TS-XB Series *105°C, 7000 hours*



- ***Designed for long life industrial applications***
- ***Compact size***
- ***Compact size***

Rated Working Voltage:	160 ~ 250 VDC	315 ~ 450 VDC
Operating Temperature:	-40 ~ +105ºC	-25 ~ +105ºC
Nominal Capacitance:	180 ~ 2200µF	39 ~ 680µF
Capacitance Tolerance:	± 20%	
Dissipation Factor:	15% maximum (120Hz, +20°C)	
Leakage Current:	3√CV (µA) max. after 5 minutes; *C = Capacitance in µF, V = WV*	

Ripple Current Multipliers:

Ripple Current Frequency Factors						
Frequency(Hz):	50	60	100~120	500	1k	10k~
160~450WV:	0.75	0.8	1.0	1.2	1.25	1.4

Ripple Current Ambient Temperature Factors*					
Ambient Temperature:	105°C	85°C	70°C	60°C	≤45°C
Multiplier:	1.0	1.7	2.0	2.2	2.35

Endurance:	7000 hours at +105ºC 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

E E T	X B	□ □	□ □ □	□	□
Common Code	Series Code	Voltage Code	Capacitance Code		

Diameter / Terminal Code

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

(Please see page 10 for details)

Insulation Options

A	PVC with top plate
	PVC without top plate (no suffix)
J	PET sleeve without plate

TS-XB 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}) 120Hz	Max 105°C R.C. (A_{rms}) 10kHz~	20°C ESR (Ω, max.) 120Hz	20°C ESR (Ω, max.) 20kHz	Panasonic Part Number
160 VDC Working, 200 VDC Surge						
270	22 x 25	1.10	1.54	0.655	0.295	**EETXB2C271BA**
330	22 x 30	1.20	1.68	0.536	0.241	**EETXB2C331BA**
390	22 x 30	1.30	1.82	0.453	0.204	**EETXB2C391BA**
	25 x 25	1.30	1.82	0.453	0.204	**EETXB2C391CA**
470	22 x 35	1.40	1.96	0.376	0.169	**EETXB2C471BA**
	25 x 30	1.40	1.96	0.376	0.169	**EETXB2C471CA**
560	22 x 40	1.50	2.10	0.316	0.142	**EETXB2C561BA**
	25 x 30	1.50	2.10	0.316	0.142	**EETXB2C561CA**
	30 x 25	1.50	2.10	0.316	0.142	**EETXB2C561DA**
680	22 x 45	1.70	2.38	0.260	0.117	**EETXB2C681BA**
	25 x 35	1.70	2.38	0.260	0.117	**EETXB2C681CA**
	30 x 30	1.70	2.38	0.260	0.117	**EETXB2C681DA**
820	25 x 40	2.00	2.80	0.216	0.097	**EETXB2C821CA**
	30 x 30	2.00	2.80	0.216	0.097	**EETXB2C821DA**
1000	25 x 45	2.20	3.08	0.177	0.080	**EETXB2C102CA**
	30 x 35	2.20	3.08	0.177	0.080	**EETXB2C102DA**
1200	25 x 50	2.30	3.22	0.160	0.080	**EETXB2C122CA**
	30 x 40	2.30	3.22	0.160	0.080	**EETXB2C122DA**
	35 x 35	2.30	3.22	0.160	0.080	**EETXB2C122EA**
1500	30 x 45	2.50	3.50	0.128	0.064	**EETXB2C152DA**
	35 x 35	2.50	3.50	0.128	0.064	**EETXB2C152EA**
1800	30 x 50	2.70	3.78	0.115	0.057	**EETXB2C182DA**
	35 x 40	2.70	3.78	0.115	0.057	**EETXB2C182EA**
2200	35 x 50	2.90	4.06	0.094	0.056	**EETXB2C222EA**
180 VDC Working, 225 VDC Surge						
220	22 x 25	1.00	1.40	0.804	0.36	**EETXB2P221BA**
270	22 x 25	1.10	1.54	0.655	0.29	**EETXB2P271BA**
330	22 x 30	1.20	1.68	0.536	0.24	**EETXB2P331BA**
	25 x 25	1.20	1.68	0.536	0.24	**EETXB2P331CA**
390	22 x 30	1.30	1.82	0.453	0.20	**EETXB2P391BA**
	25 x 25	1.30	1.82	0.453	0.20	**EETXB2P391CA**

