

TS-HC Series snap-in style

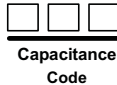
- **Highly miniaturized version (30% smaller than HB series)**
- **2 and 3 pin versions available**
- **2000 hour life at 105°C**
- **Can vent construction**



Rated Working Voltage:	10 ~ 250 VDC	350 ~ 450 VDC											
Operating Temperature:	-40 ~ +105°C	-25 ~ +105°C											
Nominal Capacitance:	270~100000 µF	100 ~ 820µF											
Capacitance Tolerance:	± 20%												
Dissipation Factor: (120 Hz, +20°C)	Working Voltage [V]:												
	10	16	25	35	50	63	80	100 - 450					
	Max. D.F. (%):												
	55	45	35	30	25	20	17	15					
	For capacitance values > 33000µF, add the value of: $\frac{\text{rated cap. } [\mu\text{F}] - 33000}{1000}$												
Leakage Current:	3vCV (µA) max. after 5 minutes; C = Capacitance in µF, V = WV												
Ripple Current Multipliers:	Frequency(Hz):	50	60	100~120	500	1k	10k~	Ripple Current Ambient Temperature Factors*					
	10~100WV:	0.93	0.95	1.0	1.05	1.08	1.15	Ambient Temperature:	105°C	85°C	70°C	60°C	=45°C
	160~500WV:	0.75	0.8	1.0	1.2	1.25	1.4	Multiplier:	1.0	1.7	2.0	2.2	2.35
Endurance:	2000 hours at +105°C with maximum specified ripple current (see page 4)												

*Use of temperature ripple current multipliers may limit life to the hours specified for the maximum operating temperature.

Part Number System



Diameter	Diameter / Terminal Code			
	# of pins:	2	2	3
	pin length:	6.3mm	4.0mm	4.0mm
22mm		B	H	P
25mm		C	J	Q
30mm		D	K	R
35mm		E	L	S

(Please see page 7 for details)

Top Vinyl Plate	
A	with plate
	without plate (no suffix)

TS-HC Standard Ratings (part numbers shown with 2 pins, 6.3mm length terminal, and top vinyl plate)

Cap. (µF)	Size (mm) D x L	Max 105°C R.C. (A _{rms})		20°C ESR (Ω, max.)		Panasonic Part Number
		120Hz	10kHz~	120Hz	20kHz	
10 VDC Working, 13 VDC Surge						
12000	22 x 25	2.20	2.53	0.076	0.065	EETHC1A123BA
18000	22 x 30	2.40	2.76	0.051	0.043	EETHC1A183BA
	25 x 25	2.40	2.76	0.051	0.043	EETHC1A183CA
22000	22 x 35	2.60	2.99	0.041	0.035	EETHC1A223BA
	25 x 30	2.60	2.99	0.041	0.035	EETHC1A223CA
27000	22 x 40	3.10	3.57	0.034	0.029	EETHC1A273BA
	25 x 35	3.10	3.57	0.034	0.029	EETHC1A273CA
	30 x 25	3.10	3.57	0.034	0.029	EETHC1A273DA
33000	22 x 45	3.40	3.91	0.028	0.023	EETHC1A333BA
	25 x 40	3.40	3.91	0.028	0.023	EETHC1A333CA
39000	25 x 45	3.70	4.26	0.026	0.022	EETHC1A393CA
	30 x 30	3.70	4.26	0.026	0.023	EETHC1A393DA
	35 x 25	3.70	4.26	0.026	0.022	EETHC1A393EA
47000	25 x 50	4.20	4.83	0.024	0.021	EETHC1A473CA
	30 x 35	4.20	4.83	0.024	0.022	EETHC1A473DA
	35 x 30	4.20	4.83	0.024	0.021	EETHC1A473EA
56000	30 x 40	5.00	5.75	0.023	0.021	EETHC1A563DA
	35 x 35	5.00	5.75	0.023	0.020	EETHC1A563EA
68000	30 x 45	5.40	6.21	0.022	0.020	EETHC1A683DA
	35 x 40	5.40	6.21	0.022	0.019	EETHC1A683EA
82000	35 x 45	6.10	7.02	0.021	0.019	EETHC1A823EA
100000	35 x 50	6.90	7.94	0.020	0.019	EETHC1A104EA
16 VDC Working, 20 VDC Surge						
10000	22 x 25	2.60	2.99	0.075	0.063	EETHC1C103BA
12000	22 x 30	2.90	3.34	0.062	0.053	EETHC1C123BA
	25 x 25	2.90	3.34	0.062	0.053	EETHC1C123CA
15000	22 x 35	3.20	3.68	0.050	0.042	EETHC1C153BA
16 VDC Working, 20 VDC Surge (continued)						
18000	22 x 40	3.50	4.03	0.041	0.035	EETHC1C183BA
	25 x 30	3.50	4.03	0.041	0.035	EETHC1C183CA
22000	22 x 45	3.80	4.37	0.034	0.029	EETHC1C223BA
	25 x 35	3.80	4.37	0.034	0.029	EETHC1C223CA
	30 x 25	3.80	4.37	0.034	0.029	EETHC1C223DA
27000	22 x 50	4.20	4.83	0.028	0.023	EETHC1C273BA
	25 x 40	4.20	4.83	0.028	0.023	EETHC1C273CA
	30 x 30	4.20	4.83	0.028	0.023	EETHC1C273DA
	35 x 25	4.20	4.83	0.028	0.023	EETHC1C273EA
33000	25 x 45	4.70	5.41	0.023	0.019	EETHC1C333CA
	30 x 35	4.70	5.41	0.023	0.019	EETHC1C333DA
	35 x 30	4.70	5.41	0.023	0.020	EETHC1C333EA
39000	30 x 40	5.10	5.87	0.022	0.018	EETHC1C393DA
	35 x 35	5.10	5.87	0.022	0.020	EETHC1C393EA
47000	30 x 45	5.50	6.33	0.016	0.014	EETHC1C473DA
	35 x 40	5.50	6.33	0.021	0.019	EETHC1C473EA
	30 x 50	6.00	6.90	0.020	0.018	EETHC1C563DA
56000	35 x 45	6.00	6.90	0.020	0.018	EETHC1C563EA
25 VDC Working, 32 VDC Surge						
6800	22 x 25	2.40	2.76	0.085	0.064	EETHC1E682BA
8200	22 x 30	2.70	3.11	0.071	0.053	EETHC1E822BA
	25 x 25	2.70	3.11	0.071	0.053	EETHC1E822CA
10000	22 x 35	3.00	3.45	0.058	0.044	EETHC1E103BA
12000	22 x 40	3.20	3.68	0.048	0.036	EETHC1E123BA
	25 x 30	3.20	3.68	0.048	0.036	EETHC1E123CA
15000	22 x 45	3.60	4.14	0.039	0.029	EETHC1E153BA
	25 x 35	3.60	4.14	0.039	0.029	EETHC1E153CA

