

RP Series Screw Terminal Type 85°C



Features

- ◆ Load life: 85°C 2000 hours.
- ◆ High ripple capability.
- ◆ For detail specifications, please refer to Engineering Bulletin No. E140.
- ◆ RoHS Compliant

Specifications

Item	Performance Characteristics										
Operating Temperature Range	-40 ~ +85 °C	-25 ~ +85°C									
Rated Voltage Range	16 ~ 100 VDC	160 ~ 450 VDC									
Capacitance Range	3300 ~ 68000 μ F	220 ~ 22000 μ F									
Capacitance Tolerance	±20% (120Hz, +20°C)										
Leakage Current (+20°C,max.)	I ≤ 0.02 CV After 5 minutes with rated working voltage applied.										
Dissipation Factor (tan δ , at 20°C , 120Hz)	Less than the value under table (%)										
	WV \ φD	35	51	63.5	76.2	WV \ φD	35	51	63.5	76.2	
	16	0.6	0.7	0.8	1.2	63	0.2	0.25	0.3	0.4	
	25	0.4	0.5	0.7	0.8	80	0.2	0.2	0.25	0.3	
	35	0.3	0.5	0.6	0.7	100	0.15	0.2	0.25	0.25	
	50	0.25	0.3	0.5	0.6	160~250	0.15	0.15	0.2	0.2	
						350~450	0.2	0.2	0.25	0.25	
Low Temperature Characteristics (at 120Hz)	Impedance ratio max.										
	Z-25°C / Z+20°C									3	
	Z-40°C / Z+20°C									12	
Load Life	Test conditions										
	Duration time	:2000 Hrs								Ambient temperature	:+85°C
	Applied voltage	:Rated DC working voltage								After test requirement at +20°C	
	Capacitance change	:≤ ±15% of the initial value								Dissipation factor	:≤ ±175% of the specified value
	Leakage current	:≤ Not more than the specified value									
Shelf Life	Test conditions										
	Duration time	:1000 Hrs								Ambient temperature	:+85°C
	Applied voltage	:None								Capacitance change	:≤ ±15% of the initial value
	Dissipation factor	:≤ ±175% of the specified value								Leakage current	:≤ Not more than the specified value
	After test requirement at +20°C	: Same limits as Load life.								Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.	

Multiplier for Ripple Current vs. Frequency

VDC \ Frequency(Hz)	50(60)	120	400	1K	10K ≤
10 ~ 50 WV	0.8	1	1.03	1.05	1.08
63 ~ 100 WV	0.8	1	1.05	1.07	1.10
160 ~ 450 WV	0.8	1	1.10	1.13	1.18

Diagram of Dimensions:(unit:mm)



φD	35	51	63.5	76.2
P	12.7	22	28.6	31.8

Case Size

φ DxDL(mm)

WV (SV) Cap(μF)	16 (20)		25 (32)		35 (44)		50 (63)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
6800							35x50	3.7
10000					35x60	3.5	35x60	5
15000			35x50	3.8	35x80	5.7	35x80	7.8
22000	35x60	5.1	35x60	6.8	35x80	7.1	35x100	11.5
					35x100	7.8	35x120	12.8
33000	35x80	6.9	35x80	9.4	35x100	10.2	51x80	11.8
							51x100	13.2
47000	35x80	8.5	35x100	12.5	35x120	13.7	51x100	14.7
	35x100	9.5						
68000	35x100	11.3	35x120	13.5	51x80	14.5	51x120	16.5
	51x80	12.7	51x80	14.3	51x100	15.1	51x140	17.8
100000	35x120	11.9	51x100	15.5	51x120	19.2	63.5x120	18.5
	51x100	13.5					63.5x140	19.8
150000							76.2x100	18.8
	51x100	15.1	51x120	21.2	63.5x120	23.8	76.2x120	24.0
220000	51x140	17.6	51x140	24.2			76.2x140	25.7
	51x120	17.8	63.5x120	25.8	76.2x100	24.0	76.2x160	32.7
330000	63.5x120	20.1			76.2x140	27.4	89x130	32.5
	63.5x120	23.0	76.2x120	26.7		33.0	89x160	36.0
470000	63.5x140	25.2			76.2x160	35.7		
	76.2x120	25.5	76.2x150	31.3	89x170	39.0	89x220	41.0
	76.2x140	27.5						
680000	76.2x160	35.1	89x160	37.0	89x220	41.0		
820000	76.2x220	38.0	89x190	40.0				
1000000	89x200	41.1	89x220	42.0				