Cap. (µF)	Size (mm) D x L	Max 105°C R.C. (A_{rms}) 120Hz	Max 105°C R.C. (A_{rms}) 10kHz~	20°C ESR (Ω, max.) 120Hz	20°C ESR (Ω, max.) 20kHz	Panasonic Part Number
180 VDC Working, 225 VDC Surge (continued)						
470	22 x 35	1.40	1.96	0.376	0.17	**EETXB2P471BA**
	25 x 30	1.40	1.96	0.376	0.17	**EETXB2P471CA**
	30 x 25	1.40	1.96	0.376	0.17	**EETXB2P471DA**
560	22 x 40	1.50	2.10	0.316	0.14	**EETXB2P561BA**
	25 x 35	1.50	2.10	0.316	0.14	**EETXB2P561CA**
	30 x 25	1.50	2.10	0.316	0.14	**EETXB2P561DA**
680	22 x 50	1.70	2.38	0.260	0.12	**EETXB2P681BA**
	25 x 40	1.70	2.38	0.260	0.12	**EETXB2P681CA**
	30 x 30	1.70	2.38	0.260	0.12	**EETXB2P681DA**
820	25 x 45	2.00	2.80	0.216	0.10	**EETXB2P821CA**
	30 x 35	2.00	2.80	0.234	0.11	**EETXB2P821DA**
	35 x 30	2.00	2.80	0.234	0.11	**EETXB2P821EA**
1000	30 x 40	2.20	3.08	0.192	0.10	**EETXB2P102DA**
	35 x 30	2.20	3.08	0.192	0.10	**EETXB2P102EA**
1200	30 x 45	2.30	3.22	0.160	0.08	**EETXB2P122DA**
	35 x 35	2.30	3.22	0.172	0.09	**EETXB2P122EA**
1500	30 x 50	2.50	3.50	0.138	0.07	**EETXB2P152DA**
	35 x 40	2.50	3.50	0.138	0.07	**EETXB2P152EA**
1800	35 x 45	2.70	3.78	0.115	0.07	**EETXB2P182EA**
2200	35 x 50	2.90	4.06	0.094	0.06	**EETXB2P222EA**
200 VDC Working, 250 VDC Surge						
220	22 x 25	1.00	1.40	0.804	0.36	**EETXB2D221BA**
270	22 x 30	1.10	1.54	0.655	0.29	**EETXB2D271BA**
	25 x 25	1.10	1.54	0.655	0.29	**EETXB2D271CA**
330	22 x 30	1.20	1.68	0.536	0.24	**EETXB2D331BA**
	25 x 25	1.20	1.68	0.536	0.24	**EETXB2D331CA**
390	22 x 35	1.30	1.82	0.453	0.20	**EETXB2D391BA**
	25 x 30	1.30	1.82	0.453	0.20	**EETXB2D391CA**
	30 x 25	1.30	1.82	0.453	0.20	**EETXB2D391DA**
470	22 x 40	1.40	1.96	0.376	0.17	**EETXB2D471BA**
	25 x 35	1.40	1.96	0.376	0.17	**EETXB2D471CA**

Design and specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use.
Whenever a doubt about safety arises from this product, please contact us immediately for technical consultation.

TS-XB Standard Ratings (continued)

