

## FEATURES

- Wide temperature range (-25°C ~ +105°C).
- Long life (2000 hours @ 105°C) (  $\phi D > 10$  ).
- Solvent resistant.

## PART NUMBERING

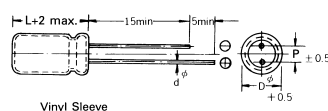
Part Number Example: 725E-050/100M5X11F							
725E	-	050	/	100	M	5X11	F
Type		Rated DC Voltage		Capacitance Code ( $\mu F$ )*	Tolerance Code	Size	RoHs Compliant

\* Capacitance Code: First two digits represent significant figures, third digit represents multiplier (number of zeros).

## SPECIFICATIONS

Performance Characteristics															
Operating Temperature Range	-40°C ~ 105°C.							-25°C, +105°C.							
Temperature Characteristics (120Hz)	Impedance Ratio														
	Rated Voltage (WVDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	Z (-25°C) / Z (+25°C)	4	3	2	2	2	2	2	2	2	2	2	2	3 max.	15 max.
	Z (-40°C) / Z (+25°C)	8	6	4	3	3	3	3	3	3	3	3	3	3	3
Voltage Range	6.3VDC ~ 100VDC.							160VDC ~ 450VDC.							
Surge Voltage Range (25°C)	Rated Voltage (WVDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	SV	8	13	20	32	44	63	79	125	200	250	300	400	450	500
Capacitance Tolerance (25°C, 120Hz)	±20%.														
Maximum Dissipation Factor (25°C, 120Hz)	Rated Voltage (WVDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	DF %	18	16	13	11	10	8	7	7	12	12	12	15	15	17
	Add 0.02 $\mu F$ per 1000 $\mu F$ for more than 1000 $\mu F$ .														
Maximum Leakage Current (25°C) (after 1 minute)	0.01CV or 3 $\mu A$ , whichever is greater.							0.03CV or 40 $\mu A$ , whichever is greater.							
	L: Leakage current ( $\mu A$ ). C: Rated capacitance ( $\mu F$ ). V: Working voltage (V).														
Load Life (105°C)	After 2000 hours' application of rated voltage, the capacitor shall meet the following limits.														
	Capacitance Change	Within ±25% of initial value @ 6.3VDC ~ 16VDC. Within ±20% of initial value @ 25VDC ~ 100VDC.													
	Dissipation Factor	200% of initial specified value.													
	Leakage Current	Initial specified value.													
Shelf Life (85°C)	No voltage applied after 600 hours the capacitor shall meet the following limits.														
	Capacitance Change	Within ±20% of initial value.													
	Dissipation Factor	200% of initial specified value.													
	Leakage Current	200% of initial specified value.													

## DIMENSIONS



## DIMENSIONS (UNIT: mm)

D	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0		7.5	
d $\phi$	0.5		0.6			0.8	

## MULTIPLIER FOR RIPPLE CURRENT VS TEMP.

Temperature (°C)	65	85	105
Multiplier	1.75	1.4	1

CASE SIZE OF STANDARD PRODUCTS (DXL (mm))

