

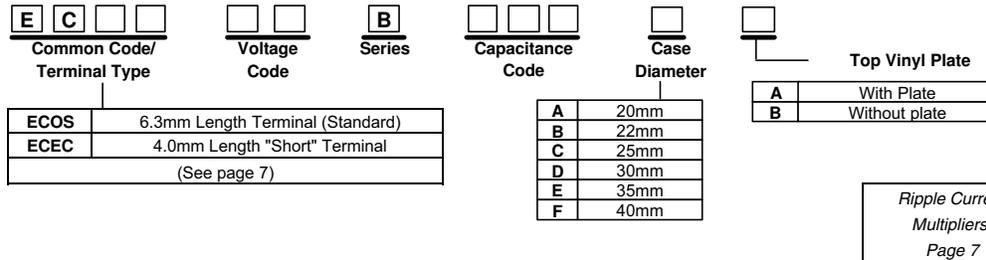
TS-HB Series two terminal snap-in

- Very compact size (20 ~ 25% smaller than TS-HA series)
- Long 3000 hour life at 105°C with high ripple current capability
- **NEW:** 40mm diameter case sizes
- Can vent construction



Rated Working Voltage:	160 ~ 250 VDC	385 ~ 450 VDC
Operating Temperature:	-40 ~ +105°C	-25 ~ +105°C
Nominal Capacitance:	330 ~ 2700μF (±20%)	82 ~ 560μF (±20%)
Dissipation Factor: (120 Hz, +20°C)	Working Voltage [V]:	160 ~ 450
	Max. D.F. (%):	15
Endurance:	3000 hours at +105°C with maximum specified ripple current (see page 4)	

Part Number System



TS-HB Standard Ratings

Cap. (μF)	Size (mm) D x L	Max 105°C R.C. (A _{rms})		20°C ESR (Ω, max.)		Panasonic Part Number	Cap. (μF)	Size (mm) D x L	Max 105°C R.C. (A _{rms})		20°C ESR (Ω, max.)		Panasonic Part Number
		120Hz	10k~100kHz	120Hz	20kHz				120Hz	10k~100kHz	120Hz	20kHz	
160 VDC Working, 200 VDC Surge							200 VDC Working, 250 VDC Surge						
470	22 x 30	1.40	1.96	0.423	0.190	ECOS2CB471BA	390	22 x 30	1.30	1.82	0.510	0.230	ECOS2DB391BA
560	22 x 35	1.50	2.10	0.355	0.160	ECOS2CB561BA	470	22 x 35	1.40	1.96	0.423	0.190	ECOS2DB471BA
680	22 x 40	1.70	2.38	0.293	0.132	ECOS2CB681BA	560	22 x 40	1.50	2.10	0.355	0.160	ECOS2DB561BA
820	22 x 45	2.00	2.80	0.243	0.109	ECOS2CB821BA	680	22 x 45	1.70	2.38	0.293	0.132	ECOS2DB681BA
1000	22 x 50	2.20	3.08	0.199	0.090	ECOS2CB102BA	390	25 x 25	1.30	1.82	0.510	0.230	ECOS2DB391CA
680	25 x 30	1.70	2.38	0.293	0.132	ECOS2CB681CA	470	25 x 30	1.40	1.96	0.423	0.190	ECOS2DB471CA
820	25 x 35	2.00	2.80	0.243	0.109	ECOS2CB821CA	560	25 x 30	1.50	2.10	0.355	0.160	ECOS2DB561CA
1000	25 x 40	2.20	3.08	0.199	0.090	ECOS2CB102CA	680	25 x 35	1.70	2.38	0.293	0.132	ECOS2DB681CA
1200	25 x 45	2.30	3.22	0.180	0.090	ECOS2CB122CA	820	25 x 45	2.00	2.80	0.263	0.118	ECOS2DB821CA
1000	30 x 30	2.20	3.08	0.199	0.090	ECOS2CB102DA	1000	25 x 50	2.20	3.08	0.216	0.108	ECOS2DB102CA
1200	30 x 35	2.30	3.22	0.180	0.090	ECOS2CB122DA	560	30 x 25	1.50	2.10	0.355	0.160	ECOS2DB561DA
1500	30 x 40	2.50	3.50	0.144	0.072	ECOS2CB152DA	820	30 x 30	2.00	2.80	0.263	0.118	ECOS2DB821DA
1800	30 x 45	2.70	3.78	0.129	0.064	ECOS2CB182DA	1000	30 x 35	2.20	3.08	0.216	0.108	ECOS2DB102DA
1000	35 x 25	2.20	3.08	0.199	0.090	ECOS2CB102EA	1200	30 x 40	2.30	3.22	0.193	0.097	ECOS2DB122DA
1200	35 x 30	2.30	3.22	0.180	0.090	ECOS2CB122EA	1500	30 x 50	2.50	3.50	0.155	0.077	ECOS2DB152DA
1500	35 x 30	2.50	3.50	0.144	0.072	ECOS2CB152EA	820	35 x 25	2.00	2.80	0.263	0.118	ECOS2DB821EA
1800	35 x 35	2.70	3.78	0.129	0.064	ECOS2CB182EA	1000	35 x 30	2.20	3.08	0.216	0.108	ECOS2DB102EA
2200	35 x 45	2.90	4.06	0.105	0.063	ECOS2CB222EA	1200	35 x 35	2.30	3.22	0.193	0.097	ECOS2DB122EA
2700	35 x 50	3.10	4.34	0.086	0.052	ECOS2CB272EA	1500	35 x 40	2.50	3.50	0.155	0.077	ECOS2DB152EA
2200	40 x 40	2.90	4.06	0.105	0.063	ECOS2CB222FA	1800	35 x 45	2.70	3.78	0.129	0.077	ECOS2DB182EA
3300	40 x 50	3.36	4.70	0.070	0.042	ECOS2CB332FA	2200	35 x 50	2.90	4.06	0.105	0.063	ECOS2DB222EA
							1800	40 x 40	2.70	3.78	0.129	0.077	ECOS2DB182FA
							2700	40 x 50	3.55	4.97	0.086	0.052	ECOS2DB272FA

