

### TS-HC Series 105°C, 2000 hours

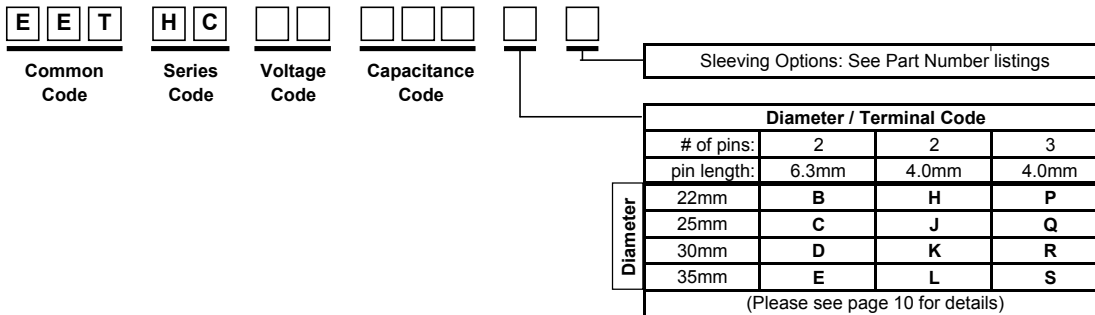
- **Highly miniaturized version (30% smaller than HB series)**
- **2 and 3 pin versions available**
- **PET Sleeve Option**



Rated Working Voltage:	16 ~ 250 VDC	350 ~ 450 VDC											
Operating Temperature:	-40 ~ +105°C	-25 ~ +105°C											
Nominal Capacitance:	270 ~ 100000µF	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:	3√CV (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	Temperature (°C):	105°C	85°C	70°C	60°C	≤45°C
	160-450WV:	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 6)												

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

#### Part Number System



#### TS-HC Standard Ratings

(part numbers shown with 2 pins and 6.3mm length terminal)

Cap. (µF)	Size (mm) D x L	Max 105°C R.C. (A <sub>rms</sub> )		20°C ESR (Ω, max.)		Panasonic Part Number	Part Number Suffix Slewing Options		
		120Hz	10kHz~	120Hz	20kHz		PVC with Top Plate	PVC without Top Plate	PET without Top Plate
<b>10 VDC Working, 13 VDC Surge</b>									
12000	22 x 25	2.20	2.53	0.076	0.065	EETHC1A123B_	A	(No suffix)	J
18000	22 x 30	2.40	2.76	0.051	0.043	EETHC1A183B_	A	(No suffix)	J
	25 x 25	2.40	2.76	0.051	0.043	EETHC1A183C_	A	(No suffix)	J
22000	22 x 35	2.60	2.99	0.041	0.035	EETHC1A223B_	A	(No suffix)	J
	25 x 30	2.60	2.99	0.041	0.035	EETHC1A223C_	A	(No suffix)	J
27000	22 x 40	3.10	3.57	0.034	0.029	EETHC1A273B_	A	(No suffix)	J
	25 x 35	3.10	3.57	0.034	0.029	EETHC1A273C_	A	(No suffix)	J
	30 x 25	3.10	3.57	0.034	0.029	EETHC1A273D_	A	(No suffix)	J
33000	22 x 45	3.40	3.91	0.028	0.023	EETHC1A333B_	A	(No suffix)	J
	25 x 40	3.40	3.91	0.028	0.023	EETHC1A333C_	A	(No suffix)	J
39000	25 x 45	3.70	4.26	0.026	0.022	EETHC1A393C_	A	(No suffix)	J
	30 x 30	3.70	4.26	0.026	0.023	EETHC1A393D_	A	(No suffix)	J
	35 x 25	3.70	4.26	0.026	0.022	EETHC1A393E_	A	(No suffix)	J
47000	25 x 50	4.20	4.83	0.024	0.021	EETHC1A473C_	A	(No suffix)	J
	30 x 35	4.20	4.83	0.024	0.022	EETHC1A473D_	A	(No suffix)	J
	35 x 30	4.20	4.83	0.024	0.021	EETHC1A473E_	A	(No suffix)	J
56000	30 x 40	5.00	5.75	0.023	0.021	EETHC1A563D_	A	(No suffix)	J
	35 x 35	5.00	5.75	0.023	0.020	EETHC1A563E_	A	(No suffix)	J
68000	30 x 45	5.40	6.21	0.022	0.020	EETHC1A683D_	A	(No suffix)	J
	35 x 40	5.40	6.21	0.022	0.019	EETHC1A683E_	A	(No suffix)	J
82000	35 x 45	6.10	7.02	0.021	0.019	EETHC1A823E_	A	(No suffix)	J
100000	35 x 50	6.90	7.94	0.020	0.019	EETHC1A104E_	A	(No suffix)	J

