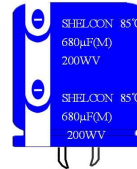


# SHELCON LARGE CAPACITANCE ALUMINUM ELECTROLYTIC CAPACITORS

## SHR SERIES

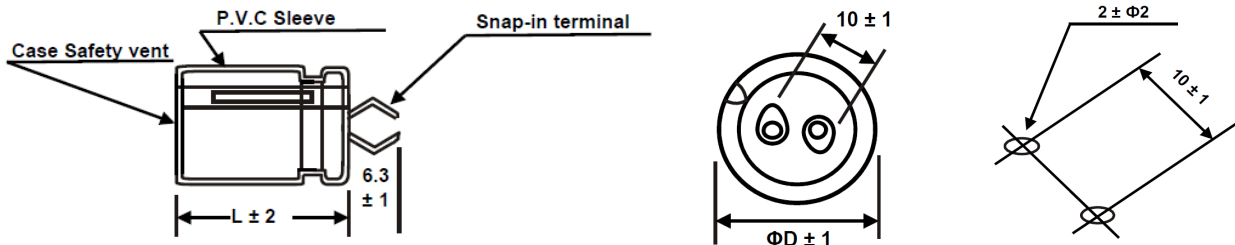
- Endurance with ripple current: 85°C 3000 hours
- Non solvent-proof type



### ◆ SPECIFICATIONS

Item	Characteristics			
Category Temperature Range	-25~+85°C			
Voltage Range	160 ~ 450V.DC			
Nominal Cap. Range	82 ~ 3900 µF			
Capacitance Tolerance	±20%(M)		20°C, 120Hz	
Leakage Current	$I \leq 3 \sqrt{CV}$ I: Leakage Current (µA); C: Nominal Capacitance (µF); V: Rated Voltage (V) (at 20°C after 5 min.)			
Dissipation Factor(tanδ) (at 120Hz,20°C)	Rated voltage (V.DC)	160 to 400V	315 to 400V	420 & 450V
	tanδ (max)	0.15	0.15	0.20
Low Temp. Impedance Stability at 120Hz	Rated voltage(V.DC)	160 to 400V	315 to 400V	420 & 450V
	Z-25°C/Z+20°C	4	8	8
High Temp. Load Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 3000 hours at 85°C Capacitance change --- $\leq \pm 20\%$ of the initial measured value tanδ --- $\leq 200\%$ of the initial specified value Leakage Current --- $\leq$ the initial specified value			
High Temp. Non-Load Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 85°C without voltage applied. Capacitance Change --- $\leq \pm 15\%$ of the initial measured value tanδ --- $\leq 150\%$ of the initial specified value Leakage Current --- $\leq$ the initial specified value			

### ● DRAWING



### ● MULTIPLIER FOR RIPPLE CURRENT

#### (1) Frequency Coefficient

Freq.(Hz)	50	120	300	1K	10K	50K
Cap.(µF)						
160~250VDC	0.81	1.00	1.17	1.32	1.45	1.50
315~450VDC	0.77	1.00	1.16	1.30	1.41	1.43

#### (2) Temperature Coefficient

Ambient Temperature (°C)	40	60	70	85
Coefficient	2.40	2.10	1.50	1.00

# SHELCON LARGE CAPACITANCE ALUMINUM ELECTROLYTIC CAPACITORS

## SHR SERIES

### ■ Standard Ratings

Cap.( $\mu$ F)	160				180				200			
	22	25	30	35	22	25	30	35	22	25	30	35
390									22X25 1.68			
470					22X25 2.08				22X30 1.85			
560	22X25 2.25				22X30 2.25				22X30 2.43	25X25 2.43		
680	22X30 2.50				22X30 2.50	25X25 2.50			22X35 2.68	25X30 2.68		
820	22X35 2.75				22X35 2.75	25X30 2.75			22X40 2.93	25X30 2.93	30X25 2.93	
1000	22X40 3.00	25X30 3.00			22X45 3.00	25X35 3.00	30X25 3.00		22X45 3.25	25X35 3.25	30X30 3.25	35X25 3.25
1200	22X45 3.25	25X35 3.25	30X25 3.25		22X50 3.31	25X40 3.31	30X30 3.31	35X25 3.31		25X40 3.50	30X30 3.5	35X30 3.50
1500	22X50 3.73	25X40 3.73	30X30 3.73	35X25 3.73		25X45 3.83	30X35 3.83	35X30 3.83		25X50 3.87	30X35 3.87	35X30 3.87
1800		25X45 4.20	30X35 4.20	35X30 4.20		25X50 4.32	30X40 4.32	35X30 4.32			30X45 4.32	35X35 4.32
2200			30X40 4.78	35X35 4.78			30X45 4.92	35X40(45) 4.92			30X50 4.92	35X40 4.92
2700				35X40 5.45				35X45 5.52				35X50 5.45
3300				35X45 5.75				35X50 5.75				
3900				35X50 6.00	← Upper: Case Size $\Phi$ DxL (mm) ← Lower: Rated Ripple Current(Arms)(85°C 120Hz)							