Cap. (µF)		WVDC						
		6.3	10	16	25	35	50	63
0.47	R47						5 x 11	5 x 11
1	010						5 x 11	5 x 11
2.2	2R2						5 x 11	5 x 11
3.3	3R3						5 x 11	5 x 11
4.7	4R7						5 x 11	5 x 11
10	100				5 x 11	5 x 11	5 x 11	5 x 11
22	220				5 x 11	5 x 11	6.3 x 11	6.3 x 11
33	330	5 x 11			5 x 11	5 x 11	6.3 x 11	6.3 x 11
47	470	5 x 11	5 x 11	5 x 11	6.3 x 11	6.3 x 11	6.3 x 11	8 x 12
100	101	5 x 11	6.3 x 11	6.3 x 11	6.3 x 11	8 x 12	10 x 13	10 x 17
220	221	6.3 x 11	6.3 x 11	8 x 12	10 x 13	10 x 13	10 x 17	10 x 20
330	331	6.3 x 11	8 x 12	8 x 12	10 x 13	10 x 17	10 x 20	13 x 21
470	471	8 x 12	8 x 12	10 x 13	10 x 17	10 x 20	13 x 21	13 x 25
1000	102	10 x 13	10 x 17	10 x 20	13 x 21	13 x 25	16 x 26	16 x 32
2200	222	10 x 20	13 x 21	13 x 25	16 x 26	16 x 32	18 x 36	
3300	332	13 x 21	13 x 25	16 x 32	16 x 36	18 x 36	18 x 36	
4700	472	13 x 25	16 x 26	16 x 32	16 x 36	18 x 41		
6800	682	16 x 26	16 x 32	18 x 36	18 x 41			
10000	103	16 x 32	18 x 36	18 x 41				
15000	223	18 x 36						

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

Cap. (µF)		WVDC						
		100	160	200	250	350	400	450
0.47	R47	5 x 11	5 x 11	5 x 11	5 x 11	6.3 x 11	6.3 x 11	6.3 x 11
1	010	5 x 11	6.3 x 11	6.3 x 11	6.3 x 11	6.3 x 11	8 x 12	8 x 12
2.2	2R2	5 x 11	6.3 x 11	6.3 x 11	8 x 12	10 x 13	10 x 13	10 x 17
3.3	3R3	5 x 11	6.3 x 11	8 x 12	8 x 12	10 x 17	10 x 17	10 x 20
4.7	4R7	5 x 11	8 x 12	8 x 12	10 x 13	10 x 17	10 x 17	10 x 20
10	100	6.3 x 11	10 x 17	10 x 17	10 x 20	10 x 20	13 x 21	13 x 25
22	220	8 x 12	10 x 20	10 x 20	13 x 21	13 x 25	16 x 26	16 x 32
33	330	10 x 13	10 x 20	13 x 21	13 x 25	16 x 26	16 x 32	16 x 36
47	470	10 x 17	13 x 25	13 x 25	13 x 25	16 x 32	16 x 36	
100	101	13 x 21	16 x 26	16 x 26	16 x 32			
220	221	16 x 26	16 x 36					
330	331	16 x 32						
470	471	16 x 32						

**MAXIMUM RIPPLE ((mA) 105°C, 120Hz)**

Cap. (µF)		WVDC													
		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
0.47	R47						8	8	10	12	12	12	14	14	14
1	010						12	12	15	17	17	17	20	20	20
2.2	2R2						20	20	23	25	29	29	35	35	35
3.3	3R3						25	28	32	36	42	42	47	47	54
4.7	4R7						30	34	37	43	50	50	55	55	60
10	100				38	41	46	50	45	59	64	64	79	79	87
22	220				57	61	68	82	96	96	110	110	130	145	165
33	330	54			69	75	90	100	120	125	140	140	175	185	210
47	470	65	70	99	105	110	125	135	160	165	180	180	230	240	
100	101	95	105	125	135	170	180	225	245	270	310	310			
220	221	160	175	215	230	300	345	400	450	480					
330	331	195	245	260	335	400	460	540	780						
470	471	270	290	370	440	520	610	700	880						
1000	102	460	550	640	770	920	1080	1210							
2200	222	810	860	1000	1170	1340	1530								
3300	332	960	1100	1300	1460	1600	1750								
4700	472	1330	1440	1680	1780	1900									
6800	682	1500	1690	1900	1950										
10000	103	1765	1950	2060											
15000	223	2075													

**FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT**

WVDC	Multiplier			
	60Hz	120Hz	1KHz	10KHz
6.3 ~ 25	0.65	1	1.1	1.2
35 ~ 100	0.60	1	1.15	1.25
150 ~ 250	0.75	1	1.25	1.4
350 ~ 450	0.70	1	1.3	1.5