WP Series

General purpose, 85℃2000Hrs
普 通 品 , 85℃2000Hrs
Suit for use in electronic complete sets of high quality
適用于高品質電子整機

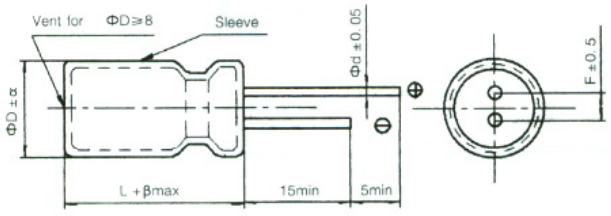
General purpose, 105℃1000Hrs
普 通 品 , 105℃1000Hrs
Suit for use in electronic complete sets of wide temperature
適用于寬溫高品質電子整機

Specifications

Items 項目	Characteristics 特性	
Operating Temperature Range 使用溫度范圍	-40 to +85℃(-25 to +85℃ for 450 VDC)	-40 to +105℃(-25 to +105℃ for 450 VDC)
Rated Voltage Range 額定電壓范圍	160 to 450VDC	160 to 450VDC
Capacitance Tolerance 靜電容量容許差	±20%(M) (at 25℃,120Hz)	
Leakage Current 漏電流	I=0.02CV or 5 μA, whichever is greater (at 25℃,after 2 minutes) Where, I: Leakage current(μA), C: Nominal capacitance (μF),V: Rated voltage(V)	
Dissipation Factor (tan δ) 損失角正切(tan δ)	Rated voltage (V) 160~250 350~450 DF(tan δ) 0.20 0.24 When the capacitance exceeds 1000 μF,0.02 shall be added every 1000 μF increase.(at25℃,120Hz)	
Low Temperature Characteristics 低溫特性	Rated voltage (V) 160~250 350~400 450 Z(-25℃)/(25℃) 3 6 6 (at 120Hz)	
Load Life 高溫負荷特性	The following specifications shall be satisfied when the capacitors are restored to 25℃after the rated voltage is applied for 1000 hours at 105℃.(for 2000 hours at 85℃). Capacitance change ≦±20% of the initial value DF(tan δ) ≦200% of the initial specified value Leakage current ≦The initial specified value	
Shelf Life 高溫貯存特性	The following specifications shall be satisfied when the capacitors are restored to 25℃ after exposing them for 1000 hours at 105℃(or 85℃) without voltage applied .The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≦±20% of the initial value DF(tan δ) ≦200% of the initial specified value Leakage current ≦500% of the initial specified value	

Pitch Dimension (mm)

DΦ	6.3	8	10	12	13	16	18		22
F	2.5	3.5	5	5	5	7.5	7.5	10	10
d	0.5	0.50	0.6	0.6	0.6	0.8			
α	0.5								1.0
β	+1.5-0.5								2.0



WP Series

Standard Ratings

105℃

μF \ VDC	160		200		250		350		400		450	
0.47	6*12	7	6*12	8	6*12	9	8*12	8	8*12	9	6*12	14
1	6*12	11	6*12	12	6*12	13	8*12	12	8*12	13	8*12	20
2.2	6*12	16	6*12	17	6*12	19	8*12	18	8*14	20	10*13	35
3.3	6*12	20	6*12	21	8*12	26	10*15	24	8*14	25	10*17	54
4.7	6*12	23	8*12	29	8*12	31	10*15	29	10*15	33	10*17	60
10	10*15	39	10*15	46	10*17	55	10*20	50	10*20	55	13*26	100
22	10*20	70	13*21	85	13*21	90	13*21	85	13*26 16*22	90	16*32	180
33	10*20	95	13*21	110	13*21	110	13*26	110	16*26	130	16*35	210
47	13*21	120	13*26	120	13*26	150	16*26	150	18*25	150	18*40	260
68	16*26	132	16*26	132	16*32	170	16*35	170	18*36	170		
100	16*26	180	16*26	200	16*32	250	18*36	230	22*32	200		
120	16*32	200	16*35	220	18*36	280	18*40	250	22*36	220		
220	16*35	320	22*32	370								
330	18*40	420	22*36	440								

Ripple current (mA rms/105℃,120Hz)

Case size ΦD*L(mm)

Standard Ratings

85℃

μF \ VDC	160		200		250		350		400		450	
0.47	6*12	12	6*12	13	6*12	14	8*12	14	8*12	15	6*12	14
1	6*12	18	6*12	19	6*12	21	8*12	21	8*12	21	8*12	19
2.2	6*12	27	6*12	29	8*12	31	8*12	31	8*12	32	10*13	29
3.3	6*12	33	6*12	35	8*12	44	10*15	41	10*15	42	10*17	35
4.7	6.3*11	39	8*12	48	8*14	50	10*15	49	8*12 10*13 10*15	40 50 55	10*17	50
10	8*12	65	10*15	75	8*16 10*17	70 90	10*17	85	10*17	85	13*26	75
22	10*15	120	10*17	140	13*21	150	13*21	130	13*21	140	16*32	110
33	10*20	160	13*21	170	13*21	190	13*26 16*26	180 200	13*26 16*20 16*22 16*26	160 176 180 185	16*35	150
47	13*21	190	13*21	210	13*26	250	16*26	220	16*26 16*30 18*22 18*25	210 220 230 240	18*40	230
68	13*26	210	16*26	230	16*26	270	16*32	240	16*30 18*26 18*30	240 250 260		
82	13*26	230	16*26	250	16*26	300	18*30	260	18*30 18*36	250 280		
100	13*26	310	16*26	340	16*26 16*32	370 410	18*36	340	18*36 22*32 22*36	250 280 308		
120	16*26	340	16*26	370	16*35	450	18*40	370	22*36	340		
220	16*35 18*33	540 550	16*35 18*33 18*36 22*25 22*32	405 450 500 560 620	18*46	530						
330	18*36	670	18*36 18*40 22*32 22*36	580 650 680 720								
470	18*40	740	18*40 22*42	750 820								
560	18*50	780	18*50	820								

Ripple current (mA rms/85℃,120Hz)

Case size ΦD*L(mm)

Ripple Current Multipliers

Temperature Multipliers

Ambient temp.(℃)	85	105
Factor	1.7	1

Frequency Multipliers

Cap.(μF) \ Freq.(Hz)	50	120	300	1K	10K	100K
0.1-3.3	0.65	1	1.35	1.75	2.30	2.50
4.7~33	0.75	1	1.25	1.50	1.75	1.80
47-1000	0.80	1	1.15	1.30	1.40	1.50
2200~	0.85	1	1.03	1.05	1.08	1.08