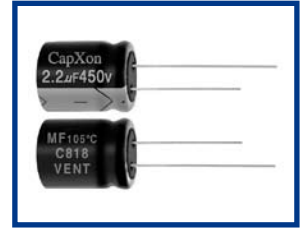


MF Series Flame Retardant Type at 105°C

Features

- ◆ Flame Retardant type capacitor with high temperature..
- ◆ Used in communication equipments, switching power supply, etc.
- ◆ Safety vent construction design.
- ◆ For detail specifications, please refer to Engineering Bulletin NO. E169
- ◆ RoHS Compliant



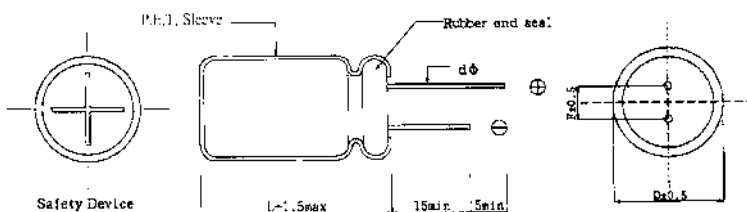
Specifications

Item	Performance Characteristics						
Operating Temperature Range	-25 to +105°C						
Rated Voltage Range	400、450 VDC						
Capacitance Range	2.2 to 180 µ F						
Capacitance Tolerance	±20%(120Hz,+20°C)						
Leakage Current (+20°C,max.)	$I \leq 0.03 CV (\mu A)$ After 1 minute with rated working voltage applied.						
Dissipation Factor ($\tan \delta$ · at 20°C · 120Hz)	<table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>400</td> <td>450</td> </tr> <tr> <td>D.F.(%)max.</td> <td>18</td> <td>20</td> </tr> </table>	Working Voltage(VDC)	400	450	D.F.(%)max.	18	20
	Working Voltage(VDC)	400	450				
D.F.(%)max.	18	20					
Low Temperature Characteristics (at 120Hz)	Impedance ratio max <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>6</td> <td>6</td> </tr> </table>	Working Voltage(VDC)	400	450	Z-25°C / Z+20°C	6	6
	Working Voltage(VDC)	400	450				
Z-25°C / Z+20°C	6	6					
Load Life	Test condition Duration time :2000 Hrs Ambient temperature :+105°C Applied voltage :Rated DC working voltage After test requirement at +20°C Capacitance change : $\leq \pm 20\%$ of the initial measured value Dissipation factor : $\leq 200\%$ of the initial specified value Leakage current : \leq The initial specified value						
Shelf Life	Test condition Duration time :1000 Hrs Ambient temperature :+105°C Applied voltage :None After test requirement at +20°C:Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.						

Multiplier for Ripple Current vs. Frequency

CAP(µF)\Frequency(Hz)	50(60)	120	400	1K	10K	50K-100K
CAP \leq 10	0.8	1	1.30	1.45	1.65	1.70
10<CAP \leq 100	0.8	1	1.23	1.36	1.48	1.53
100<CAP	0.8	1	1.16	1.25	1.35	1.38

Diagram of Dimensions:(unit:mm)



Dφ	10	13	16	18	22
F	5.0	5.0	7.5	7.5	10
dφ	0.6		0.8	0.8	0.8
α	1.5			1.5 (L<35.5)	2
				2 (L \geq 35.5)	

Case Size

φ DxL(mm)

Cap(μF) \ WV(SV)	400V (450)		450V (500)	
	Size	Ripple	Size	Ripple
2.2	10X12.5	35	10X12.5	25
3.3	10X16	36	10X16	30
4.7	10X16	55	10X20	38
6.8	10X16	90	10X20	65
10	10X20	125	13X20	80
22	13X25	190	13X25	105
33	16X25	220	16X25	180
47	16X31.5	280	16X35.5	300
68	16X35.5	400	16X35.5	425
	18X31.5	420		
100	18X35.5	480	18X41	530
120	18X35.5	500	22X41	600
	18X41	530		
150	18X41	570		
180	18X45	620		

Ripple Current (A, rms) at 105°C 120Hz