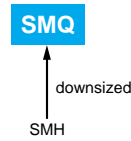


# SMQ Series

- Downsized from current downsized snap-ins SMM series
- Endurance with ripple current : 85°C 2000 hours
- Non solvent-proof type

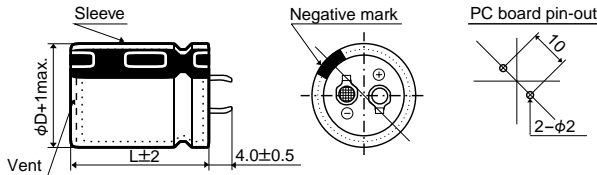


## ◆SPECIFICATIONS

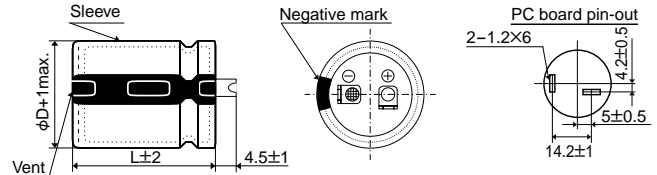
Items	Characteristics			
Category	-25 to +85°C			
Temperature Range	-25 to +85°C			
Rated Voltage Range	160 to 450V <sub>dc</sub>			
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)			
Leakage Current	I ≤ 3√CV Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 5 minutes)			
Dissipation Factor (tanδ)	Rated voltage (V <sub>dc</sub> )	160 to 250V	315 to 400V	450V
	tanδ (Max.)	0.15	0.15	0.20
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 250V	315 to 400V	450V
	Z(-25°C)/Z(+20°C)	4	8	8
Endurance	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 2000 hours at 85°C.			
	Capacitance change	≤±20% of the initial value		
	D.F. (tanδ)	≤200% of the initial specified value		
	Leakage current	≤The initial specified value		
Shelf Life	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	≤±15% of the initial value		
	D.F. (tanδ)	≤150% of the initial specified value		
	Leakage current	≤The initial specified value		

## ◆DIMENSIONS [mm]

● Standard Terminal Type : VSSN (φ22 to φ35)

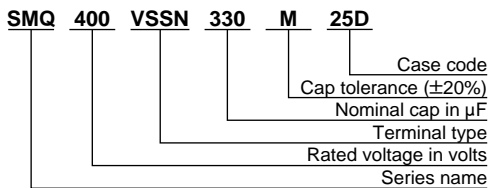


● Terminal Type : LISN (φ35)



\* No plastic disk is the standard design.

## ◆PART NUMBERING SYSTEM



## ◆CASE CODE [mm]

Case code	Case size φDXL	Case code	Case size φDXL	Case code	Case size φDXL	Case code	Case size φDXL
22A	22×25	25A	25.4×25	30A	30×25	35A	35×25
22B	22×30	25B	25.4×30	30B	30×30	35B	35×30
22C	22×35	25C	25.4×35	30C	30×35	35C	35×35
22D	22×40	25D	25.4×40	30D	30×40	35D	35×40
22E	22×45	25E	25.4×45	30E	30×45	35E	35×45
22F	22×50	25F	25.4×50	30F	30×50	35F	35×50

## ◆STANDARD RATINGS

μF	V <sub>dc</sub>		160				180				200			
	φD		22	25	30	35	22	25	30	35	22	25	30	35
390											22×25 1.68			
470							22×25 2.08				22×30 1.85			
560		22×25 2.25					22×30 2.25				22×30 2.43	25.4×25 2.43		
680		22×30 2.50					22×30 2.50	25.4×25 2.50			22×35 2.68	25.4×30 2.68		
820		22×35 2.75					22×35 2.75	25.4×30 2.75			22×40 2.93	25.4×30 2.93	30×25 2.93	
1,000		22×40 3.00	25.4×30 3.00				22×45 3.00	25.4×35 3.00	30×25 3.00		22×45 3.25	25.4×35 3.25	30×30 3.25	35×25 3.25
1,200		22×45 3.25	25.4×35 3.25	30×25 3.25			22×50 3.31	25.4×40 3.31	30×30 3.31	35×25 3.31		25.4×40 3.50	30×30 3.50	35×30 3.50
1,500		22×50 3.73	25.4×40 3.73	30×30 3.73	35×25 3.73			25.4×45 3.83	30×35 3.83	35×30 3.83		25.4×50 3.87	30×35 3.87	35×30 3.87
1,800			25.4×45 4.20	30×35 4.20	35×30 4.20			25.4×50 4.32	30×40 4.32	35×30 4.32			30×45 4.32	35×35 4.32
2,200				30×40 4.78	35×35 4.78					30×45 4.92	35×40 4.92		30×50 4.92	35×40 4.92
2,700					35×40 5.45						35×45 5.52			35×50 5.45
3,300					35×45 5.75						35×50 5.75			
3,900					35×50 6.00									

