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**TS-UQ Series 85°C, 2000 hours**

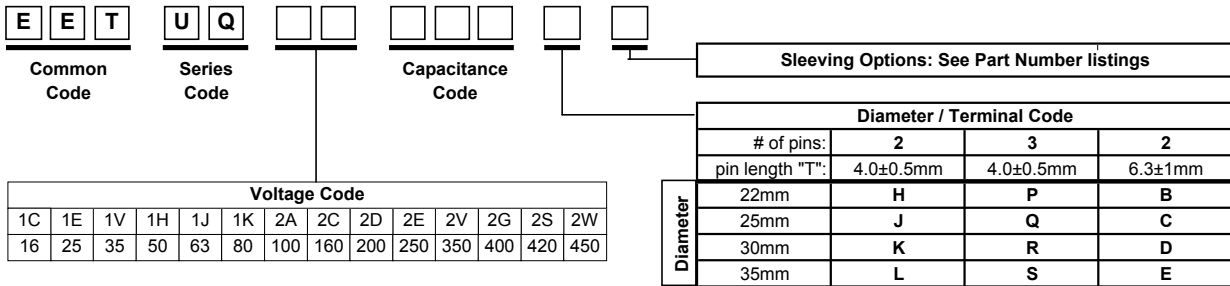
- Highest capacitance version (30% smaller than UP series)
- 2 and 3 pin versions available
- RoHS compliant PVC and RoHS compliant PET sleeve options



Rated Working Voltage:	16 ~ 250 VDC		350 ~ 450 VDC									
Operating Temperature:	-40 ~ +85°C		-25 ~ +85°C									
Nominal Capacitance:	270 ~ 100000µF		82 ~ 1000µF									
Capacitance Tolerance:	± 20%											
Dissipation Factor: (120 Hz, +20°C)	Working Voltage [V]:	16	25	35	50	63	80	100	160 ~ 450			
	Max. D.F. (%):	50	40	35	30	25	20	20	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*				
	16-100WV:	0.93	0.95	1.0	1.05	1.08	1.15	Temperature (°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	1.3	1.4	1.5
Endurance:	2000 hours at +85°C with maximum specified ripple current (see page 4)											

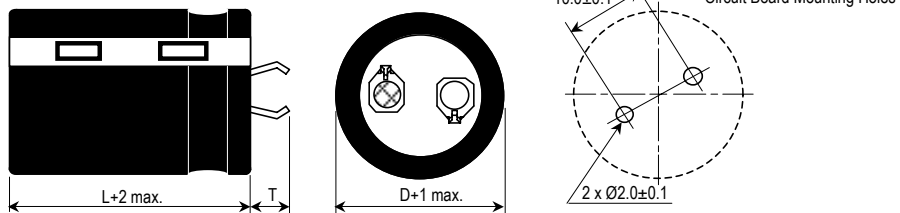
\*Use of temperature ripple current multipliers may limit life to the hours specified for the maximum operating temperature.

**Part Number System**

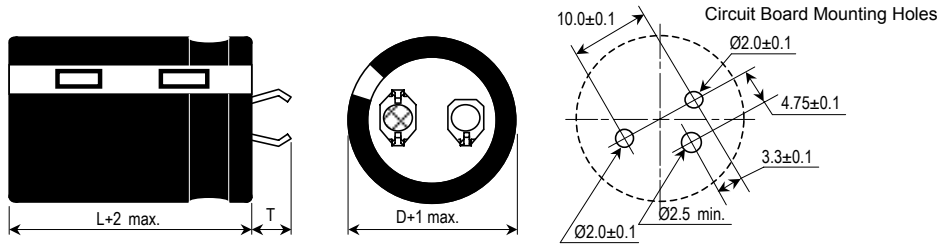


**Dimensions in millimeters**

2 Pin Mounting Style



3 Pin Mounting Style



Pin Dimensions



4mm Length: Standard on 2 and 3 Pin Mounting Styles

6.3mm Length: Available on 2 Pin Mounting Style Only

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Contact the factory or your sales representative for technical specifications before purchase and/or use. When safety concerns arise, please contact Panasonic immediately for technical consultation.