### TS-HC Standard Ratings (continued)

Cap. ( $\mu$ F)	Size (mm) D x L	Max 105°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number	Part Number Suffix Sleeving Options		
		120Hz	10kHz~	120Hz	20kHz		PVC with Top Plate	PVC without Top Plate	PET without Top Plate
<b>16 VDC Working, 20 VDC Surge</b>									
10000	22 x 25	2.60	2.99	0.075	0.063	EETHC1C103B_	A	(No suffix)	J
12000	22 x 30	2.90	3.34	0.062	0.053	EETHC1C123B_	A	(No suffix)	J
	25 x 25	2.90	3.34	0.062	0.053	EETHC1C123C_	A	(No suffix)	J
15000	22 x 35	3.20	3.68	0.050	0.042	EETHC1C153B_	A	(No suffix)	J
18000	22 x 40	3.50	4.03	0.041	0.035	EETHC1C183B_	A	(No suffix)	J
	25 x 30	3.50	4.03	0.041	0.035	EETHC1C183C_	A	(No suffix)	J
22000	22 x 45	3.80	4.37	0.034	0.029	EETHC1C223B_	A	(No suffix)	J
	25 x 35	3.80	4.37	0.034	0.029	EETHC1C223C_	A	(No suffix)	J
	30 x 25	3.80	4.37	0.034	0.029	EETHC1C223D_	A	(No suffix)	J
27000	22 x 50	4.20	4.83	0.028	0.023	EETHC1C273B_	A	(No suffix)	J
	25 x 40	4.20	4.83	0.028	0.023	EETHC1C273C_	A	(No suffix)	J
	30 x 30	4.20	4.83	0.028	0.023	EETHC1C273D_	A	(No suffix)	J
	35 x 25	4.20	4.83	0.028	0.023	EETHC1C273E_	A	(No suffix)	J
33000	25 x 45	4.70	5.41	0.023	0.019	EETHC1C333C_	A	(No suffix)	J
	30 x 35	4.70	5.41	0.023	0.019	EETHC1C333D_	A	(No suffix)	J
	35 x 30	4.70	5.41	0.023	0.020	EETHC1C333E_	A	(No suffix)	J
39000	30 x 40	5.10	5.87	0.022	0.018	EETHC1C393D_	A	(No suffix)	J
	35 x 35	5.10	5.87	0.022	0.020	EETHC1C393E_	A	(No suffix)	J
47000	30 x 45	5.50	6.33	0.016	0.014	EETHC1C473D_	A	(No suffix)	J
	35 x 40	5.50	6.33	0.021	0.019	EETHC1C473E_	A	(No suffix)	J
56000	30 x 50	6.00	6.90	0.020	0.018	EETHC1C563D_	A	(No suffix)	J
	35 x 45	6.00	6.90	0.020	0.018	EETHC1C563E_	A	(No suffix)	J
<b>25 VDC Working, 32 VDC Surge</b>									
6800	22 x 25	2.40	2.76	0.085	0.064	EETHC1E682B_	A	(No suffix)	J
8200	22 x 30	2.70	3.11	0.071	0.053	EETHC1E822B_	A	(No suffix)	J
	25 x 25	2.70	3.11	0.071	0.053	EETHC1E822C_	A	(No suffix)	J
10000	22 x 35	3.00	3.45	0.058	0.044	EETHC1E103B_	A	(No suffix)	J
12000	22 x 40	3.20	3.68	0.048	0.036	EETHC1E123B_	A	(No suffix)	J
