

## PE-ES Series

Snap-in Type  
105°C Low Profile



### Specifications

Items	Specifications																		
Rated voltage (V)	10	16	25	35	50	63	80	100	160	180	200	220	250	315	350	385	400	420	450
Category temperature range (°C)	-40 to +105									-25 to +105									
Capacitance tolerance (%)	±20															(120Hz/20°C)			
Tangent of loss angle (tanδ) (MAX.) (120Hz/20°C)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15						0.20				
Leakage current (L.C.) (μA/after 5min) (MAX.)	$3\sqrt{CV}$																		
Endurance 105°C 3000hrs. rated voltage applied.	ΔC/C		Within ±20% of the initial value																
	tan δ		≤ Twice the initial standard																
	L.C.		≤ The initial standard																

### Size List, Maximum Permissible Ripple Current

V	10	16	25	35	50	63	80	100
330								20×20 0.60
390								20×20 0.71
470							20×20 0.65	22×20 0.78
560							20×20 0.70	25×20 0.95
680						20×20 0.83	22×20 0.84	25×20 1.09
820						22×20 0.99	25×20 1.04	30×20 1.32
1000					20×20 0.87	22×20 1.10	25×20 1.19	
1200					22×20 1.02	25×20 1.20	30×20 1.44	
1500				20×20 0.80	25×20 1.15	30×20 1.47		
1800				22×20 0.94	25×20 1.34	30×20 1.52		
2200			20×20 0.98	22×20 1.04	30×20 1.60			
2700			22×20 1.08	25×20 1.29				
3300		20×20 1.06	22×20 1.29	30×20 1.45				
3900		20×20 1.25	25×20 1.58					
4700	20×20 0.98	22×20 1.38	25×20 1.61					
5600	20×20 1.16	25×20 1.68						
6800	22×20 1.31	25×20 1.80						
8200	25×20 1.59							
10000	25×20 1.77							

Ripple Current (A r.m.s./120Hz•105°C)

Case Size; φ D×L (mm)

## PE-ES Series

μF \ V	160		180		200		220		250		315		350		385		
	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	
39															20×20	0.35	
47													20×20	0.38	20×20	0.38	
56												20×20	0.41	20×20	0.40	22×20	0.42
68												22×20	0.48	22×20	0.45	25×20	0.50
82												22×20	0.51	25×20	0.54	25×20	0.52
100									20×20	0.59		25×20	0.57	25×20	0.57	30×20	0.61
120					20×20	0.63	20×20	0.60	22×20	0.65	30×20	0.65	30×20	0.65	30×20	0.64	
150			20×20	0.66	20×20	0.66	22×20	0.70	25×20	0.74	30×20	0.70	35×20	0.78	35×20	0.80	
180	20×20	0.69	22×20	0.80	22×20	0.80	25×20	0.80	25×20	0.77	35×20	0.85	35×20	0.85			
220	22×20	0.81	25×20	0.90	25×20	0.87	25×20	0.85	30×20	0.95	35×20	0.90					
270	25×20	0.98	25×20	0.95	25×20	0.95	30×20	1.02	30×20	1.00							
330	25×20	1.02	30×20	1.15	30×20	1.15	30×20	1.12	35×20	1.16							
390	30×20	1.25	30×20	1.20	30×20	1.20	35×20	1.25									
470	30×20	1.30	35×20	1.36	35×20	1.41											
560	35×20	1.46	35×20	1.43													
680	35×20	1.51															

μF \ V	400		420		450	
	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
27					20×20	0.26
33			20×20	0.30	20×20	0.30
39	20×20	0.34	20×20	0.34	22×20	0.36
47	22×20	0.39	22×20	0.38	25×20	0.41
56	22×20	0.40	25×20	0.45	25×20	0.43
68	25×20	0.49	25×20	0.48	30×20	0.50
82	30×20	0.55	30×20	0.53	30×20	0.53
100	30×20	0.60	30×20	0.58	35×20	0.61
120	35×20	0.75	35×20	0.70		
150	35×20	0.80				

Ripple Current (A r.m.s./120Hz·105°C)

Case Size; φ D×L (mm)

### MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Frequency (Hz)		60 (50)	120	500	1k	10k <sub>≤</sub>
Coefficient	10~100V	0.90	1.00	1.05	1.10	1.15
	160~250V	0.80	1.00	1.20	1.30	1.50
	315~450V	0.80	1.00	1.20	1.25	1.40