TS-UQ Standard Ratings

Part numbers shown with 2 pins and 4.0mm length terminal

Cap. ( $\mu$ F)	Size (mm) D x L	Max 85°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number (By Sleeving Style)	
		120Hz	10kHz~	120Hz	20kHz	PVC with Top Plate	PET without Top Plate
<b>16 VDC Working, 20 VDC Surge</b>							
12000	22 x 25	4.52	5.20	0.069	0.059	EETUQ1C123HA	EETUQ1C123HJ
15000	22 x 30	5.26	6.05	0.055	0.047	EETUQ1C153HA	EETUQ1C153HJ
18000	22 x 35	5.57	6.41	0.046	0.039	EETUQ1C183HA	EETUQ1C183HJ
	25 x 25	5.57	6.41	0.046	0.039	EETUQ1C183JA	EETUQ1C183JJ
22000	22 x 40	6.10	7.02	0.038	0.032	EETUQ1C223HA	EETUQ1C223HJ
	25 x 30	6.10	7.02	0.038	0.032	EETUQ1C223JA	EETUQ1C223JJ
27000	22 x 45	6.31	7.26	0.031	0.026	EETUQ1C273HA	EETUQ1C273HJ
	25 x 35	6.31	7.26	0.031	0.026	EETUQ1C273JA	EETUQ1C273JJ
	30 x 25	6.31	7.26	0.031	0.026	EETUQ1C273KA	EETUQ1C273KJ
33000	22 x 50	6.84	7.87	0.025	0.021	EETUQ1C333HA	EETUQ1C333HJ
	25 x 40	6.84	7.87	0.025	0.021	EETUQ1C333JA	EETUQ1C333JJ
	30 x 30	6.84	7.87	0.025	0.021	EETUQ1C333KA	EETUQ1C333KJ
	35 x 25	6.84	7.87	0.025	0.021	EETUQ1C333LA	EETUQ1C333LJ
39000	25 x 45	6.94	7.98	0.024	0.020	EETUQ1C393JA	EETUQ1C393JJ
	30 x 35	6.94	7.98	0.024	0.020	EETUQ1C393KA	EETUQ1C393KJ
47000	25 x 50	7.47	8.59	0.023	0.019	EETUQ1C473JA	EETUQ1C473JJ
	30 x 40	7.47	8.59	0.023	0.019	EETUQ1C473KA	EETUQ1C473KJ
	35 x 30	7.47	8.59	0.023	0.019	EETUQ1C473LA	EETUQ1C473LJ
56000	30 x 45	8.73	10.04	0.022	0.019	EETUQ1C563KA	EETUQ1C563KJ
	35 x 35	8.73	10.04	0.022	0.019	EETUQ1C563LA	EETUQ1C563LJ
68000	30 x 50	9.05	10.41	0.021	0.018	EETUQ1C683KA	EETUQ1C683KJ
	35 x 40	9.05	10.41	0.021	0.018	EETUQ1C683LA	EETUQ1C683LJ
82000	35 x 45	9.49	10.91	0.020	0.018	EETUQ1C823LA	EETUQ1C823LJ
100000	35 x 50	10.18	11.71	0.019	0.018	EETUQ1C104LA	EETUQ1C104LJ
<b>25 VDC Working, 32 VDC Surge</b>							
8200	22 x 25	3.57	4.11	0.081	0.065	EETUQ1E822HA	EETUQ1E822HJ
12000	22 x 30	4.10	4.72	0.055	0.044	EETUQ1E123HA	EETUQ1E123HJ
	25 x 25	4.10	4.72	0.055	0.044	EETUQ1E123JA	EETUQ1E123JJ