	25 x 30	3.20	3.68	0.048	0.036	EETHC1E123C_	A	(No suffix)	J
15000	22 x 45	3.60	4.14	0.039	0.029	EETHC1E153B_	A	(No suffix)	J
	25 x 35	3.60	4.14	0.039	0.029	EETHC1E153C_	A	(No suffix)	J
	30 x 25	3.60	4.14	0.039	0.029	EETHC1E153D_	A	(No suffix)	J
18000	22 x 50	3.90	4.49	0.032	0.024	EETHC1E183B_	A	(No suffix)	J
	25 x 40	3.90	4.49	0.032	0.024	EETHC1E183C_	A	(No suffix)	J
	30 x 30	3.90	4.49	0.032	0.024	EETHC1E183D_	A	(No suffix)	J
	35 x 25	3.90	4.49	0.032	0.024	EETHC1E183E_	A	(No suffix)	J
22000	25 x 45	4.30	4.95	0.026	0.020	EETHC1E223C_	A	(No suffix)	J
	30 x 35	4.30	4.95	0.026	0.020	EETHC1E223D_	A	(No suffix)	J
	35 x 30	4.30	4.95	0.026	0.020	EETHC1E223E_	A	(No suffix)	J
27000	30 x 40	4.80	5.52	0.021	0.016	EETHC1E273D_	A	(No suffix)	J
	35 x 35	4.80	5.52	0.021	0.016	EETHC1E273E_	A	(No suffix)	J
33000	30 x 45	5.50	6.33	0.018	0.013	EETHC1E333D_	A	(No suffix)	J
	35 x 40	5.50	6.33	0.018	0.014	EETHC1E333E_	A	(No suffix)	J
39000	30 x 50	5.80	6.67	0.017	0.013	EETHC1E393D_	A	(No suffix)	J
	35 x 45	5.80	6.67	0.017	0.014	EETHC1E393E_	A	(No suffix)	J
47000	35 x 50	6.30	7.25	0.017	0.014	EETHC1E473E_	A	(No suffix)	J
<b>35 VDC Working, 44 VDC Surge</b>									
4700	22 x 25	2.20	2.53	0.106	0.079	EETHC1V472B_	A	(No suffix)	J
5600	22 x 30	2.40	2.76	0.089	0.067	EETHC1V562B_	A	(No suffix)	J
	25 x 25	2.40	2.76	0.089	0.067	EETHC1V562C_	A	(No suffix)	J
6800	22 x 35	2.60	2.99	0.073	0.055	EETHC1V682B_	A	(No suffix)	J
8200	22 x 40	2.90	3.34	0.061	0.045	EETHC1V822B_	A	(No suffix)	J
	25 x 30	2.90	3.34	0.061	0.045	EETHC1V822C_	A	(No suffix)	J
10000	22 x 45	3.20	3.68	0.050	0.037	EETHC1V103B_	A	(No suffix)	J
	25 x 35	3.20	3.68	0.050	0.037	EETHC1V103C_	A	(No suffix)	J
	30 x 25	3.20	3.68	0.050	0.037	EETHC1V103D_	A	(No suffix)	J
12000	25 x 40	3.50	4.03	0.041	0.031	EETHC1V123C_	A	(No suffix)	J
	30 x 30	3.50	4.03	0.041	0.031	EETHC1V123D_	A	(No suffix)	J
	35 x 25	3.50	4.03	0.041	0.031	EETHC1V123E_	A	(No suffix)	J
15000	25 x 45	3.90	4.49	0.033	0.025	EETHC1V153C_	A	(No suffix)	J
	30 x 35	3.90	4.49	0.033	0.025	EETHC1V153D_	A	(No suffix)	J
	35 x 30	3.90	4.49	0.033	0.025	EETHC1V153E_	A	(No suffix)	J