WV (SV) Cap(μF)	63 (79)		80 (100)		100 (125)		160 (200)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1000							35x60	2.8
1500							35x60	3.1
2200							35x80	4.2
							35x100	4.7
3300					35x60	4.1	35x100	6.0
							35x120	6.8
4700			35x60	4	35x80	5.2	51x80	7.5
6800	35x50	4.3	35x60	5.3	35x80	6.2	51x100	10.0
							51x120	11.5
10000	35x60	6.2	35x80	7.3	35x100	7.9	51x140	13.4
							63.5x100	13.0
15000	35x80	8.7	35x120	10.3	51x80	11.0	63.5x120	13.5
					51x100	12.4	63.5x140	14.8
22000							76.2x100	14.0
	35x120	13.1	51x80	12.3	51x120	16.2	76.2x120	16.5
33000							76.2x140	17.0
	51x100	13.9	51x120	16.1	51x140	21.3	76.2x160	22.0
47000							89x140	23.0
	51x120	18.6	63.5x120	18.5	63.5x140	24.3	89x170	25.0
68000	63.5x120	21.3	63.5x140	24.1	76.2x140	26.4	89x230	27.0
100000	76.2x120	24.0	76.2x160	25.8	89x160	27.2		
150000	76.2x160	27.0	89x160	28.5	89x230	29.0		
220000	89x160	29.0	89x230	31.0				
330000	89x220	32.0						

Ripple Current (A, rms) at 85°C 120Hz

φ DxL(mm)

WV (SV) Cap(μF)	200 (250)		250 (300)		350 (400)		400 (450)		450 (500)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
220									35x50	1
330							35x60	1.2	35x60	1.2
470					35x60	1.5	35x80	1.6	35x80	1.8
680			35x60	1.8	35x80	2.7	35x80	1.9	35x120	2.3
							35x100	2.1		
1000	35x60	2.3	35x80	3.1	35x100	3.2	35x120	2.8	51x80	2.9
							51x80	2.8		
1500	35x80	3.2	35x80	3.8	51x80	4.1	51x80	3.4	51x100	3.5
							51x100	3.8	51x120	3.7
2200	35x100	4.8	35x120	5.3	51x100	5.5	51x100	4.0	51x120	4.5
			51x80	5.4	51x120	6.0	51x120	4.4	63.5x100	4.5
							51x140	4.7	63.5x120	4.9
3300	35x120	6.2	51x100	6.8	51x120	7.3	51x130	5.4	63.5x120	6.0
	51x80	6.3	51x120	7.5	51x140	7.8	63.5x100	5.4	76.2x120	6.3
					63.5x100	7.6	63.5x120	5.8		
4700	51x100	7.8	51x120	8.5	63.5x120	8.0	76.2x100	6.4	76.2x120	7.5
			51x140	9.1	76.2x100	8.2	76.2x120	6.9	76.2x140	8.1
			63.5x100	8.8					76.2x160	8.6
6800	51x120	9.0	51x140	9.5	76.2x120	8.9	76.2x140	9.2	76.2x160	9.5
	51x140	9.8	63.5x120	9.8	89x100	9.5	76.2x160	9.8		
			76.2x100	10.0						
10000	63.5x100	10.3	76.2x120	11.5	76.2x160	12.3	76.2x160	12.0	76.2x220	13.5
	63.5x120	11.2	76.2x140	12.3	89x120	11.8	89x130	12.0	89x170	13.0
15000	76.2x120	13.0	76.2x150	14.5	89x160	16.5	76.2x230	17.0		
	76.2x140	14.2	76.2x160	15.1			89x180	17.0		
			89x120	14.5						
22000	76.2x160	17.8	89x160	18.5	89x230	21.0	100x240	22.0		
	89x120	17.0								
33000	89x160	19.5	89x220	21.0						
47000	89x220	21.0	100x240	22.5						

Ripple Current (A, rms) at 85°C 120Hz