15000	22 x 35	4.63	5.32	0.044	0.035	EETUQ1E153HA	EETUQ1E153HJ
	25 x 30	4.63	5.32	0.044	0.035	EETUQ1E153JA	EETUQ1E153JJ
18000	22 x 40	5.47	6.29	0.037	0.029	EETUQ1E183HA	EETUQ1E183HJ
	25 x 35	5.47	6.29	0.037	0.029	EETUQ1E183JA	EETUQ1E183JJ
	30 x 25	5.47	6.29	0.037	0.029	EETUQ1E183KA	EETUQ1E183KJ
22000	22 x 45	6.10	7.02	0.030	0.024	EETUQ1E223HA	EETUQ1E223HJ
	25 x 40	6.10	7.02	0.030	0.024	EETUQ1E223JA	EETUQ1E223JJ
	30 x 30	6.10	7.02	0.030	0.024	EETUQ1E223KA	EETUQ1E223KJ
	35 x 25	6.10	7.02	0.030	0.024	EETUQ1E223LA	EETUQ1E223LJ
27000	25 x 45	6.21	7.14	0.025	0.020	EETUQ1E273JA	EETUQ1E273JJ
	30 x 35	6.21	7.14	0.025	0.020	EETUQ1E273KA	EETUQ1E273KJ
33000	25 x 50	6.84	7.87	0.020	0.016	EETUQ1E333JA	EETUQ1E333JJ
	30 x 40	6.84	7.87	0.020	0.016	EETUQ1E333KA	EETUQ1E333KJ
	35 x 30	6.84	7.87	0.020	0.016	EETUQ1E333LA	EETUQ1E333LJ
39000	30 x 45	7.36	8.46	0.020	0.016	EETUQ1E393KA	EETUQ1E393KJ
	35 x 35	7.36	8.46	0.020	0.016	EETUQ1E393LA	EETUQ1E393LJ
47000	30 x 50	8.00	9.20	0.019	0.016	EETUQ1E473KA	EETUQ1E473KJ
	35 x 40	8.00	9.20	0.019	0.016	EETUQ1E473LA	EETUQ1E473LJ
56000	35 x 45	8.91	10.25	0.019	0.016	EETUQ1E563LA	EETUQ1E563LJ
68000	35 x 50	9.79	11.26	0.018	0.016	EETUQ1E683LA	EETUQ1E683LJ
<b>35 VDC Working, 44 VDC Surge</b>							
5600	22 x 25	3.36	3.86	0.104	0.078	EETUQ1V562HA	EETUQ1V562HJ
8200	22 x 30	4.00	4.60	0.071	0.053	EETUQ1V822HA	EETUQ1V822HJ
	25 x 25	4.00	4.60	0.071	0.053	EETUQ1V822JA	EETUQ1V822JJ
10000	22 x 35	4.42	5.08	0.058	0.044	EETUQ1V103HA	EETUQ1V103HJ
	25 x 30	4.42	5.08	0.058	0.044	EETUQ1V103JA	EETUQ1V103JJ
12000	22 x 40	5.05	5.81	0.048	0.036	EETUQ1V123HA	EETUQ1V123HJ
	25 x 35	5.05	5.81	0.048	0.036	EETUQ1V123JA	EETUQ1V123JJ
	30 x 25	5.05	5.81	0.048	0.036	EETUQ1V123KA	EETUQ1V123KJ
15000	22 x 45	5.57	6.41	0.039	0.029	EETUQ1V153HA	EETUQ1V153HJ
	25 x 40	5.57	6.41	0.039	0.029	EETUQ1V153JA	EETUQ1V153JJ
18000	25 x 45	5.68	6.53	0.032	0.024	EETUQ1V183JA	EETUQ1V183JJ
	30 x 30	5.68	6.53	0.032	0.024	EETUQ1V183KA	EETUQ1V183KJ
	35 x 25	5.68	6.53	0.032	0.024	EETUQ1V183LA	EETUQ1V183LJ