## TS-HC Standard Ratings (continued)

Cap. ( $\mu$ F)	Size (mm) D x L	Max 105°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number	Part Number Suffix Slewing Options		
		120Hz	10kHz~	120Hz	20kHz		PVC with Top Plate	PVC without Top Plate	PET without Top Plate
<b>35 VDC Working, 44 VDC Surge (continued)</b>									
18000	30 x 40	4.30	4.95	0.028	0.021	EETHC1V183D_	A	(No suffix)	J
	35 x 35	4.30	4.95	0.028	0.021	EETHC1V183E_	A	(No suffix)	J
22000	30 x 45	5.00	5.75	0.023	0.017	EETHC1V223D_	A	(No suffix)	J
	35 x 40	5.00	5.75	0.023	0.017	EETHC1V223E_	A	(No suffix)	J
27000	30 x 50	5.30	6.10	0.018	0.014	EETHC1V273D_	A	(No suffix)	J
	35 x 45	5.30	6.10	0.018	0.014	EETHC1V273E_	A	(No suffix)	J
33000	35 x 50	5.90	6.79	0.015	0.012	EETHC1V333E_	A	(No suffix)	J
<b>50 VDC Working, 63 VDC Surge</b>									
2700	22 x 25	1.80	2.07	0.154	0.115	EETHC1H272B_	A	(No suffix)	J
3300	22 x 30	2.00	2.30	0.126	0.094	EETHC1H332B_	A	(No suffix)	J
3900	22 x 35	2.20	2.53	0.106	0.080	EETHC1H392B_	A	(No suffix)	J
	25 x 25	2.20	2.53	0.106	0.080	EETHC1H392C_	A	(No suffix)	J
4700	22 x 40	2.50	2.88	0.088	0.066	EETHC1H472B_	A	(No suffix)	J
	25 x 30	2.50	2.88	0.088	0.066	EETHC1H472C_	A	(No suffix)	J
5600	22 x 45	2.80	3.22	0.074	0.056	EETHC1H562B_	A	(No suffix)	J
	25 x 35	2.80	3.22	0.074	0.056	EETHC1H562C_	A	(No suffix)	J
	30 x 25	2.80	3.22	0.074	0.056	EETHC1H562D_	A	(No suffix)	J
6800	22 x 50	3.30	3.80	0.061	0.046	EETHC1H682B_	A	(No suffix)	J
	25 x 40	3.30	3.80	0.061	0.046	EETHC1H682C_	A	(No suffix)	J
	30 x 30	3.30	3.80	0.061	0.046	EETHC1H682D_	A	(No suffix)	J
	35 x 25	3.30	3.80	0.061	0.046	EETHC1H682E_	A	(No suffix)	J
8200	25 x 45	3.60	4.14	0.051	0.038	EETHC1H822C_	A	(No suffix)	J
	30 x 35	3.60	4.14	0.051	0.038	EETHC1H822D_	A	(No suffix)	J
10000	25 x 50	4.00	4.60	0.041	0.031	EETHC1H103C_	A	(No suffix)	J
	30 x 40	4.00	4.60	0.041	0.031	EETHC1H103D_	A	(No suffix)	J
	35 x 30	4.00	4.60	0.041	0.031	EETHC1H103E_	A	(No suffix)	J
12000	30 x 45	4.50	5.18	0.035	0.026	EETHC1H123D_	A	(No suffix)	J
	35 x 35	4.50	5.18	0.035	0.028	EETHC1H123E_	A	(No suffix)	J
15000	30 x 50	4.80	5.52	0.028	0.021	EETHC1H153D_	A	(No suffix)	J
	35 x 40	4.80	5.52	0.028	0.022	EETHC1H153E_	A	(No suffix)	J
18000	35 x 45	5.60	6.44	0.023	0.018	EETHC1H183E_	A	(No suffix)	J
<b>63 VDC Working, 79 VDC Surge</b>									
2200	22 x 25	2.00	2.30	0.151	0.113	EETHC1J222B_	A	(No suffix)	J
2700	22 x 30	2.20	2.53	0.123	0.092	EETHC1J272B_	A	(No suffix)	J
	25 x 25	2.20	2.53	0.123	0.092	EETHC1J272C_	A	(No suffix)	J
3300	22 x 35	2.50	2.88	0.100	0.075	EETHC1J332B_	A	(No suffix)	J
3900	22 x 40	2.70	3.11	0.085	0.064	EETHC1J392B_	A	(No suffix)	J
	25 x 30	2.70	3.11	0.085	0.064	EETHC1J392C_	A	(No suffix)	J
	30 x 25	2.70	3.11	0.085	0.064	EETHC1J392D_	A	(No suffix)	J
4700	22 x 45	3.00	3.45	0.071	0.053	EETHC1J472B_	A	(No suffix)	J
	25 x 35	3.00	3.45	0.071	0.053	EETHC1J472C_	A	(No suffix)	J
5600	22 x 50	3.30	3.80	0.059	0.044	EETHC1J562B_	A	(No suffix)	J
	25 x 40	3.30	3.80	0.059	0.044	EETHC1J562C_	A	(No suffix)	J
	30 x 30	3.30	3.80	0.059	0.044	EETHC1J562D_	A	(No suffix)	J
	35 x 25	3.30	3.80	0.059	0.044	EETHC1J562E_	A	(No suffix)	J
6800	25 x 45	3.60	4.14	0.049	0.037	EETHC1J682C_	A	(No suffix)	J
	30 x 35	3.60	4.14	0.049	0.037	EETHC1J682D_	A	(No suffix)	J
	35 x 30	3.60	4.14	0.049	0.037	EETHC1J682E_	A	(No suffix)	J
8200	30 x 40	3.90	4.49	0.040	0.030	EETHC1J822D_	A	(No suffix)	J
	35 x 35	3.90	4.49	0.040	0.030	EETHC1J822E_	A	(No suffix)	J
10000	30 x 45	4.40	5.06	0.033	0.025	EETHC1J103D_	A	(No suffix)	J
	35 x 40	4.40	5.06	0.033	0.025	EETHC1J103E_	A	(No suffix)	J
12000	30 x 50	4.80	5.52	0.028	0.021	EETHC1J123D_	A	(No suffix)	J
	35 x 45	4.80	5.52	0.028	0.022	EETHC1J123E_	A	(No suffix)	J
15000	35 x 50	5.40	6.21	0.022	0.018	EETHC1J153E_	A	(No suffix)	J
<b>80 VDC Working, 100 VDC Surge</b>									
1200	22 x 25	1.50	1.73	0.235	0.176	EETHC1K122B_	A	(No suffix)	J
1500	22 x 30	1.70	1.96	0.188	0.141	EETHC1K152B_	A	(No suffix)	J
	25 x 25	1.70	1.96	0.188	0.141	EETHC1K152C_	A	(No suffix)	J
1800	22 x 35	1.80	2.07	0.157	0.117	EETHC1K182B_	A	(No suffix)	J
2200	22 x 40	2.10	2.42	0.128	0.096	EETHC1K222B_	A	(No suffix)	J
	25 x 30	2.10	2.42	0.128	0.096	EETHC1K222C_	A	(No suffix)	J