Cap. (μF)	Size (mm) D x L	Max 105°C R.C. (A_{rms}) 120Hz	Max 105°C R.C. (A_{rms}) 10kHz~	20°C ESR (Ω, max.) 120Hz	20°C ESR (Ω, max.) 20kHz	Panasonic Part Number
200 VDC Working, 250 VDC Surge (continued)						
470	30 x 30	1.40	1.96	0.376	0.17	**EETXB2D471DA**
560	22 x 45	1.50	2.10	0.316	0.14	**EETXB2D561BA**
	25 x 35	1.50	2.10	0.316	0.14	**EETXB2D561CA**
	30 x 30	1.50	2.10	0.316	0.14	**EETXB2D561DA**
680	25 x 40	1.70	2.38	0.260	0.12	**EETXB2D681CA**
	30 x 35	1.70	2.38	0.260	0.12	**EETXB2D681DA**
820	25 x 50	2.00	2.80	0.216	0.10	**EETXB2D821CA**
	30 x 40	2.00	2.80	0.216	0.10	**EETXB2D821DA**
	35 x 30	2.00	2.80	0.216	0.10	**EETXB2D821EA**
1000	30 x 45	2.20	3.08	0.177	0.09	**EETXB2D102DA**
	35 x 35	2.20	3.08	0.177	0.09	**EETXB2D102EA**
1200	30 x 50	2.30	3.22	0.160	0.08	**EETXB2D122DA**
	35 x 40	2.30	3.22	0.160	0.08	**EETXB2D122EA**
1500	35 x 50	2.50	3.50	0.128	0.06	**EETXB2D152EA**
250 VDC Working, 300 VDC Surge						
180	22 x 30	0.90	1.26	0.819	0.41	**EETXB2E181BA**
	25 x 25	0.90	1.26	0.819	0.41	**EETXB2E181CA**
220	22 x 30	1.00	1.40	0.670	0.33	**EETXB2E221BA**
	25 x 25	1.00	1.40	0.670	0.33	**EETXB2E221CA**
270	22 x 35	1.10	1.54	0.546	0.27	**EETXB2E271BA**
	25 x 30	1.10	1.54	0.546	0.27	**EETXB2E271CA**
	30 x 25	1.10	1.54	0.546	0.27	**EETXB2E271DA**
330	22 x 40	1.20	1.68	0.447	0.22	**EETXB2E331BA**
	25 x 35	1.20	1.68	0.447	0.22	**EETXB2E331CA**
	30 x 25	1.20	1.68	0.447	0.22	**EETXB2E331DA**
390	22 x 45	1.30	1.82	0.378	0.19	**EETXB2E391BA**
	25 x 35	1.30	1.82	0.378	0.19	**EETXB2E391CA**
	30 x 30	1.30	1.82	0.378	0.19	**EETXB2E391DA**
470	25 x 45	1.40	1.96	0.314	0.16	**EETXB2E471CA**
	30 x 35	1.40	1.96	0.314	0.16	**EETXB2E471DA**
	35 x 30	1.40	1.96	0.314	0.16	**EETXB2E471EA**
560	25 x 50	1.50	2.10	0.263	0.13	**EETXB2E561CA**
	30 x 35	1.50	2.10	0.263	0.13	**EETXB2E561DA**
	35 x 30	1.50	2.10	0.263	0.13	**EETXB2E561EA**
