

## FEATURES

- Long life (1000 hours @ 85°C).
- Expanded applications for automatic mounting.
- Solvent resistant ( 250VDC).

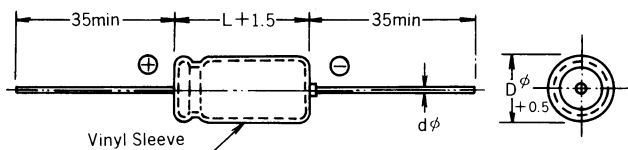
## PART NUMBERING

Part Number Example: 701-063/010M5X13F							
701	-	063	/	010	M	5X13	F
Type		Rated DC Voltage		Capacitance Code (μF)*	Tolerance Code	Size	RoHs Compliant
* Capacitance Code: First two digits represent significant figures, third digit represents multiplier (number of zeros).							

## SPECIFICATIONS

Performance Characteristics											
Operating Temperature Range	-40°C ~ +85°C @ 6.3VDC ~ 400VDC. -25°C ~ +85°C @ 450VDC.										
Temperature Characteristics (120Hz)	Impedance Ratio										
	Rated Voltage (WVDC)	6.3	10	16	25	35	50 ~ 100	160 ~ 200	250	315 ~ 400	450
	Z (-25°C) / Z (+20°C)	4	3	2	2	2	2	3	3	3	5
	Z (-40°C) / Z (+20°C)	10	8	6	4	3	3	6	6	6	
Voltage Range	6.3VDC ~ 450VDC.										
Capacitance Range	0.47μF ~ 15000μF.										
Capacitance Tolerance (20°C, 120Hz)	±20%.										
Maximum Dissipation Factor (20°C, 120Hz)	Rated Voltage (WVDC)	6.3	10	16	25	35	50	63	100	160 ~ 350	400 ~ 450
	DF %	24	20	17	15	12	10	10	10	20	25
For capacitance of more than 1000μF, add 0.02μF for every increase of 1000μF.											
Maximum Leakage Current	6.3VDC ~ 100VDC						160VDC ~ 450VDC				
	0.03CV or 4μA, whichever is greater, after 1 minute application of rated voltage. 0.01CV or 3μA, whichever is greater, after 2 minutes application of rated voltage.						CV ≤ 1000: 0.1CV + 40μA or less after 1 minute application of rated voltage. CV > 1000: 0.04CV + 100μA or less after 1 minute application of rated voltage.				
Applicable Standards	Characteristics of JIS C-5141.										
Load Life Test (105°C)	After 2000 hours application of rated voltage, capacitors meet the characteristics requirements mentioned below.										
	Capacitance Change	Within ±20% of initial value.									
	DF	200% or less of initial specified value.									
	Leakage Current	Initial specified value or less.									
Shelf Life (105°C)	After leaving capacitors under no load for 1000 hours and applying voltage according to JIS C-5102 4-3, they meet the specified value for load life characteristics listed above.										

## DIMENSIONS



## DIMENSIONS TOLERANCE (UNIT: mm)

Case Diameter Range	5 ~ 13	16 ~ 22	
Dimensions Tolerance	D	≤ -1.0	≤ -2.0
	L	≤ -0.5	-0.5
	dØ	≤ -0.6	0.8

## MULTIPLIER FOR RIPPLE CURRENT VS. TEMP

Ambient Temperature (°C)	~ +70	+85
Multiplier	1.27	1.0

CASE SIZE OF STANDARD PRODUCTS (DXL (mm))