### TS-HC Standard Ratings (continued)

Cap. ( $\mu$ F)	Size (mm) D x L	Max 105°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number	Part Number Suffix Slewing Options		
		120Hz	10kHz~	120Hz	20kHz		PVC with Top Plate	PVC without Top Plate	PET without Top Plate
<b>80 VDC Working, 100 VDC Surge (continued)</b>									
2700	22 x 45	2.40	2.76	0.104	0.078	EETHC1K272B_	A	(No suffix)	J
	25 x 35	2.40	2.76	0.104	0.078	EETHC1K272C_	A	(No suffix)	J
	30 x 25	2.40	2.76	0.104	0.078	EETHC1K272D_	A	(No suffix)	J
3300	22 x 50	2.60	2.99	0.085	0.064	EETHC1K332B_	A	(No suffix)	J
	25 x 40	2.60	2.99	0.085	0.064	EETHC1K332C_	A	(No suffix)	J
	30 x 30	2.60	2.99	0.085	0.064	EETHC1K332D_	A	(No suffix)	J
	35 x 25	2.60	2.99	0.085	0.064	EETHC1K332E_	A	(No suffix)	J
3900	25 x 45	3.00	3.45	0.072	0.054	EETHC1K392C_	A	(No suffix)	J
	30 x 35	3.00	3.45	0.072	0.054	EETHC1K392D_	A	(No suffix)	J
4700	25 x 50	3.30	3.80	0.060	0.045	EETHC1K472C_	A	(No suffix)	J
	30 x 40	3.30	3.80	0.060	0.045	EETHC1K472D_	A	(No suffix)	J
	35 x 30	3.30	3.80	0.060	0.045	EETHC1K472E_	A	(No suffix)	J
5600	30 x 45	3.70	4.26	0.050	0.038	EETHC1K562D_	A	(No suffix)	J
	35 x 35	3.70	4.26	0.050	0.038	EETHC1K562E_	A	(No suffix)	J
6800	30 x 50	3.90	4.49	0.041	0.031	EETHC1K682D_	A	(No suffix)	J
	35 x 40	3.90	4.49	0.041	0.032	EETHC1K682E_	A	(No suffix)	J
8200	35 x 45	4.50	5.18	0.034	0.027	EETHC1K822E_	A	(No suffix)	J
<b>100 VDC Working, 125 VDC Surge</b>									
820	22 x 25	1.40	1.61	0.303	0.197	EETHC2A821B_	A	(No suffix)	J
1200	22 x 30	1.80	2.07	0.207	0.135	EETHC2A122B_	A	(No suffix)	J
	25 x 25	1.80	2.07	0.207	0.135	EETHC2A122C_	A	(No suffix)	J
1500	22 x 35	2.10	2.42	0.166	0.108	EETHC2A152B_	A	(No suffix)	J
	25 x 30	2.10	2.42	0.166	0.108	EETHC2A152C_	A	(No suffix)	J
1800	22 x 40	2.30	2.65	0.138	0.090	EETHC2A182B_	A	(No suffix)	J
	25 x 35	2.30	2.65	0.138	0.090	EETHC2A182C_	A	(No suffix)	J
	30 x 25	2.30	2.65	0.138	0.090	EETHC2A182D_	A	(No suffix)	J
2200	22 x 45	2.60	2.99	0.113	0.073	EETHC2A222B_	A	(No suffix)	J
	25 x 40	2.60	2.99	0.113	0.073	EETHC2A222C_	A	(No suffix)	J
	30 x 30	2.60	2.99	0.113	0.073	EETHC2A222D_	A	(No suffix)	J
	35 x 25	2.60	2.99	0.113	0.073	EETHC2A222E_	A	(No suffix)	J
2700	25 x 45	2.90	3.34	0.092	0.060	EETHC2A272C_	A	(No suffix)	J
	30 x 35	2.90	3.34	0.092	0.060	EETHC2A272D_	A	(No suffix)	J
3300	25 x 50	3.20	3.68	0.075	0.049	EETHC2A332C_	A	(No suffix)	J
	30 x 40	3.20	3.68	0.075	0.049	EETHC2A332D_	A	(No suffix)	J
	35 x 30	3.20	3.68	0.075	0.049	EETHC2A332E_	A	(No suffix)	J
3900	30 x 45	3.60	4.14	0.064	0.043	EETHC2A392D_	A	(No suffix)	J
	35 x 35	3.60	4.14	0.064	0.043	EETHC2A392E_	A	(No suffix)	J
4700	30 x 50	3.80	4.37	0.053	0.038	EETHC2A472D_	A	(No suffix)	J
	35 x 40	3.80	4.37	0.053	0.037	EETHC2A472E_	A	(No suffix)	J
5600	35 x 45	4.20	4.83	0.044	0.031	EETHC2A562E_	A	(No suffix)	J
6800	35 x 50	4.70	5.41	0.037	0.027	EETHC2A682E_	A	(No suffix)	J
<b>160 VDC Working, 200 VDC Surge</b>									
470	22 x 25	1.40	1.96	0.423	0.190	EETHC2C471B_	A	(No suffix)	J
560	22 x 30	1.50	2.10	0.355	0.160	EETHC2C561B_	A	(No suffix)	J
680	22 x 30	1.70	2.38	0.293	0.132	EETHC2C681B_	A	(No suffix)	J
	25 x 25	1.70	2.38	0.293	0.132	EETHC2C681C_	A	(No suffix)	J
820	22 x 35	2.00	2.80	0.243	0.109	EETHC2C821B_	A	(No suffix)	J
	25 x 30	2.00	2.80	0.243	0.109	EETHC2C821C_	A	(No suffix)	J
1000	22 x 40	2.20	3.08	0.199	0.090	EETHC2C102B_	A	(No suffix)	J
	25 x 35	2.20	3.08	0.199	0.090	EETHC2C102C_	A	(No suffix)	J
	30 x 25	2.20	3.08	0.216	0.108	EETHC2C102D_	A	(No suffix)	J
1200	22 x 45	2.30	3.22	0.166	0.075	EETHC2C122B_	A	(No suffix)	J
	25 x 40	2.30	3.22	0.166	0.075	EETHC2C122C_	A	(No suffix)	J
	30 x 30	2.30	3.22	0.166	0.075	EETHC2C122D_	A	(No suffix)	J
	35 x 25	2.30	3.22	0.180	0.090	EETHC2C122E_	A	(No suffix)	J
1500	25 x 45	2.50	3.50	0.133	0.060	EETHC2C152C_	A	(No suffix)	J
	30 x 35	2.50	3.50	0.133	0.060	EETHC2C152D_	A	(No suffix)	J
	35 x 30	2.50	3.50	0.155	0.077	EETHC2C152E_	A	(No suffix)	J
1800	25 x 50	2.70	3.78	0.111	0.050	EETHC2C182C_	A	(No suffix)	J
	30 x 40	2.70	3.78	0.111	0.050	EETHC2C182D_	A	(No suffix)	J
	35 x 30	2.70	3.78	0.120	0.060	EETHC2C182E_	A	(No suffix)	J