Cap.( $\mu$ F)	250				315				350			
	22	25	30	35	22	25	30	35	22	25	30	35
150									22X25 1.12			
180					22X25 1.21				22X30 1.22			
220					22X30 1.41				22X35 1.44			
270	22X25 1.31				22X30 1.60				22X40 1.66	25X30 1.66		
330	22X30 1.75				22X40 1.82	25X30 1.82	30X25 1.82		22X45 1.88	25X35 1.88		
390	22X30 1.91	25X25 1.91			22X45 2.01	25X35 2.01	30X30 2.01		22X50 2.06	25X40 2.06	30X30 2.06	35X25 2.06
470	22X35 2.11	25X30 2.11			22X50 2.27	25X40 2.27	30X30 2.27	35X25 2.27		25X45 2.40	30X35 2.4	35X30 2.4
560	22X40 2.25	25X30 2.25	30X25 2.25			25X45 2.56	30X35 2.56	35X30 2.56		25X50 2.6	30X40 2.6	35X30 2.60
680	22X45 2.5	25X35 2.5	30X30 2.5				30X40 2.87	35X35 2.87			30X45 2.96	35X35 2.96
820	22X45 2.77	25X40 2.77	30X30 2.77	35X25 2.77			30X45 3.25	35X40 3.25			30X50 3.25	35X45 3.25
1000		25X45 3.32	30X35 3.32	35X30 3.32			30X50 3.63	35X45 3.63				35X50 3.54
1200			30X40 3.53	35X35 3.53								
1500			30X50 4.04	35X40 4.04								
1800				35X45 4.55	← Upper: Case Size $\Phi$ DxL (mm) ← Lower: Rated Ripple Current(Arms)(85°C 120Hz)							

# SHELCON LARGE CAPACITANCE ALUMINUM ELECTROLYTIC CAPACITORS

## SHR SERIES

### Standard Ratings

Cap.( $\mu$ F)	WV(Vdc) $\phi$ D	400				420				450					
		22	25	30	35	22	25	30	35	22	25	30	35		
82										22X25 0.83					
100					22X25 0.97					22X25 0.93					
120		22X25 1.02			22X25 1.08					22X30 1.04					
150		22X30 1.16			22X30 1.3	25X25 1.3				22X35 1.19	25X25 1.19				
180		22X35 1.44			22X35 1.48	25X30 1.48				22X40 1.35	25X30 1.35				
220		22X40 1.49	25X30 1.49		22X40 1.65	25X35 1.65	30X25 1.65			22X45 1.55	25X40 1.55	30X30 1.55	35X25 1.55		
270		22X45 1.67	25X35 1.67	30X25 1.67	22X50 1.94	25X35 1.94	30X30 1.94			22X50 1.78	25X40 1.78	30X30 1.78			
330		22X50 1.9	25X40 1.9	30X30 1.9	35X25 1.9	25X45 2.17	30X35 2.17	35X30 2.17		25X50 2.01	30X40 2.01	35X30 2.01			
390			25X45 2.13	30X35 2.13	35X30 2.13	25X50 2.27	30X35 2.27	35X30 2.27				30X40 2.24	35X35 2.24		
470			25X50 2.39	30X40 2.39	35X30 2.39		30X40 2.61	35X35 2.61				30X45 2.53	35X40 2.53		
560				30X45 2.69	35X35 2.69		30X50 2.82	35X40 2.82				30X50 2.82	35X45 2.82		
680				30X50 2.96	35X40 2.96			35X45 3.11							
820				35X45 3.25	← Upper: Case Size $\phi$ DxL (mm) ← Lower: Rated Ripple Current(Arms)(85°C 120Hz)										