← Upper : Case size φDXL (mm)  
 ← Lower : Rated ripple current (Arms) at 85°C, 120Hz

μF	V <sub>dc</sub>		250				315				350			
	φD		22	25	30	35	22	25	30	35	22	25	30	35
150											22×25 1.12			
180							22×25 1.21				22×30 1.22			
220							22×30 1.41				22×35 1.44			
270		22×25 1.31					22×30 1.60				22×40 1.66	25.4×30 1.66		
330		22×30 1.75					22×40 1.82	25.4×30 1.82	30×25 1.82		22×45 1.88	25.4×35 1.88		
390		22×30 1.91	25.4×25 1.91				22×45 2.01	25.4×35 2.01	30×30 2.01		22×50 2.06	25.4×40 2.06	30×30 2.06	35×25 2.06
470		22×35 2.11	25.4×30 2.11				22×50 2.27	25.4×40 2.27	30×30 2.27	35×25 2.27		25.4×45 2.40	30×35 2.40	35×30 2.40
560		22×40 2.25	25.4×30 2.25	30×25 2.25				25.4×45 2.56	30×35 2.56	35×30 2.56		25.4×50 2.60	30×40 2.60	35×30 2.60
680		22×45 2.50	25.4×35 2.50	30×30 2.50					30×40 2.87	35×35 2.87			30×45 2.96	35×35 2.96
820		22×50 2.77	25.4×40 2.77	30×30 2.77	35×25 2.77				30×45 3.25	35×40 3.25			30×50 3.25	35×45 3.25
1,000			25.4×45 3.32	30×35 3.32	35×30 3.32				30×50 3.63	35×45 3.63				35×50 3.54
1,200				30×40 3.53	35×35 3.53									
1,500				30×50 4.04	35×40 4.04									
1,800					35×45 4.55									

← Upper : Case size φDXL (mm)  
 ← Lower : Rated ripple current (Arms) at 85°C, 120Hz



◆STANDARD RATINGS

μF	V <sub>dc</sub>		400				450			
	φ	D	22	25	30	35	22	25	30	35
82							22×25 0.83			
100							22×25 0.93			
120			22×25 1.02				22×30 1.04			
150			22×30 1.16				22×35 1.19	25.4×25 1.19		
180			22×35 1.44				22×40 1.35	25.4×30 1.35		
220			22×40 1.49	25.4×30 1.49			22×45 1.55	25.4×40 1.55	30×30 1.55	35×25 1.55
270			22×45 1.67	25.4×35 1.67	30×25 1.67		22×50 1.78	25.4×40 1.78	30×30 1.78	
330			22×50 1.90	25.4×40 1.90	30×30 1.90	35×25 1.90		25.4×50 2.01	30×40 2.01	35×30 2.01
390				25.4×45 2.13	30×35 2.13	35×30 2.13			30×40 2.24	35×35 2.24
470				25.4×50 2.39	30×40 2.39	35×30 2.39			30×45 2.53	35×40 2.53
560					30×45 2.69	35×35 2.69			30×50 2.82	35×45 2.82
680					30×50 2.96	35×40 2.96				
820						35×45 3.25	← Upper : Case size φDXL (mm) ← Lower : Rated ripple current (Arms) at 85°C, 120Hz			

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
160 to 250V <sub>dc</sub>	0.81	1.00	1.17	1.32	1.45	1.50
315 to 450V <sub>dc</sub>	0.77	1.00	1.16	1.30	1.41	1.43