### TS-HC Standard Ratings (continued)

Cap. ( $\mu$ F)	Size (mm) D x L	Max 105°C R.C. ( $A_{rms}$ )				20°C ESR ( $\Omega$ , max.)		Panasonic Part Number	Part Number Suffix Slewing Options		
		120Hz	10kHz~	120Hz	20kHz	PVC with Top Plate	PVC without Top Plate		PET without Top Plate		
<b>160 VDC Working, 200 VDC Surge (continued)</b>											
2200	30 x 45	2.90	4.06	0.090	0.041	EETHC2C222D_	A	(No suffix)	J		
	35 x 35	2.90	4.06	0.098	0.049	EETHC2C222E_	A	(No suffix)	J		
2700	30 x 50	3.10	4.34	0.080	0.040	EETHC2C272D_	A	(No suffix)	J		
	35 x 40	3.10	4.34	0.086	0.043	EETHC2C272E_	A	(No suffix)	J		
3300	35 x 50	3.30	4.62	0.070	0.042	EETHC2C332E_	A	(No suffix)	J		
<b>200 VDC Working, 250 VDC Surge</b>											
390	22 x 25	1.31	1.83	0.510	0.230	EETHC2D391B_	A	(No suffix)	J		
470	22 x 30	1.45	2.03	0.423	0.190	EETHC2D471B_	A	(No suffix)	J		
560	22 x 30	1.67	2.34	0.355	0.160	EETHC2D561B_	A	(No suffix)	J		
680	22 x 40	1.75	2.45	0.293	0.132	EETHC2D681B_	A	(No suffix)	J		
	25 x 30	1.75	2.45	0.293	0.132	EETHC2D681C_	A	(No suffix)	J		
820	22 x 45	2.04	2.86	0.243	0.109	EETHC2D821B_	A	(No suffix)	J		
	25 x 35	2.04	2.86	0.243	0.109	EETHC2D821C_	A	(No suffix)	J		
	30 x 25	2.04	2.86	0.243	0.109	EETHC2D821D_	A	(No suffix)	J		
1000	22 x 50	2.30	3.22	0.199	0.090	EETHC2D102B_	A	(No suffix)	J		
	25 x 40	2.07	2.90	0.199	0.090	EETHC2D102C_	F	U	C		
	25 x 45	2.30	3.22	0.199	0.090	EETHC2D102C_	A	(No suffix)	J		
	30 x 30	2.30	3.22	0.199	0.090	EETHC2D102D_	A	(No suffix)	J		
	35 x 25	2.30	3.22	0.216	0.097	EETHC2D102E_	A	(No suffix)	J		
1200	25 x 45	2.38	3.33	0.166	0.075	EETHC2D122C_	F	U	C		
	25 x 50	2.65	3.71	0.166	0.075	EETHC2D122C_	A	(No suffix)	J		
	30 x 35	2.65	3.71	0.166	0.075	EETHC2D122D_	A	(No suffix)	J		
	35 x 30	2.65	3.71	0.180	0.090	EETHC2D122E_	A	(No suffix)	J		
1500	30 x 40	2.80	3.92	0.133	0.060	EETHC2D152D_	A	(No suffix)	J		
	35 x 30	2.80	3.92	0.144	0.072	EETHC2D152E_	A	(No suffix)	J		
1800	30 x 45	3.08	4.31	0.111	0.050	EETHC2D182D_	A	(No suffix)	J		
	35 x 40	3.08	4.31	0.129	0.064	EETHC2D182E_	A	(No suffix)	J		
2200	30 x 50	3.48	4.87	0.090	0.041	EETHC2D222D_	A	(No suffix)	J		
	35 x 45	3.48	4.87	0.098	0.044	EETHC2D222E_	A	(No suffix)	J		
<b>250 VDC Working, 300 VDC Surge</b>											
270	22 x 25	1.10	1.54	0.614	0.276	EETHC2E271B_	A	(No suffix)	J		
330	22 x 30	1.20	1.68	0.502	0.226	EETHC2E331B_	A	(No suffix)	J		
	25 x 25	1.20	1.68	0.502	0.226	EETHC2E331C_	A	(No suffix)	J		
390	22 x 30	1.20	1.68	0.425	0.191	EETHC2E391B_	F	U	C		
	22 x 35	1.30	1.82	0.425	0.191	EETHC2E391B_	A	(No suffix)	J		
	25 x 25	1.30	1.82	0.425	0.191	EETHC2E391C_	A	(No suffix)	J		
470	22 x 35	1.20	1.68	0.353	0.159	EETHC2E471B_	F	U	C		
	22 x 40	1.40	1.96	0.353	0.159	EETHC2E471B_	A	(No suffix)	J		
	25 x 30	1.40	1.96	0.353	0.159	EETHC2E471C_	A	(No suffix)	J		
	30 x 25	1.40	1.96	0.353	0.159	EETHC2E471D_	A	(No suffix)	J		
560	22 x 40	1.40	1.96	0.296	0.133	EETHC2E561B_	F	U	C		
	22 x 45	1.50	2.10	0.296	0.133	EETHC2E561B_	A	(No suffix)	J		
	25 x 35	1.50	2.10	0.296	0.133	EETHC2E561C_	A	(No suffix)	J		
	30 x 25	1.50	2.10	0.296	0.133	EETHC2E561D_	A	(No suffix)	J		
680	22 x 45	1.50	2.10	0.244	0.110	EETHC2E681B_	F	U	C		
	22 x 50	1.70	2.38	0.244	0.110	EETHC2E681B_	A	(No suffix)	J		
	25 x 40	1.70	2.38	0.244	0.110	EETHC2E681C_	A	(No suffix)	J		
	30 x 30	1.70	2.38	0.244	0.110	EETHC2E681D_	A	(No suffix)	J		
	35 x 25	1.70	2.38	0.244	0.110	EETHC2E681E_	A	(No suffix)	J		
820	25 x 45	2.00	2.80	0.202	0.091	EETHC2E821C_	A	(No suffix)	J		
	30 x 35	2.00	2.80	0.202	0.091	EETHC2E821D_	A	(No suffix)	J		
	35 x 30	2.00	2.80	0.202	0.091	EETHC2E821E_	A	(No suffix)	J		
1000	25 x 50	2.20	3.08	0.166	0.075	EETHC2E102C_	F	U	C		
	30 x 40	2.20	3.08	0.166	0.075	EETHC2E102D_	A	(No suffix)	J		
	35 x 30	2.20	3.08	0.166	0.075	EETHC2E102E_	A	(No suffix)	J		
1200	30 x 45	2.30	3.22	0.138	0.062	EETHC2E122D_	A	(No suffix)	J		
	35 x 35	2.30	3.22	0.138	0.062	EETHC2E122E_	A	(No suffix)	J		
1500	35 x 45	2.50	3.50	0.111	0.050	EETHC2E152E_	A	(No suffix)	J		
1800	35 x 45	2.50	3.50	0.092	0.041	EETHC2E182E_	F	U	C		
	35 x 50	2.70	3.78	0.092	0.041	EETHC2E182E_	A	(No suffix)	J		

