

# SMH Series

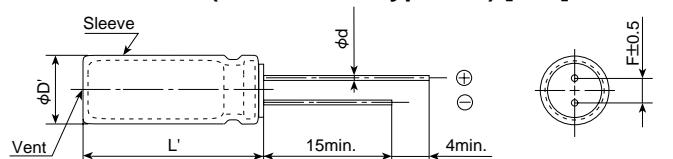
- Downsized from current standard SMG series
- Endurance with ripple current : 85°C 2000 hours
- For input filtering of power supplies
- Non solvent-proof type



## ◆SPECIFICATIONS

Items	Characteristics		
Category Temperature Range	-25 to +85°C		
Rated Voltage Range	160 to 450V <sub>dc</sub>		
Capacitance Tolerance	$\pm 20\%$ (M) (at 20°C, 120Hz)		
Leakage Current	I=0.03CV or 3 mA, whichever is smaller. Where, I : Max. leakage current ( $\mu$ A), C : Nominal capacitance ( $\mu$ F), V : Rated voltage (V) (at 20°C after 5 minutes)		
Dissipation Factor (tan $\delta$ )	0.15max. (at 20°C, 120Hz)		
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 250V	400 & 450V
	Z(-25°C)/Z(+20°C)	4	6
		(at 120Hz)	
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	$\leq \pm 20\%$ of the initial value	
	D.F. (tan $\delta$ )	$\leq 200\%$ of the initial specified value	
	Leakage current	$\leq$ 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	$\leq \pm 20\%$ of the initial value	
	D.F. (tan $\delta$ )	$\leq 200\%$ of the initial specified value	
	Leakage current	$\leq 500\%$ of the initial specified value	

## ◆DIMENSIONS (Radial Lead Type=VB) [mm]



ΦD	20	22
Φd	1.0	
F	10.0	
ΦD'	ΦD+0.5max.	
L'	L+2.0max.	

\*Note : The snap-in forming type, RC-type, is available upon request, RC-type fits two  $\phi 2$ mm holes and 10.5mm spacing.

## ◆PART NUMBERING SYSTEM

SMH	200	VB	470	M	20D	RC
If RC type lead is required						
				Case code		
				Cap tolerance ( $\pm 20\%$ )		
				Nominal cap in $\mu$ F		
				Radial lead type		
				Rated voltage in volts		
				Series name		

## ◆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
400 & 450V <sub>dc</sub>	0.77	1.00	1.16	1.30	1.41	1.43

## ◆CASE CODE [mm]

Case code	Case size $\phi$ DXL	Case code	Case size $\phi$ DXL
20S	20×20	22S	22×20
20A	20×25	22A	22×25
20B	20×30	22B	22×30
20C	20×35	22C	22×35
20D	20×40	22D	22×40
20E	20×45	22E	22×45
20F	20×50	22F	22×50



# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

ϕ20 & 22 radial lead, 85°C

**SMH** Series

## ◆STANDARD RATINGS

μF	V <sub>dc</sub>	160		200		250		400		450	
		ϕD	20	22	20	22	20	22	20	22	20
33											20×20 0.40
47								20×20 0.48		20×25 0.52	22×25 0.57
56								20×25 0.57	22×25 0.62	20×30 0.62	22×25 0.65
68								20×25 0.64	22×25 0.69	20×35 0.72	22×30 0.69
82								20×30 0.75	22×25 0.78	20×35 0.79	22×30 0.80
100						20×20 0.67		20×35 0.87	22×30 0.90	20×40 0.92	22×35 0.94
120						20×25 0.85	22×20 0.83	20×40 1.02	22×35 1.03	20×45 1.07	22×40 1.11
150			20×20 0.82	22×20 0.87	20×25 0.94	22×25 1.03	20×45 1.20	22×40 1.24	20×50 1.24	22×45 1.29	
180	20×20 0.90	22×20 0.95	20×25 0.97	22×25 1.05	20×30 1.12	22×25 1.12	20×50 1.36	22×45 1.41			22×50 1.44
220	20×25 1.07	22×25 1.16	20×25 1.07	22×25 1.16	20×30 1.24	22×30 1.33		22×50 1.59			
270	20×30 1.29	22×25 1.29	20×30 1.29	22×30 1.39	20×35 1.44	22×30 1.47					
330	20×30 1.43	22×30 1.53	20×35 1.49	22×30 1.53	20×40 1.70	22×35 1.71					
390	20×30 1.55	22×30 1.67	20×35 1.62	22×30 1.67	20×45 1.93	22×40 2.00	Upper : Case size ϕDXL (mm) Lower : Rated ripple current (Arms) at 85°C, 120Hz				
470	20×35 1.78	22×30 1.83	20×40 1.90	22×35 1.92	20×50 2.19	22×45 2.29					