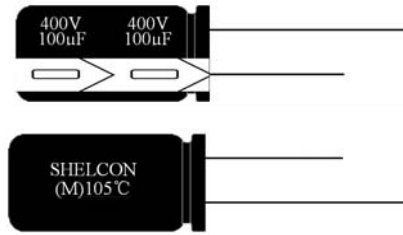


SH SERIES

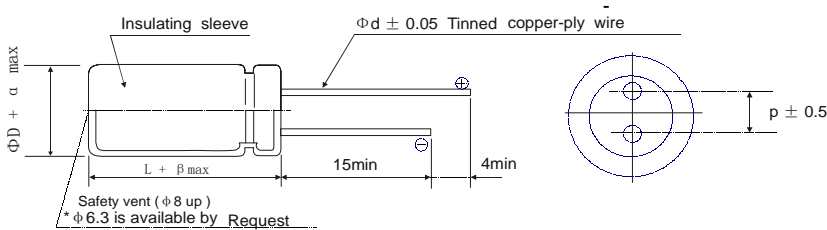
- Wide operating temperature range of - 40 ~ + 105°C
- Standard series for general-purpose
- Voltage range of 6.3 ~ 450V
- Load life of 2000 hours at 105°C



■ SPECIFICATIONS

Item	Characteristics											
	- 40 ~ +105°C	- 40 ~ +105°C	- 25 ~ + 105°C									
Operating Temperature Range	- 40 ~ +105°C	- 40 ~ +105°C	- 25 ~ + 105°C									
Voltage Range	6.3 ~100 V.DC	160 ~350 V.DC	400 , 450 V.DC									
Nominal Cap. Range	0.1 ~ 15000 μF	0.47 ~ 330 μF	1 ~ 68 μF									
Capacitance Tolerance	- 20% ~ + 20% (at 20°C, 120Hz)											
Leakage Current	WV	6.3 V ~ 100 V	160 V ~ 450 V									
	L.C.	I =0.01CV or 3(μA) whichever is greater(after 2min) I =0.03CV or 4(μA) whichever is greater(after 1min)	I=0.02CV+15(μA)(after 5 min.)									
where, I: Max Leakage Current(μA), C: Nominal Capacitance(μF), V: Rated Voltage(V) (at 20°C)												
Dissipation Factor (tanδ) (at 120Hz, +20°C)	W.V.	6.3	10	16	25	35	50	63	100	160~250	350~450	
	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20	
Add 0.02 per 1,000 μF for more than 1,000μF items.												
Low Temp. Impedance Stability at 120Hz	W. V.	6.3	10	16	25~100	160~250	350~450					
	Z-25°C/Z+20°C	4	3	2	2	3	8					
	Z-40°C/Z+20°C	8	6	4	3	4	-					
High Temp. Load Test	After 2000 hours, application of DC rated working voltage at + 105°C, 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											
High Temp. Non-Load Test	After storage for 1000 hours at 105°C 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	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		0.6		0.8		
β	1.0			1.5			
α	0.5						

▼ MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency coefficient

Cap(μF)	Freq.(HZ)				
	60(50)	120	300	1K	10K
0.1~ 47	0.75	1.00	1.35	1.55	2.00
68 ~ 680	0.80	1.00	1.25	1.34	1.50
1000 ~15000	0.85	1.00	1.10	1.13	1.15