### TS-HC Standard Ratings (continued)

Cap. ( $\mu$ F)	Size (mm) D x L	Max 105°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number	Part Number Suffix Slewing Options		
		120Hz	10kHz~	120Hz	20kHz		PVC with Top Plate	PVC without Top Plate	PET without Top Plate
<b>350 VDC Working, 400 VDC Surge</b>									
120	22 x 25	0.75	1.05	1.382	0.622	EETHC2V121B_	A	(No suffix)	J
150	22 x 30	0.82	1.15	1.105	0.497	EETHC2V151B_	A	(No suffix)	J
180	22 x 30	0.90	1.26	0.921	0.414	EETHC2V181B_	A	(No suffix)	J
	25 x 25	0.90	1.26	0.921	0.414	EETHC2V181C_	A	(No suffix)	J
220	22 x 35	1.00	1.40	0.754	0.339	EETHC2V221B_	A	(No suffix)	J
	25 x 30	1.00	1.40	0.754	0.339	EETHC2V221C_	A	(No suffix)	J
270	25 x 35	1.10	1.54	0.614	0.276	EETHC2V271C_	A	(No suffix)	J
	30 x 25	1.10	1.54	0.614	0.276	EETHC2V271D_	A	(No suffix)	J
330	25 x 40	1.20	1.68	0.502	0.226	EETHC2V331C_	A	(No suffix)	J
	30 x 30	1.20	1.68	0.502	0.226	EETHC2V331D_	A	(No suffix)	J
390	25 x 45	1.30	1.82	0.425	0.191	EETHC2V391C_	A	(No suffix)	J
	30 x 35	1.30	1.82	0.425	0.191	EETHC2V391D_	A	(No suffix)	J
470	25 x 50	1.40	1.96	0.353	0.159	EETHC2V471C_	A	(No suffix)	J
	35 x 30	1.40	1.96	0.353	0.159	EETHC2V471E_	A	(No suffix)	J
560	30 x 45	1.50	2.10	0.296	0.133	EETHC2V561D_	A	(No suffix)	J
	35 x 35	1.50	2.10	0.296	0.133	EETHC2V561E_	A	(No suffix)	J
680	30 x 50	1.70	2.38	0.244	0.110	EETHC2V681D_	A	(No suffix)	J
	35 x 40	1.70	2.38	0.244	0.110	EETHC2V681E_	A	(No suffix)	J
820	35 x 45	1.90	2.66	0.202	0.091	EETHC2V821E_	A	(No suffix)	J
<b>400 VDC Working, 450 VDC Surge</b>									
100	22 x 25	0.70	0.98	1.824	0.821	EETHC2G101B_	A	(No suffix)	J
120	22 x 30	0.75	1.05	1.520	0.684	EETHC2G121B_	A	(No suffix)	J
150	22 x 30	0.88	1.23	1.216	0.547	EETHC2G151B_	A	(No suffix)	J
180	22 x 35	0.95	1.33	1.013	0.456	EETHC2G181B_	A	(No suffix)	J
	25 x 30	0.95	1.33	1.013	0.456	EETHC2G181C_	A	(No suffix)	J
220	22 x 40	1.00	1.40	0.829	0.373	EETHC2G221B_	F	U	C
	22 x 45	1.10	1.54	0.829	0.373	EETHC2G221B_	A	(No suffix)	J
	25 x 35	1.10	1.54	0.829	0.373	EETHC2G221C_	A	(No suffix)	J
	30 x 25	1.10	1.54	0.829	0.373	EETHC2G221D_	A	(No suffix)	J
270	22 x 45	1.10	1.54	0.675	0.304	EETHC2G271B_	F	U	C
	22 x 50	1.22	1.71	0.675	0.304	EETHC2G271B_	A	(No suffix)	J
	25 x 40	1.22	1.71	0.675	0.304	EETHC2G271C_	A	(No suffix)	J
	30 x 30	1.22	1.71	0.675	0.304	EETHC2G271D_	A	(No suffix)	J
	35 x 25	1.22	1.71	0.675	0.304	EETHC2G271E_	A	(No suffix)	J
330	25 x 45	1.44	2.02	0.553	0.249	EETHC2G331C_	A	(No suffix)	J
	30 x 35	1.44	2.02	0.553	0.249	EETHC2G331D_	A	(No suffix)	J
	35 x 30	1.44	2.02	0.553	0.249	EETHC2G331E_	A	(No suffix)	J
390	25 x 50	1.55	2.17	0.468	0.210	EETHC2G391C_	A	(No suffix)	J
	30 x 35	1.40	1.96	0.468	0.210	EETHC2G391D_	F	U	C
	30 x 40	1.55	2.17	0.468	0.210	EETHC2G391D_	A	(No suffix)	J
	35 x 30	1.55	2.17	0.468	0.210	EETHC2G391E_	A	(No suffix)	J
470	30 x 45	1.68	2.35	0.388	0.175	EETHC2G471D_	A	(No suffix)	J
	35 x 35	1.68	2.35	0.388	0.175	EETHC2G471E_	A	(No suffix)	J
560	30 x 50	1.90	2.66	0.326	0.147	EETHC2G561D_	A	(No suffix)	J
	35 x 40	1.90	2.66	0.326	0.147	EETHC2G561E_	A	(No suffix)	J
680	35 x 45	2.12	2.97	0.268	0.121	EETHC2G681E_	A	(No suffix)	J
820	35 x 50	2.30	3.22	0.202	0.091	EETHC2G821E_	A	(No suffix)	J
<b>420 VDC Working, 470 VDC Surge</b>									
120	22 x 30	0.74	1.04	1.520	0.684	EETHC2S121B_	A	(No suffix)	J
	25 x 25	0.74	1.04	1.520	0.684	EETHC2S121C_	A	(No suffix)	J
150	22 x 35	0.84	1.18	1.216	0.547	EETHC2S151B_	A	(No suffix)	J
	25 x 30	0.91	1.27	1.103	0.456	EETHC2S181B_	A	(No suffix)	J
180	22 x 40	0.91	1.27	1.103	0.456	EETHC2S181C_	A	(No suffix)	J
	25 x 30	0.91	1.27	1.103	0.456	EETHC2S181C_	A	(No suffix)	J
220	22 x 45	1.05	1.47	0.829	0.373	EETHC2S221B_	A	(No suffix)	J
	25 x 35	1.05	1.47	0.829	0.373	EETHC2S221C_	A	(No suffix)	J
	30 x 25	1.05	1.47	0.829	0.373	EETHC2S221D_	A	(No suffix)	J
270	22 x 50	1.20	1.68	0.675	0.304	EETHC2S271B_	A	(No suffix)	J
	25 x 40	1.20	1.68	0.675	0.304	EETHC2S271C_	A	(No suffix)	J
	30 x 30	1.20	1.68	0.675	0.304	EETHC2S271D_	A	(No suffix)	J
	35 x 25	1.20	1.68	0.675	0.304	EETHC2S271E_	A	(No suffix)	J
330	25 x 50	1.42	1.99	0.553	0.249	EETHC2S331C_	A	(No suffix)	J

