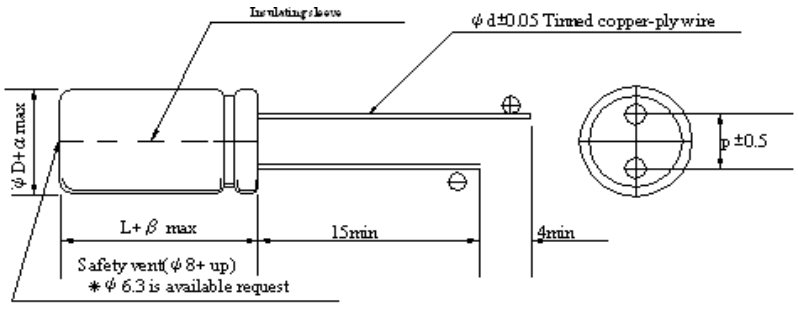
W. V.	16	25	35	50	63	100	160~250	250~450
tanδ	0.16	0.14	0.12	0.10	0.10	0.08	0.20	0.24

Low Temp. Impedance Stability at 120Hz

W. V .	16	25	35	50	63	100	160~250	350~450
Z(-25℃)/ Z(20℃)	2	2	2	2	2	2	3	6
Z(-40℃)/Z(+20℃)	4	4	4	4	4	4	6	-

High Temp. Load Test	After the following life time, application of DC rated working voltage at 105℃, the capacitor shall meet the following limits: Capacitance change … ≦±20% of the initial measured value Tan δ … ≦200% of the initial specified value DC leakage current … ≦ the initial specified value Life Time: 16 ~ 100V: 5000 hours; 160 ~ 450V, Φ≦10: 5000 hours, Φ≧13: 10000 hours)
High Temp. Non-Load Test	After storage for 1000 hours at 105℃ with no voltage applied, voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made, at which time requirements specified in the table "High Temperature Loading" can be met.

● DRAWING



Unit: (mm)

φD	8	10	13	16	18
P	3.5	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.6	0.8	0.8
β	1.5			2.0	
α	0.5				

▼ MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency Multipliers

Freq.(Hz) / Cap.(μF)	120	1K	10K	100K
1~ 4.7	0.20	0.40	0.80	1.00
6.8 ~ 100	0.40	0.70	0.90	1.00
220	0.45	0.75	0.90	1.00

(2) Temperature coefficient

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

SHG SERIES

■ STANDARD RATINGS

WV(Vdc) / Parameter / Cap (μF)	16				25				35				50				63				100			
	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃
4.7																	5x11	85	1.50	4.5	5x11	120	1.10	3.3
6.8													5x11	85	1.50	4.5	5x11	95	1.30	3.9	6.3x11	135	1.00	3.0
10					5x11	80	1.50	4.5	5x11	85	1.50	4.5	5x11	95	1.30	3.9	5x11	110	1.30	3.9	6.3x11	150	0.90	2.7
15					5x11	85	1.50	4.5	5x11	95	1.30	3.9	5x11	110	1.30	3.9	5x11	120	1.10	3.3	8x11.5	200	0.80	2.4
22	5x11	80	1.50	4.5	5x11	95	1.30	3.9	5x11	110	1.30	3.9	5x11	120	1.10	3.3	6.3x11	135	1.00	3.0	8x11.5	220	0.80	2.4
33	5x11	85	1.50	4.5	5x11	110	1.30	3.9	5x11	120	1.10	3.3	6.3x11	135	1.00	3.0	6.3x11	150	0.90	2.7	10x12.5	300	0.70	2.1
47	5x11	95	1.30	3.9	5x11	120	1.10	3.3	6.3x11	135	1.00	3.0	6.3x11	150	0.90	2.7	8x11.5	200	0.80	2.4	10x16	350	0.65	2.0
68	5x11	110	1.30	3.9	6.3x11	135	1.00	3.0	6.3x11	150	0.90	2.7	8x11.5	200	0.80	2.4	8x11.5	220	0.80	2.4	10x16	450	0.55	1.7
100	6.3x11	120	1.10	3.3	6.3x11	150	0.90	2.7	8x11.5	200	0.80	2.4	8x11.5	220	0.80	2.4	10x12.5	300	0.70	2.1	10x20	550	0.45	1.4
150	6.3x11	135	1.00	3.0	8x11.5	200	0.80	2.4	8x11.5	220	0.80	2.4	10x12.5	300	0.70	2.1	10x16	350	0.65	2.0	10x20	650	0.40	1.2
220	8x11.5	150	0.90	2.7	8x11.5	220	0.80	2.4	10x12.5	300	0.70	2.1	10x16	350	0.65	2.0	10x16	450	0.55	1.7	10x25	1100	0.35	1.1
330	8x11.5	200	0.80	2.4	10x12.5	300	0.70	2.1	10x16	350	0.65	2.0	10x16	450	0.55	1.7	10x20	550	0.45	1.4	13x20	1350	0.30	0.9
470	10x12.5	220	0.80	2.4	10x16	350	0.65	2.0	10x16	450	0.55	1.7	10x20	550	0.45	1.4	10x20	650	0.40	1.2	13x25	1600	0.25	0.8
560	10x16	300	0.70	2.1	10x16	450	0.55	1.7	10x20	550	0.45	1.4	10x20	650	0.40	1.2	10x25	1100	0.35	1.1	16x25	2000	0.2	0.6
680	10x16	350	0.65	2.0	10x20	550	0.45	1.4	10x20	650	0.40	1.2	10x25	1100	0.35	1.1	13x20	1350	0.30	0.9	16x31.5	2150	0.2	0.6
820	10x20	450	0.55	1.7	10x20	650	0.40	1.2	10x25	1100	0.35	1.1	13x20	1350	0.30	0.9	13x25	1600	0.25	0.8	18x35	2400	0.15	0.45
1000	10x20	550	0.45	1.4	10x25	1100	0.35	1.1	13x20	1350	0.30	0.9	13x25	1600	0.25	0.8	16x25	2000	0.2	0.6	18x40	2800	0.1	0.3
1500	10x25	650	0.40	1.2	13x20	1350	0.30	0.9	13x25	1600	0.25	0.8	16x25	2000	0.2	0.6	16x31.5	2150	0.2	0.6				
2200	13x20	1100	0.35	1.1	13x25	1600	0.25	0.8	16x25	2000	0.2	0.6	16x31.5	2150	0.2	0.6	18x32	2400	0.15	0.45				
3300	13x25	1350	0.30	0.9	16x25	2000	0.2	0.6	16x31.5	2150	0.2	0.6	18x32	2400	0.15	0.45	18x40	2800	0.1	0.3				
4700	16x25	1600	0.25	0.8	16x31.5	2150	0.2	0.6	18x32	2400	0.15	0.45	18x40	2800	0.1	0.3								