(2) Temperature coefficient



Ambient Temperature(°C)	40	60	70	85	105
Coefficient	2.4	2.1	1.78	1.65	1

SH SERIES

STANDARD RATINGS

WV(Vdc) Parameter Cap (μF)	6.3		10		16		25		35		50		63		
	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	
0.10											5X11	1	5X11	2	
0.22											5X11	2	5X11	3	
0.33											5X11	3	5X11	4	
0.47											5X11	6	5X11	8	
0.68											5X11	13	5X11	15	
1.0											5X11	16	5X11	18	
1.5											5X11	20	5X11	22	
2.2											5X11	24	5X11	26	
3.3											5X11	29	5X11	32	
4.7											5X11	35	5X11	38	
6.8											5X11	42	5X11	46	
10											5X11	51	5X11	56	
15											5X11	62	6.3X11	78	
22										5X11	65	5X11	75	6.3X11	95
33							5X11	75	5X11	80	6.3X11	106	6.3X11	116	
47					5X11	81	5X11	90	6.3X11	110	6.3X11	127	6.3X11	164	
68			5X11	60	5X11	98	6.3X11	125	6.3X11	132	8X11.5	180	10X12.5	229	
100	5X11	99	5X11	87	6.3X11	137	6.3X11	151	8X11.5	189	10X12.5	253	10X16	301	
150	6.3X11	139	6.3X11	150	6.3X11	167	8X11.5	218	10X12.5	269	10X16	340	10X20	406	
220	6.3X11	168	6.3X11	150	8X11.5	239	10X12.5	307	10X12.5	326	10X20	449	13X16	532	
330	6.3X11	206	8X11.5	215	10X12.5	340	10X16	412	10X16	437	13X16	595	13X20	708	
470	8X11.5	290	8X11.5	250	10X16	444	10X20	536	10X20	569	13X20	771	13X25	921	
680	10X12.5	405	10X16	492	10X16	535	13X16	698	13X20	803	13X25	1,001	16X25	1,228	
1,000	10X12.5	491	10X16	470	10X20	707	13X20	918	13X25	1,062	16X25	1,360	16X31.5	1,630	
1,500	10X20	677	10X20	742	13X20	936	13X25	1,109	16X25	1,290	16X31.5	1,578	18X40	1,993	
2,200	13X20	913	13X20	991	13X25	1,150	16X25	1,370	16X31.5	1,560	18X40	2,019			
3,300	13X20	1,067	13X25	1,251	16X25	1,468	16X35.5	1,794	18X35.5	1,992					
4,700	16X25	1,474	16X25	1,576	16X31.5	1,813	18X40	2,264							
6,800	16X25	1,642	16X31.5	1,901	16X40	2,184									
10,000	16X31.5	1,977	18X35.5	2,330											
15,000	18X35.5	2,396													

WV(Vdc) Parameter Cap (μF)	100		160		200		250		350		400		450	
	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)	ΦDxL (mm)	Ripple current (mArms)
0.47	5X11	12	6.3X11	11	6.3X11	11	6.3X11	11						
0.68	5X11	15	6.3X11	13	6.3X11	13	6.3X11	13						
1.0	5X11	18	6.3X11	16	6.3X11	16	6.3X11	16	8X11.5	19	8X11.5	19	8X11.5	16
1.5	5X11	22	6.3X11	19	6.3X11	19	8X11.5	23	10X12.5	27	10X12.5	27	10X12.5	22
2.2	5X11	26	6.3X11	23	8X11.5	28	8X11.5	28	10X12.5	32	10X12.5	32	10X12.5	27
3.3	5X11	32	8X11.5	34	8X11.5	34	10X12.5	39	10X16	43	10X16	43	10X16	36
4.7	5X11	38	8X11.5	40	10X12.5	47	10X16	51	10X16	51	10X16	51	10X20	47
6.8	6.3X11	53	10X12.5	56	10X16	62	10X16	62	10X20	67	10X20	67	13X20	66
10	6.3X11	64	10X16	75	10X16	75	10X16	75	10X20	82	13X20	96	13X20	80
15	8X11.5	93	10X16	92	10X20	100	10X20	100	13X20	118	13X25	128	13X25	107
22	8X11.5	112	10X20	121	13X20	143	13X20	143	13X25	155	13X25	155	16X25	144
33	10X12.5	159	13X20	175	13X20	175	13X20	175	16X25	211	16X25	211	16X31.5	193
47	10X16	208	13X20	208	13X25	227	13X25	227	16X31.5	276	16X35.5	289	18X40	272
68	10X20	274	13X25	273	16X25	303	16X25	303	16X35.5	248	18X40	392		
100	13X20	389	16X25	368	16X31.5	402	16X35.5	422	18X40	475				
150	13X25	520	16X31.5	492	16X40	543	18X40	582						
220	16X25	699	16X40	657	18X40	705								
330	16X25	856	18X40	863										
470	16X31.5	1,117												
680	18X40	1,588												
1000														
1500														
2200														
3300														
4700														
6800														
10000														
15000														

 Rated Ripple Current (mArms) at 105°C 120Hz
 Case Size: ΦDxL (mm)