

# LM

**Feature: High ripple current capability.  
High stability.**

## SPECIFICATIONS

Item	Performance Characteristics								
Category Temperature Range	-25 to +105°C								
Working Voltage Range	200 to 450Vdc								
Capacitance Range	1 to 68 $\mu$ F								
Capacitance Tolerance	$\pm 20\%$ ( at 25°C 120Hz )								
Dissipation Factor (tan $\delta$ ) (at 25°C 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>200 to 250</th> <th>350</th> <th>400 to 450</th> </tr> </thead> <tbody> <tr> <td>tan <math>\delta</math> (Max)</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </tbody> </table>	Rated Voltage (V)	200 to 250	350	400 to 450	tan $\delta$ (Max)	0.15	0.20	0.20
Rated Voltage (V)	200 to 250	350	400 to 450						
tan $\delta$ (Max)	0.15	0.20	0.20						
Leakage Current	$I \leq 0.03CV + 10 \mu A$ I: Leakage current. ( $\mu A$ )    C:Rated capacitance. ( $\mu F$ )    V: Rated voltage. (V) The rated voltage is impressed for two minutes.								
Endurance	After applying rated voltage to the capacitor for 1,000 hours at 105°C , the following characteristics shall be satisfied when the capacitor has been restored to 25°C . Capacitance change $\leq \pm 20\%$ of the initial value Dissipation factor (tan $\delta$ ) $\leq 200\%$ of the specified value Leakage current $\leq$ specified value								
Shelf Life	After exposing the capacitor for 500 hours at 105°C , without applying voltage, the following characteristics shall be satisfied when the capacitor has been restored to 25°C . Capacitance change $\leq \pm 20\%$ of the initial value Dissipation factor (tan $\delta$ ) $\leq 200\%$ of the specified value Leakage current $\leq 200\%$ of the specified value								
Others	Conforms to JIS C-5141 (1991), characteristic W								

## RIPPLE CURRENT MULTIPLIERS

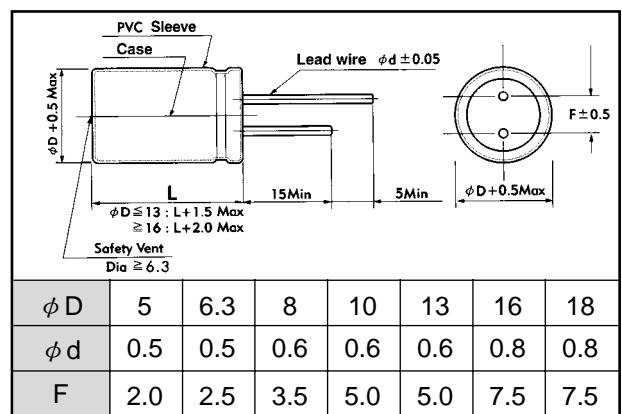
### Temperature Multipliers

Temp (°C)	40	60	70	85	95	105
Factor	1.90	1.75	1.61	1.40	1.25	1.00

### Frequency Multipliers

Vdc	Freq.(Hz)					
	Cap.( $\mu$ F)	50(60)	120	1K	10K	100K
200 to 450	1 to 68	0.80	1.00	1.40	1.60	1.60

### DIMENSIONS(mm)



**LM**
**Case size & Permissible Ripple Current**

Vdc μ F	200		250		350		400		450	
	1	5X11	13	5X11	14	6.3x11	14	6.3x11	15	6.3x11
2.2	5X11	20	6.3X11	21	6.3x11	21	8x12	24	8x12	20
2.7	5X11	22	6.3X11	27	8x12	26	8x12	27	8x12	22
3.3	6.3X11	25	6.3X11	30	10x12	27	8x12	28	10x12	24
4.7	6.3X11	32	8x12	36	10x12	33	10x12	38	10x12	33
5.6	6.3X11	35	8x12	40	10x12	43	10x12	45	10x16	42
6.8	8x12	38	8x12	45	10x16	50	10x16	55	10x16	48
8.2	8x12	41	8x12	50	10x16	52	10x16	60	10x20	58
10	8x12	45	10x12	55	10x20	54	10x20	68	13x20	65
15	10x12	65	10x16	75	13x20	80	13x20	90	13x20	85
22	10x16	100	10x20	120	13x20	100	13x25	112	13x25	105
33	10x20	125	13x20	135	13x25	125	16x25	150	16x25	140
47	13x20	155	13x25	170	16x25	170	16x32	180	16x32	175
68	13x25	190	16x25	211	16x32	200	16x36	216	16x36	210

↑ Case size φ DXL(mm)      ↑ Ripple current (mA rms) at 105°C, 120Hz