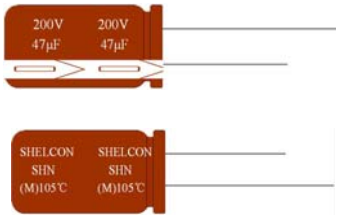
SHN SERIES

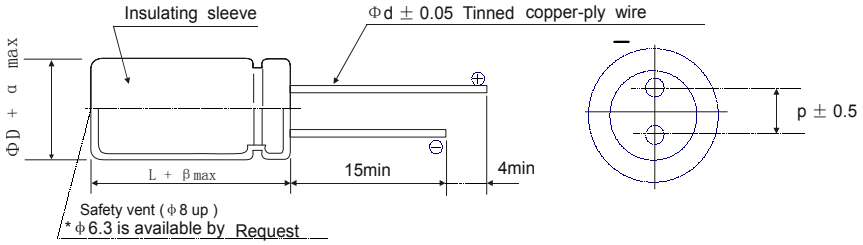


- 105℃ High Frequency , Low Impedance.
- 5000 hours guaranteed for ΦD≦Φ10
- 8000 hours guaranteed for ΦD ≧Φ13

◆ SPECIFICATIONS

Item	Characteristics
Operating Temperature Range	-40 ~ +105℃ (160V~400V.DC) -25 ~ +105℃ (450V.DC)
Voltage Range	160V ~ 450V.DC
Nominal Cap. Range	3.3 ~ 330 μF
Capacitance Tolerance	'- 20% ~ + 20% (at 20℃, 120Hz)
Leakage Current	Time / CV: 1 min. / 5 min. CV ≦ 1000: I = 0.1CV + 40(μA) max / I = 0.03CV + 15 max CV > 1000: I = 0.04CV + 100(μA) max / I = 0.02CV + 25 max 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): 160~250V / 350 & 400V / 450V tanδ (Max.): 0.2 / 0.24 / 0.24
Low Temp. Impedance Stability at 120Hz	Rated voltage(V.DC): 160~250V / 350 & 400V / 450V Z(-25℃)/Z(+20℃): 3 / 5 / 6 Z(-40℃)/Z(+20℃): 6 / 6 / -
Impedance (Ω)	See case size table
High Temp. Load Test	After ΦD≦Φ10: 5000hrs, ΦD ≧Φ13: 8000hrs, application of DC rated working voltage at +105℃, The capacitor shall meet the following limits. Capacitance change … ≦± 20% of the initial measured value Tanδ … ≦ 200% of the initial specified value DC leakage current … ≦ the initial specified value
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, The capacitor shall meet the following limits. Capacitance change … ≦± 20% of the initial measured value tanδ … ≦ 200% of the initial specified value DC leakage current … ≦ 500% of the initial specified value

◆ DRAWING



Unit: (mm)

ΦD	10	13	16	18
P	5.0	5.0	7.5	7.5
Φd	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)	60(50)	120	1K	10K	100K
3.3~ 47	0.70	0.85	0.90	0.95	1.00
68 ~ 330	0.75	0.90	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

SHN SERIES

■STANDARD RATINGS

WV(Vdc) / Parameter / Cap (μF)	160				200			
	ΦDxL (mm)	Impedance Ω 20℃,100KHZ	Ripple Current(mArms) 105℃ 120HZ	Ripple Current(mArms) 105℃ 100KHZ	ΦDxL (mm)	Impedance Ω 20℃,100KHZ	Ripple Current(mArms) 105℃ 120HZ	Ripple Current(mArms) 105℃ 100KHZ
22					10x20	1.88	165	440
33	10x20	1.63	210	565	13x20	1.14	230	590
47	13x20	1.14	270	725	13x20	1.14	270	780
68	13x25	0.79	350	950	13x25	0.79	350	950
100	16x25	0.34	475	1280	16x25	0.34	425	1280
150	16x31.5	0.28	625	1300	16x25	0.37	580	1300
220	16x31.5	0.28	750	1300	18x31.5	0.28	780	1700
330	18x31.5	0.28	960	1700				

WV(Vdc) / Parameter / Cap (μF)	250				350			
	ΦDxL (mm)	Impedance Ω 20℃,100KHZ	Ripple Current(mArms) Ripple Current(mArms) 120HZ	Ripple Current(mArms) Ripple Current(mArms) 100KHZ	ΦDxL (mm)	Impedance Ω 20℃,100KHZ	Ripple Current(mArms) 105℃ 120HZ	Ripple Current(mArms) 105℃ 100KHZ
10	10x20	4.38	110	300				
22	13x20	2.88	185	480	13x20	2.63	185	270
33	13x25	2.13	250	630	16x20	1.14	250	600
47	13x25	2.13	295	630	16x25	1.14	325	700
68	16x25	0.98	390	1000	16x31.5	0.61	420	1100
100	16x31.5	0.79	520	1400	18x31.5	0.5	530	1170
150	18x31.5	0.53	640	1450				

WV(Vdc) / Parameter / Cap (μF)	400				450			
	ΦDxL (mm)	Impedance Ω 20℃,100KHZ	Ripple Current(mArms) 105℃ 120HZ	Ripple Current(mArms) 105℃ 100KHZ	ΦDxL (mm)	Impedance Ω 20℃,100KHZ	Ripple Current(mArms) 105℃ 120HZ	Ripple Current(mArms) 105℃ 100KHZ
3.3					10x20	7.8	60	150
4.7					13x20	4.5	80	200
10	10x20	3.62	110	180	13x25	3.13	125	315
22	13x25	1.62	200	300	16x25	2.13	210	570
33	16x20	1.5	250	600	16x31.5	1.88	275	620
47	16x26	1.25	325	700	18x31.5	1.63	340	900
68	16X40	1	385	1050	18x35.5	1.06	420	980
	20X26	0.94	420	1100				