### TS-HC Standard Ratings (continued)

TS-HC Standard Ratings (continued)							Part Number Suffix Slewing Options		
Cap. ( $\mu$ F)	Size (mm) D x L	Max 105°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number	PVC with Top Plate	PVC without Top Plate	PET without Top Plate
		120Hz	10kHz~	120Hz	20kHz				
<b>420 VDC Working, 470 VDC Surge (continued)</b>									
330	30 x 35	1.42	1.99	0.553	0.249	EETHC2S331D_	A	(No suffix)	J
	35 x 35	1.42	1.99	0.553	0.249	EETHC2S331E_	A	(No suffix)	J
390	30 x 40	1.55	2.17	0.468	0.210	EETHC2S391D_	A	(No suffix)	J
	35 x 35	1.55	2.17	0.468	0.210	EETHC2S391E_	A	(No suffix)	J
470	30 x 45	1.71	2.39	0.388	0.175	EETHC2S471D_	A	(No suffix)	J
	35 x 35	1.71	2.39	0.388	0.175	EETHC2S471E_	A	(No suffix)	J
560	30 x 50	1.90	2.66	0.326	0.147	EETHC2S561D_	A	(No suffix)	J
	35 x 45	1.90	2.66	0.326	0.147	EETHC2S561E_	A	(No suffix)	J
680	35 x 50	2.10	2.94	0.268	0.121	EETHC2S681E_	A	(No suffix)	J
<b>450 VDC Working, 500 VDC Surge</b>									
100	22 x 30	0.64	0.90	1.824	0.821	EETHC2W101B_	A	(No suffix)	J
	25 x 25	0.64	0.90	1.824	0.821	EETHC2W101C_	A	(No suffix)	J
120	22 x 35	0.72	1.01	1.520	0.684	EETHC2W121B_	A	(No suffix)	J
	25 x 30	0.72	1.01	1.520	0.684	EETHC2W121C_	A	(No suffix)	J
150	22 x 40	0.79	1.11	1.216	0.547	EETHC2W151B_	A	(No suffix)	J
	25 x 30	0.79	1.11	1.216	0.547	EETHC2W151C_	A	(No suffix)	J
	30 x 25	0.79	1.11	1.216	0.547	EETHC2W151D_	A	(No suffix)	J
180	22 x 45	0.87	1.22	1.013	0.456	EETHC2W181B_	A	(No suffix)	J
	25 x 35	0.79	1.11	1.013	0.456	EETHC2W181C_	F	U	C
	25 x 40	0.87	1.22	1.013	0.456	EETHC2W181C_	A	(No suffix)	J
	30 x 30	0.87	1.22	1.013	0.456	EETHC2W181D_	A	(No suffix)	J
220	22 x 50	0.90	1.26	0.829	0.373	EETHC2W221B_	A	(No suffix)	J
	25 x 45	1.00	1.40	0.829	0.373	EETHC2W221C_	A	(No suffix)	J
	30 x 30	1.00	1.40	0.829	0.373	EETHC2W221D_	A	(No suffix)	J
	35 x 25	1.00	1.40	0.829	0.373	EETHC2W221E_	A	(No suffix)	J
270	25 x 50	1.19	1.67	0.675	0.304	EETHC2W271C_	A	(No suffix)	J
	30 x 35	1.07	1.50	0.675	0.304	EETHC2W271D_	F	U	C
	30 x 40	1.19	1.67	0.675	0.304	EETHC2W271D_	A	(No suffix)	J
	35 x 30	1.19	1.67	0.675	0.304	EETHC2W271E_	A	(No suffix)	J
330	30 x 40	1.24	1.74	0.553	0.249	EETHC2W331D_	F	U	C
	30 x 45	1.38	1.93	0.553	0.249	EETHC2W331D_	A	(No suffix)	J
	35 x 35	1.38	1.93	0.553	0.249	EETHC2W331E_	A	(No suffix)	J
390	30 x 45	1.39	1.95	0.468	0.210	EETHC2W391D_	F	U	C
	30 x 50	1.55	2.17	0.468	0.210	EETHC2W391D_	A	(No suffix)	J
	35 x 40	1.55	2.17	0.468	0.210	EETHC2W391E_	A	(No suffix)	J
470	35 x 45	1.74	2.44	0.388	0.175	EETHC2W471E_	A	(No suffix)	J

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