680	30 x 45	1.70	2.38	0.217	0.12	**EETXB2E681DA**
	35 x 35	1.70	2.38	0.217	0.12	**EETXB2E681EA**
820	30 x 50	2.00	2.80	0.180	0.10	**EETXB2E821DA**
	35 x 40	2.00	2.80	0.180	0.10	**EETXB2E821EA**
1000	35 x 45	2.20	3.08	0.177	0.10	**EETXB2E102EA**
1200	35 x 50	2.30	3.22	0.147	0.09	**EETXB2E122EA**
315 VDC Working, 365 VDC Surge						
82	22 x 25	0.64	0.90	1.797	0.90	**EETXB2F820BA**
100	22 x 30	0.69	0.97	1.474	0.74	**EETXB2F101BA**
120	22 x 30	0.75	1.05	1.228	0.61	**EETXB2F121BA**
	25 x 25	0.75	1.05	1.228	0.61	**EETXB2F121CA**
150	22 x 35	0.82	1.15	0.982	0.49	**EETXB2F151BA**
	25 x 30	0.82	1.15	0.982	0.49	**EETXB2F151CA**
	30 x 25	0.82	1.15	0.982	0.49	**EETXB2F151DA**
180	22 x 40	0.90	1.26	0.819	0.41	**EETXB2F181BA**
	25 x 35	0.90	1.26	0.819	0.41	**EETXB2F181CA**
	30 x 25	0.90	1.26	0.819	0.41	**EETXB2F181DA**
220	22 x 45	1.00	1.40	0.737	0.37	**EETXB2F221BA**
	25 x 40	1.00	1.40	0.737	0.37	**EETXB2F221CA**
	30 x 30	1.00	1.40	0.737	0.37	**EETXB2F221DA**
270	25 x 45	1.10	1.54	0.600	0.30	**EETXB2F271CA**
	30 x 35	1.10	1.54	0.600	0.30	**EETXB2F271DA**
	35 x 30	1.10	1.54	0.600	0.30	**EETXB2F271EA**
330	25 x 50	1.20	1.68	0.491	0.25	**EETXB2F331CA**
	30 x 40	1.20	1.68	0.491	0.25	**EETXB2F331DA**
	35 x 30	1.20	1.68	0.491	0.25	**EETXB2F331EA**
390	30 x 45	1.30	1.82	0.453	0.23	**EETXB2F391DA**
	35 x 35	1.30	1.82	0.453	0.23	**EETXB2F391EA**
470	30 x 50	1.40	1.96	0.376	0.19	**EETXB2F471DA**
	35 x 40	1.40	1.96	0.376	0.19	**EETXB2F471EA**
560	35 x 45	1.50	2.10	0.316	0.16	**EETXB2F561EA**
680	35 x 50	1.70	2.38	0.260	0.14	**EETXB2F681EA**
350 VDC Working, 400 VDC Surge						
82	22 x 25	0.64	0.90	1.797	0.90	**EETXB2V820BA**
100	22 x 30	0.69	0.97	1.474	0.74	**EETXB2V101BA**
	25 x 25	0.69	0.97	1.474	0.74	**EETXB2V101CA**
120	22 x 35	0.75	1.05	1.228	0.61	**EETXB2V121BA**
	25 x 30	0.75	1.05	1.228	0.61	**EETXB2V121CA**