WV(Vdc) / Parameter / Cap (μF)	160				200				250				350				400				450			
	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃	ΦDxL (mm)	Ripple Current (mArms)	Impedance 100KHz/Ω 20℃	-10℃
1.0																	10X12.5	60	4.0	16.0				
1.5																	10X12.5	90	3.5	16.0				
2.2																	10X12.5	95	3.2	9.0				
3.3																	10X16	150	3.0	9.0				
4.7									8X1.5	160	2.5	7.5	10X16	150	3.0	9.0	10X16	220	3.0	9.0	10X20	220	3.5	16.0
6.8									10X12.5	250	2.0	6.0	10X20	280	2.5	7.5	10X20	280	2.5	7.5	13X20	280	3.2	9.0
10	10X16	320	2.5	7.5	10X16	320	2.5	7.5	10X16	320	1.8	5.4	10X20	350	2.0	6.0	13X20	350	2.0	6.0	13X25	450	3.0	9.0
15	10X16	340	2.5	7.5	10X20	340	2.0	6.0	10X20	340	1.6	4.8	13X20	500	1.8	5.4	13X25	550	1.8	5.4	16X25	600	3.0	9.0
22	10X20	500	2.0	6.0	13X20	500	1.8	5.4	13X20	500	1.5	4.5	13X25	650	1.6	4.8	13X25	760	1.6	4.8	16X25	730	2.5	7.5
33	13X20	650	1.8	5.4	13X20	650	1.6	4.8	13X20	650	1.3	3.9	16X25	900	1.5	4.5	16X25	900	1.5	4.5	16X31.5	980	2.0	6.0
47	13X20	750	1.6	4.8	13X25	980	1.5	4.5	16X25	800	1.2	3.6	16X31.5	1080	1.3	3.9	16X35.5	1180	1.3	3.9	18X40	1200	1.8	5.4
68	13X25	1180	1.5	4.5	16X25	1300	1.3	3.9	16X25	1250	1.0	3.0	18X31.5	1470	1.2	3.6	18X40	1470	1.2	3.6				
100	16X25	1420	1.3	3.9	16X31.5	1420	1.2	3.6	18X31.5	1300	0.8	2.4	18X40	1530	1.0	3.0								
150	18X25	1890	1.2	3.6	16X31.5	1890	1.0	3.0	18X40	1420	0.8	2.4												
220	18X31.5	2370	1.0	3.0	18X40	2370	0.8	2.4																

→ Rated Ripple Current (mArms) at 105℃ 100kHz

→ Case Size ΦDxL(mm)