Cap. (µF)		WVDC									
		6.3	10	16	25	35	50	63	100	160	250
0.47	R47							5 x 13	5 x 13		
1	010							5 x 13	5 x 13	6 x 16	6 x 16
2.2	2R2							5 x 13	6 x 13	6 x 16	8 x 16
3.3	3R3							5 x 13	6 x 13	6 x 16	8 x 16
4.7	4R7						5 x 13	6 x 13	6 x 13	8 x 16	8 x 20
10	100					5 x 13	6 x 13	6 x 13	6 x 16	8 x 20	10 x 16
22	220			5 x 13	6 x 13	6 x 13	6 x 16	6 x 16	8 x 16	10 x 25	10 x 25
33	330	5 x 13	5 x 13	6 x 13	6 x 13	6 x 16	6 x 16	8 x 16	8 x 20	13 x 25	13 x 21
47	470	5 x 13	5 x 13	6 x 13	6 x 13	6 x 16	8 x 16	8 x 20	10 x 20	13 x 30	13 x 25
100	101	6 x 13	6 x 13	6.3 x 16	8 x 16	8 x 16	8 x 20	10 x 16	10 x 25	13 x 30	18 x 40
220	221	6.3 x 16	8 x 16	8 x 16	8 x 20	10 x 16	10 x 20	10 x 25	13 x 30	18 x 30	18 x 40
330	331	8 x 16	8 x 16	8 x 20	10 x 16	10 x 20	10 x 25	13 x 25	16 x 30	18 x 40	22 x 41
470	471	8 x 16	8 x 16	10 x 16	10 x 20	10 x 25	13 x 25	13 x 30	16 x 40	22 x 41	
1000	102	10 x 20	10 x 20	10 x 25	13 x 25	13 x 25	16 x 30	16 x 40	22 x 40		
2200	222	13 x 25	13 x 25	13 x 30	16 x 30	16 x 30	18 x 40	22 x 40			
3300	332	13 x 30	13 x 30	16 x 30	16 x 40	18 x 40	22 x 40				
4700	472	16 x 30	16 x 30	16 x 40	18 x 40	22 x 40	22 x 45				
10000	103	18 x 45	18 x 45	22 x 40	22 x 50						
15000	153	22 x 40	22 x 40	22 x 50							

For capacitance values or sizes not listed above, consult Factory or Area Representative.

CASE SIZE OF STANDARD PRODUCTS (DXL (mm)) (CONT.)

Cap. (µF)		WVDC	
		350	450
0.47	R47		
1	010	8 x 16	8 x 16
2.2	2R2	8 x 16	8 x 20
3.3	3R3	8 x 20	10 x 20
4.7	4R7	10 x 20	10 x 25
10	100	10 x 20	13 x 21
22	220	13 x 21	16 x 30
33	330	13 x 25	16 x 30
47	470	13 x 30	13 x 33
100	101	16 x 40	22 x 40
220	221	22 x 40	

For capacitance values or sizes not listed above, consult Factory or Area Representative.

**MAXIMUM RIPPLE ((mA) 85°C, 120Hz)**

Cap. (µF)		WVDC											
		6.3	10	16	25	35	50	63	100	160	250	350	450
0.47	R47							10	5				
1	010							18	12	13	13	16	17
2.2	2R2							24	21	22	23	25	30
3.3	3R3							28	30	31	31	31	39
4.7	4R7						30	32	39	40	37	60	51
10	100					35	36	51	68	63	67	75	89
22	220			55	53	53	58	91	111	108	118	139	175
33	330	50	70	60	77	70	111	111	136	144	161	200	241
47	470	65	75	70	91	121	130	133	192	180	211	240	318
100	101	116	180	125	158	194	250	247	345	270	419	350	550
220	221	204	204	221	257	335	388	450	560	400	764	823	
330	331	300	249	350	367	440	433	550	700	440	910		
470	471	396	400	440	480	550	650	750	1031	500			
1000	102	580	585	680	850	992	1050	1100	1447				
2200	222	830	920	1000	1200	1250	1300	1400					
3300	332	1020	1090	1200	1300	1400	1500						
4700	472	1450	1200	1360	1500	1600	3305						
10000	103	1500	1600	1800	1800								
15000	153	1800	1850	2890									

For capacitance values or sizes not listed above, consult Factory or Area Representative.

**FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT**

WVDC	Capacitance (µF)	Frequency				
		50Hz	120Hz	300Hz	1KHz	10KHz
6.3 ~ 100	~ 47	0.75	1.0	1.35	1.57	2.00
	100 ~ 470	0.80	1.0	1.23	1.34	1.50
	1000 ~ 22000	0.85	1.0	1.10	1.13	1.15
160 ~ 450	0.47 ~ 220	0.80	1.0	1.25	1.40	1.60
	330 ~ 470	0.90	1.0	1.10	1.13	1.15