

**7mmL(高), -40°C~ +105°C**

**FEATURES**

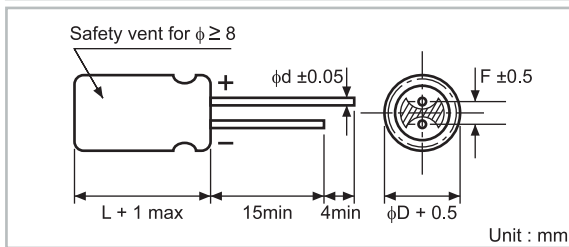
1. Rated working voltage range 6.3 to 50V DC operation temperature range -40 to +105°C.
2. This series is for communication equipments, switching power supply, industrial measuring instruments, automotive electric products, etc.



**SPECIFICATIONS**

Item	Performance Characteristics							
Operating Temperature Range	-40 to +105°C							
Rated Working Voltage Range	6.3 to 50V							
Nominal Capacitance Range	0.1 to 220μF							
Capacitance Tolerance	±20% (120Hz, +20°C)							
Leakage Current	I ≤ 0.01CV or 3(μA) after 2 minutes application of rated working voltage at +20°C							
Dissipation Factor tan δ (120Hz, +20°C)	Working Voltage (V)	6.3	10	16	25	35	50	
	tan δ (max.)	0.24	0.21	0.18	0.15	0.13	0.12	
Low Temperature Characteristics	Impedance ratio max. at 120Hz							
	Working Voltage (V)	6.3	10	16	25	35	50	
	Z-25°C / Z+20°C	4	2	2	2	2	2	
	Z-40°C / Z+20°C	8	5	4	3	3	3	
High Temperature Loading	Test conditions			Post test requirements at +20°C				
	Duration	: 1000 hours			Leakage current : ≤ Initial specified value			
	Ambient temp.	: +105°C			Cap. change : within ±20% of initial measured value			
	Applied voltage	: Rated DC working voltage			tan δ : ≤ 200% of initial specified value			
Shelf Life	Test conditions			Post test requirements at +20°C				
	Duration	: 1000 hours			Same limits for high temperature loading.			
	Ambient temp.	: +105°C						
	Applied voltage	: (None)						
Others	JIS C - 5141 JIS C - 5102							

**CASE SIZE TABLE**



φD	4	5	6.3	8				
F	1.5	2.0	2.5	3.5				
φd	0.45							

**RIPPLE CURRENT MULTIPLIER**

Temperature Coefficient						Frequency Coefficient					
Temperature(°C)	~ 55	60	70	85	105	Cap(μF) \ Freq.(Hz)	50	120	300	1K	10K ~
Factor	2.23	2.17	2.00	1.75	1.00		≤ 47	0.75	1.00	1.35	1.57
						47 ~ 220	0.80	1.00	1.23	1.34	1.50

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**DIMENSIONS**

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap.(μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.1	104								
0.22	224								
0.33	334								
0.47	474								
1	105								
2.2	225								
3.3	335								
4.7	475								
10	106					4 x 7	29	5 x 7	33
22	226	4 x 7	34	5 x 7	38	5 x 7	44	6.3 x 7	51
33	336	5 x 7	42	5 x 7	47	6.3 x 7	57	6.3 x 7	63
47	476	5 x 7	50	6.3 x 7	59	6.3 x 7	68	8 x 7	78
100	107	6.3 x 7	77	8 x 7	96	8 x 7	107		
220	227	8 x 7	130	8 x 7	140				

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size φD x L(mm)

Voltage (Code)		35V (1V)		50V (1H)					
Cap.(μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current				
0.1	104			4 x 7	1.0				
0.22	224			4 x 7	2.3				
0.33	334			4 x 7	3.5				
0.47	474			4 x 7	5.0				
1	105			4 x 7	10				
2.2	225			4 x 7	19				
3.3	335			4 x 7	24				
4.7	475	4 x 7	24	5 x 7	29				
10	106	5 x 7	36	6.3 x 7	44				
22	226	6.3 x 7	57	8 x 7	65				
33	336	8 x 7	72						
47	476								
100	107								
220	227								

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size φD x L(mm)