TS-HB Standard Ratings (continued)

Cap. (μ F)	Size (mm) D x L	Max 105°C R.C. (A_{rms})		20°C ESR (Ω , max.)		Panasonic Part Number	Cap. (μ F)	Size (mm) D x L	Max 105°C R.C. (A_{rms})		20°C ESR (Ω , max.)		Panasonic Part Number
		120Hz	10k~100kHz	120Hz	20kHz				120Hz	10k~100kHz	120Hz	20kHz	
250 VDC Working, 300 VDC Surge							385 VDC Working, 435 VDC Surge						
180	22 x 25	0.90	1.26	0.921	0.461	ECOS2EB181BA	82	22 x 30	0.64	0.90	2.022	0.809	ECOS2TB820BA
220	22 x 30	1.00	1.40	0.754	0.377	ECOS2EB221BA	100	22 x 30	0.69	0.97	1.658	0.663	ECOS2TB101BA
270	22 x 35	1.10	1.54	0.614	0.307	ECOS2EB271BA	120	22 x 35	0.75	1.05	1.382	0.553	ECOS2TB121BA
330	22 x 40	1.20	1.68	0.502	0.251	ECOS2EB331BA	150	22 x 40	0.82	1.15	1.105	0.442	ECOS2TB151BA
390	22 x 45	1.30	1.82	0.425	0.213	ECOS2EB391BA	180	22 x 45	0.95	1.33	0.921	0.368	ECOS2TB181BA
470	22 x 50	1.40	1.96	0.353	0.176	ECOS2EB471BA	100	25 x 25	0.69	0.97	1.658	0.663	ECOS2TB101CA
330	25 x 30	1.20	1.68	0.502	0.251	ECOS2EB331CA	120	25 x 30	0.75	1.05	1.382	0.553	ECOS2TB121CA
470	25 x 40	1.40	1.96	0.353	0.176	ECOS2EB471CA	150	25 x 30	0.82	1.15	1.105	0.442	ECOS2TB151CA
560	25 x 45	1.50	2.10	0.296	0.148	ECOS2EB561CA	180	25 x 35	0.95	1.33	0.921	0.368	ECOS2TB181CA
680	25 x 50	1.70	2.38	0.244	0.134	ECOS2EB681CA	220	25 x 45	1.10	1.54	0.754	0.301	ECOS2TB221CA
390	30 x 25	1.30	1.82	0.425	0.213	ECOS2EB391DA	270	25 x 50	1.20	1.68	0.675	0.270	ECOS2TB271CA
470	30 x 30	1.40	1.96	0.353	0.176	ECOS2EB471DA	150	30 x 25	0.82	1.15	1.105	0.442	ECOS2TB151DA
680	30 x 40	1.70	2.38	0.244	0.134	ECOS2EB681DA	180	30 x 30	0.95	1.33	0.921	0.368	ECOS2TB181DA
820	30 x 45	2.00	2.80	0.202	0.111	ECOS2EB821DA	220	30 x 30	1.10	1.54	0.829	0.332	ECOS2TB221DA
1000	30 x 50	2.20	3.08	0.199	0.109	ECOS2EB102DA	330	30 x 45	1.35	1.89	0.553	0.221	ECOS2TB331DA
560	35 x 25	1.50	2.10	0.296	0.148	ECOS2EB561EA	390	30 x 50	1.55	2.17	0.510	0.204	ECOS2TB391DA
680	35 x 30	1.70	2.38	0.244	0.134	ECOS2EB681EA	220	35 x 25	1.10	1.54	0.829	0.332	ECOS2TB221EA
820	35 x 35	2.00	2.80	0.202	0.111	ECOS2EB821EA	270	35 x 30	1.20	1.68	0.675	0.270	ECOS2TB271EA
1000	35 x 40	2.20	3.08	0.199	0.109	ECOS2EB102EA	330	35 x 35	1.35	1.89	0.553	0.221	ECOS2TB331EA
1200	35 x 45	2.30	3.22	0.166	0.099	ECOS2EB122EA	470	35 x 45	1.75	2.45	0.423	0.212	ECOS2TB471EA
1500	35 x 50	2.50	3.50	0.144	0.093	ECOS2EB152EA	560	35 x 50	1.80	2.52	0.355	0.178	ECOS2TB561EA
1200	40 x 40	2.66	3.72	0.180	0.117	ECOS2EB122FA	470	40 x 40	1.75	2.45	0.423	0.212	ECOS2TB471FA
