

## SHJ SERIES

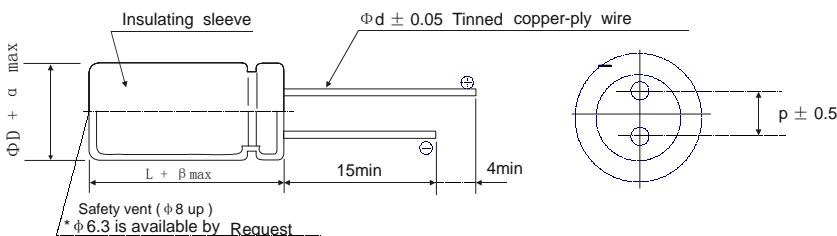


- 105°C, Long Life, High Ripple Current, High Frequency
- 3000 hours guaranteed for WV ≤ 100AV, 4000-7000 hours guaranteed for WV = 160 ~ 250AV
- 8000 hours guaranteed for WV = 350AV ~ 450AV

## ■ SPECIFICATIONS

Item	Characteristics									
Operating Temperature Range	-40°C ~ +105°C								-25°C ~ +105°C	
Voltage Range	10 ~ 100 V.DC								160 ~ 450V.DC	
Nominal Cap. Range	0.47 ~ 3300 μF								10 ~ 330 μF	
Leakage Current	WV	10V ~ 100V								160V ~ 450V
	L.C.	I=0.01CV or 3(μA) whichever is greater. (after 2 min) I=0.03CV or 4(μA) whichever is greater. (after 1 min)								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 +20 °C 120Hz)	WV	6.3	10	16	25	35	50	63	100	160 ~ 250
	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	350 ~ 450
	Add 0.02 per 1,000μF for more than 1,000μF items .									
Low Temperature Impedance Stability at 120Hz	W.V.	6.3	10	16	25	35	50	63	100	
	Z(-25°C)/Z(+20°C)	5	4	3	2	2	2	2	2	
	Z(-40°C)/Z(+20°C)	12	10	8	5	4	3	3	3	
	W.V.	160	200	250	350	400	450			
	Z(-25°C)/Z(+20°C)	3	3	4	4	6	15			
Impedance( Ω )	See Case Size Table									
High Temp. Load Test	After WV ≤ 100V: 3000 hours; WV = 160V ~ 250V: 4000 ~ 7000 hours; WV = 350V ~ 450V: 8000 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	2.5	3.5	5	5	7.5	7.5
Φd	0.5			0.6			0.8
β	1.0			1.5			2.0
α	0.5						

## ▼ MULTIPLIER FOR RIPPLE CURRENT

## (1) Frequency coefficient

Freq.(Hz)	120	1K	10K	100K
Cap.( μ F)				
0.47~10	1.00	1.4	1.55	1.65
22~470	1.00	1.2	1.25	1.30
1000~3300	1.00	1.05	1.10	1.15

## (2) Temperature coefficient

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

**SHJ SERIES****■ STANDARD RATINGS**

WV(Vdc)		10V		WV(Vdc)		16V	
Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)	Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)
		105°C,120HZ				105°C,120HZ	
100	5X11	66		100	5X11	80	
220	6.3X11	100		220	6.3X11	150	
470	8X11.5	180		330	8X11.5	240	
2200	13X20	540		470	10X12.5	430	
3300	13X25	802		1000	10X16	706	
WV(Vdc)		25V		WV(Vdc)		35V	
Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)	Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)
		105°C,120HZ				105°C,120HZ	
47	5X11	55		33	5X11	210	
100	6.3X11	95		220	8X15	340	
220	8X11.5	135		330	10X16	640	
330	10X12.5	255		470	10X20	865	
470	10X16	321		1000	13X25	1210	
1000	13X20	438					
WV(Vdc)		50V		WV(Vdc)		63V	
Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)	Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)
		105°C,120HZ				105°C,100KHZ	
0.47	5X11	4		0.47	5X11	5	
1	5X11	8		1	5X11	9	
2.2	5X11	15		2.2	5X11	17	
3.3	5X11	18		3.3	5X11	20	
4.7	5X11	20		4.7	5X11	23	
10	5X11	27		10	5X11	30	
22	5X11	39		22	6.3X11	55	
47	6.3X11	87		33	6.3X11	60	
100	8X11.5	99		47	6.3X11	80	
220	10X16	234		100	8X11.5	180	
330	10X20	293		220	10X20	292	
470	13X20	370		330	13X20	381	
				470	13X25	454	
WV(Vdc)		100V					
Cap.( $\mu$ F)	Parameter	ΦDxL (mm)	Ripple Current (mAmps)				
		105°C,120HZ					
0.47	5X11	9					
1	5X11	17					
2.2	5X11	20					
3.3	5X11	23					
4.7	5X11	30					
10	6.3X11	55					
22	8X11.5	60					
33	10X12.5	80					
47	10X16	180					
100	10X20	292					

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

## SHJ SERIES

## ■ STANDARD RATINGS

Cap.( $\mu$ F)	WV(Vdc)	160V		WV(Vdc)	200V	
		ΦDxL (mm)	Ripple Current (mAmps) 105°C, 120Hz		Cap.( $\mu$ F)	ΦDxL (mm)
22	10x20	470	22	10x20	470	
33	10x20	470	33	13x20	470	
47	13x20	600	47	13x20	600	
68	16x20	750	68	16x20	750	
100	18x20	1060	100	18x20	1060	
150	18x25	1280	150	18x25	1280	
220	18x25	1280	220	18x31.5	1690	
330	18x31.5	1690				
Cap.( $\mu$ F)	WV(Vdc)	250V		WV(Vdc)	350V	
		ΦDxL (mm)	Ripple Current (mAmps) 105°C, 120Hz		Cap.( $\mu$ F)	ΦDxL (mm)
22	13x20	560	10	10X20	270	
33	13X20	560	22	13X25	350	
47	16x20	710	33	16X20	480	
68	18x20	990	47	18X20	640	
100	18x25	1200	68	18x25	780	
150	18x31.5	1470	100	18x31.5	970	
Cap.( $\mu$ F)	WV(Vdc)	400V		WV(Vdc)	450V	
		ΦDxL (mm)	Ripple Current (mAmps) 105°C, 120Hz		Cap.( $\mu$ F)	ΦDxL (mm)
10	10X20	250	10	13X20	310	
22	13X25	410	22	16X25	560	
33	16X25	600	33	18X25	680	
47	18X25	730	47	18X31.5	850	
68	18x31.5	970	68	18X32	1200	
100	18x32	1200	100	18x36	1470	
120	18x36	1470	120	18x40	1550	

Rated Ripple Current (mAmps) at 105°C 120Hz

Case Size: Φ DxL(mm)