Cap. (μF)	Size (mm) D x L	Max 105°C R.C. (A_{rms}) 120Hz	Max 105°C R.C. (A_{rms}) 10kHz~	20°C ESR (Ω, max.) 120Hz	20°C ESR (Ω, max.) 20kHz	Panasonic Part Number
350 VDC Working, 400 VDC Surge (continued)						
150	22 x 40	0.82	1.15	0.982	0.49	**EETXB2V151BA**
	25 x 30	0.82	1.15	0.982	0.49	**EETXB2V151CA**
	30 x 25	0.82	1.15	0.982	0.49	**EETXB2V151DA**
180	22 x 45	0.90	1.26	0.819	0.41	**EETXB2V181BA**
	25 x 35	0.90	1.26	0.819	0.41	**EETXB2V181CA**
	30 x 30	0.90	1.26	0.819	0.41	**EETXB2V181DA**
220	22 x 50	1.00	1.40	0.737	0.37	**EETXB2V221BA**
	25 x 40	1.00	1.40	0.737	0.37	**EETXB2V221CA**
	30 x 30	1.00	1.40	0.737	0.37	**EETXB2V221DA**
270	25 x 50	1.10	1.54	0.600	0.30	**EETXB2V271CA**
	30 x 35	1.10	1.54	0.600	0.30	**EETXB2V271DA**
	35 x 30	1.10	1.54	0.600	0.30	**EETXB2V271EA**
330	30 x 45	1.20	1.68	0.491	0.25	**EETXB2V331DA**
	35 x 35	1.20	1.68	0.491	0.25	**EETXB2V331EA**
390	30 x 50	1.30	1.82	0.453	0.23	**EETXB2V391DA**
	35 x 40	1.30	1.82	0.453	0.23	**EETXB2V391EA**
470	35 x 40	1.40	1.96	0.376	0.19	**EETXB2V471EA**
560	35 x 50	1.50	2.10	0.316	0.16	**EETXB2V561EA**
400 VDC Working, 450 VDC Surge						
56	22 x 25	0.51	0.71	2.631	0.92	**EETXB2G560BA**
68	22 x 30	0.56	0.78	2.167	0.76	**EETXB2G680BA**
	25 x 25	0.56	0.78	2.167	0.76	**EETXB2G680CA**
82	22 x 35	0.64	0.90	1.797	0.63	**EETXB2G820BA**
	25 x 25	0.64	0.90	1.797	0.63	**EETXB2G820CA**
100	22 x 35	0.69	0.97	1.474	0.52	**EETXB2G101BA**
	25 x 30	0.69	0.97	1.474	0.52	**EETXB2G101CA**
120	22 x 40	0.75	1.05	1.228	0.43	**EETXB2G121BA**
	25 x 35	0.75	1.05	1.228	0.43	**EETXB2G121CA**
	30 x 25	0.75	1.05	1.228	0.43	**EETXB2G121DA**
150	22 x 50	0.82	1.15	0.982	0.34	**EETXB2G151BA**
	25 x 40	0.82	1.15	0.982	0.34	**EETXB2G151CA**
	30 x 30	0.82	1.15	0.982	0.34	**EETXB2G151DA**
180	25 x 45	0.90	1.26	0.819	0.29	**EETXB2G181CA**
	30 x 35	0.90	1.26	0.819	0.29	**EETXB2G181DA**
	35 x 25	0.90	1.26	0.819	0.29	**EETXB2G181EA**
220	25 x 50	1.00	1.40	0.670	0.23	**EETXB2G221CA**
	30 x 40	1.00	1.40	0.670	0.23	**EETXB2G221DA**
	35 x 30	1.00	1.40	0.670	0.23	**EETXB2G221EA**
270	30 x 45	1.10	1.54	0.546	0.19	**EETXB2G271DA**
	35 x 35	1.10	1.54	0.546	0.19	**EETXB2G271EA**
330	30 x 50	1.20	1.68	0.447	0.18	**EETXB2G331DA**
	35 x 40	1.20	1.68	0.447	0.18	**EETXB2G331EA**
390	35 x 45	1.30	1.82	0.378	0.15	**EETXB2G391EA**
470	35 x 50	1.40	1.96	0.314	0.13	**EETXB2G471EA**
450 VDC Working, 500 VDC Surge						
39	22 x 25	0.37	0.52	3.779	1.32	**EETXB2W390BA**
47	22 x 30	0.40	0.56	3.135	1.10	**EETXB2W470BA**
56	22 x 35	0.47	0.66	2.631	0.92	**EETXB2W560BA**
	25 x 25	0.47	0.66	2.631	0.92	**EETXB2W560CA**
68	22 x 40	0.53	0.74	2.167	0.76	**EETXB2W680BA**
	25 x 30	0.53	0.74	2.167	0.76	**EETXB2W680CA**
82	22 x 45	0.56	0.78	1.797	0.63	**EETXB2W820BA**
	25 x 35	0.56	0.78	1.797	0.63	**EETXB2W820CA**
	30 x 25	0.56	0.78	1.797	0.63	**EETXB2W820DA**
100	22 x 50	0.64	0.90	1.474	0.52	**EETXB2W101BA**
	25 x 40	0.64	0.90	1.474	0.52	**EETXB2W101CA**
	30 x 30	0.64	0.90	1.474	0.52	**EETXB2W101DA**
120	25 x 45	0.72	1.01	1.228	0.43	**EETXB2W121CA**
	30 x 30	0.72	1.01	1.228	0.43	**EETXB2W121DA**
150	25 x 50	0.79	1.11	0.982	0.34	**EETXB2W151CA**
	30 x 40	0.79	1.11	0.982	0.34	**EETXB2W151DA**
	35 x 30	0.79	1.11	0.982	0.34	**EETXB2W151EA**
180	30 x 45	0.87	1.22	0.819	0.29	**EETXB2W181DA**
	35 x 35	0.87	1.22	0.819	0.29	**EETXB2W181EA**
220	30 x 50	1.00	1.40	0.670	0.23	**EETXB2W221DA**
	35 x 40	1.00	1.40	0.670	0.23	**EETXB2W221EA**
270	35 x 45	1.19	1.67	0.546	0.19	**EETXB2W271EA**
330	35 x 50	1.38	1.93	0.447	0.16	**EETXB2W331EA**