1800	40 x 50	3.25	4.55	0.120	0.078	ECOS2EB182FA	680	40 x 50	2.10	2.94	0.293	0.146	ECOS2TB681FA
400 VDC Working, 450 VDC Surge							450 VDC Working, 500 VDC Surge						
82	22 x 30	0.64	0.90	2.022	0.708	ECOS2GB820BA	82	22 x 30	0.56	0.78	2.022	0.708	ECOS2WB820BA
100	22 x 30	0.69	0.97	1.658	0.580	ECOS2GB101BA	100	22 x 35	0.64	0.90	1.658	0.580	ECOS2WB101BA
120	22 x 35	0.75	1.05	1.382	0.484	ECOS2GB121BA	120	22 x 40	0.72	1.01	1.382	0.484	ECOS2WB121BA
150	22 x 40	0.82	1.15	1.105	0.387	ECOS2GB151BA	150	22 x 50	0.79	1.11	1.105	0.387	ECOS2WB151BA
180	22 x 45	0.95	1.33	0.921	0.322	ECOS2GB181BA	82	25 x 25	0.56	0.78	2.022	0.708	ECOS2WB820CA
100	25 x 25	0.69	0.97	1.658	0.580	ECOS2GB101CA	100	25 x 30	0.64	0.90	1.658	0.580	ECOS2WB101CA
120	25 x 30	0.75	1.05	1.382	0.484	ECOS2GB121CA	120	25 x 35	0.72	1.01	1.382	0.484	ECOS2WB121CA
150	25 x 30	0.82	1.15	1.105	0.387	ECOS2GB151CA	150	25 x 40	0.79	1.11	1.105	0.387	ECOS2WB151CA
180	25 x 35	0.95	1.33	0.921	0.322	ECOS2GB181CA	180	25 x 45	0.87	1.22	0.921	0.322	ECOS2WB181CA
220	25 x 45	1.10	1.54	0.754	0.264	ECOS2GB221CA	220	25 x 50	1.00	1.40	0.754	0.264	ECOS2WB221CA
270	25 x 50	1.20	1.68	0.614	0.215	ECOS2GB271CA	120	30 x 25	0.72	1.01	1.382	0.484	ECOS2WB121DA
150	30 x 25	0.82	1.15	1.105	0.387	ECOS2GB151DA	150	30 x 30	0.79	1.11	1.105	0.387	ECOS2WB151DA
180	30 x 30	0.95	1.33	0.921	0.322	ECOS2GB181DA	180	30 x 35	0.87	1.22	0.921	0.322	ECOS2WB181DA
220	30 x 30	1.10	1.54	0.754	0.264	ECOS2GB221DA	220	30 x 40	1.00	1.40	0.754	0.264	ECOS2WB221DA
270	30 x 35	1.20	1.68	0.614	0.215	ECOS2GB271DA	270	30 x 45	1.19	1.67	0.614	0.215	ECOS2WB271DA
330	30 x 45	1.35	1.89	0.502	0.201	ECOS2GB331DA	330	30 x 50	1.38	1.93	0.502	0.176	ECOS2WB331DA
390	30 x 50	1.55	2.17	0.425	0.170	ECOS2GB391DA	150	35 x 25	0.79	1.11	1.105	0.387	ECOS2WB151EA
220	35 x 25	1.10	1.54	0.754	0.264	ECOS2GB221EA	220	35 x 30	1.00	1.40	0.754	0.264	ECOS2WB221EA
270	35 x 30	1.20	1.68	0.614	0.215	ECOS2GB271EA	270	35 x 35	1.19	1.67	0.614	0.215	ECOS2WB271EA
330	35 x 35	1.35	1.89	0.502	0.201	ECOS2GB331EA	330	35 x 40	1.38	1.93	0.502	0.176	ECOS2WB331EA
390	35 x 40	1.55	2.17	0.425	0.170	ECOS2GB391EA	390	35 x 45	1.55	2.17	0.425	0.149	ECOS2WB391EA
470	35 x 45	1.75	2.45	0.353	0.141	ECOS2GB471EA	470	35 x 50	1.74	2.44	0.353	0.123	ECOS2WB471EA
560	35 x 50	1.80	2.52	0.296	0.118	ECOS2GB561EA	390	40 x 40	1.68	2.35	0.425	0.170	ECOS2WB391FA
470	40 x 40	1.75	2.45	0.353	0.141	ECOS2GB471FA	560	40 x 50	2.17	3.04	0.296	0.118	ECOS2WB561FA
680	40 x 50	2.10	2.94	0.244	0.098	ECOS2GB681FA							