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## TS-UQ Standard Ratings (continued)

Part numbers shown with 2 pins and 4.0mm length terminal

Cap. ( $\mu$ F)	Size (mm) D x L	Max 85°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number (By Sleeve Style)	
		120Hz	10kHz~	120Hz	20kHz	PVC with Top Plate	PET without Top Plate
<b>35 VDC Working, 44 VDC Surge (continued)</b>							
22000	25 x 50	6.10	7.02	0.026	0.020	EETUQ1V223JA	EETUQ1V223JJ
	30 x 35	6.10	7.02	0.026	0.020	EETUQ1V223KA	EETUQ1V223KJ
	35 x 30	6.10	7.02	0.026	0.020	EETUQ1V223LA	EETUQ1V223LJ
27000	30 x 45	6.84	7.87	0.021	0.016	EETUQ1V273KA	EETUQ1V273KJ
	35 x 35	6.84	7.87	0.021	0.016	EETUQ1V273LA	EETUQ1V273LJ
33000	30 x 50	7.15	8.22	0.018	0.013	EETUQ1V333KA	EETUQ1V333KJ
	35 x 40	7.15	8.22	0.018	0.014	EETUQ1V333LA	EETUQ1V333LJ
39000	35 x 45	7.91	9.10	0.017	0.014	EETUQ1V393LA	EETUQ1V393LJ
47000	35 x 50	8.56	9.84	0.017	0.014	EETUQ1V473LA	EETUQ1V473LJ
<b>50 VDC Working, 63 VDC Surge</b>							
3300	22 x 25	2.73	3.14	0.151	0.113	EETUQ1H332HA	EETUQ1H332HJ
4700	22 x 30	3.03	3.48	0.106	0.079	EETUQ1H472HA	EETUQ1H472HJ
	25 x 25	3.03	3.48	0.106	0.079	EETUQ1H472JA	EETUQ1H472JJ
5600	22 x 35	3.42	3.93	0.089	0.067	EETUQ1H562HA	EETUQ1H562HJ
6800	22 x 40	3.85	4.43	0.073	0.055	EETUQ1H682HA	EETUQ1H682HJ
	25 x 30	3.85	4.43	0.073	0.055	EETUQ1H682JA	EETUQ1H682JJ
	30 x 25	3.85	4.43	0.073	0.055	EETUQ1H682KA	EETUQ1H682KJ
8200	22 x 45	4.41	5.07	0.061	0.045	EETUQ1H822HA	EETUQ1H822HJ
	25 x 35	4.41	5.07	0.061	0.045	EETUQ1H822JA	EETUQ1H822JJ
10000	22 x 50	4.97	5.72	0.050	0.037	EETUQ1H103HA	EETUQ1H103HJ
	25 x 40	4.97	5.72	0.050	0.037	EETUQ1H103JA	EETUQ1H103JJ
	30 x 30	4.97	5.72	0.050	0.037	EETUQ1H103KA	EETUQ1H103KJ
	35 x 25	4.97	5.72	0.050	0.037	EETUQ1H103LA	EETUQ1H103LJ
12000	25 x 45	5.58	6.42	0.041	0.031	EETUQ1H123JA	EETUQ1H123JJ
	30 x 35	5.58	6.42	0.041	0.031	EETUQ1H123KA	EETUQ1H123KJ
	35 x 30	5.58	6.42	0.041	0.031	EETUQ1H123LA	EETUQ1H123LJ
15000	30 x 40	6.44	7.41	0.033	0.025	EETUQ1H153KA	EETUQ1H153KJ
	35 x 35	6.44	7.41	0.033	0.025	EETUQ1H153LA	EETUQ1H153LJ
18000	30 x 45	6.94	7.98	0.028	0.021	EETUQ1H183KA	EETUQ1H183KJ
	35 x 40	6.94	7.98	0.028	0.021	EETUQ1H183LA	EETUQ1H183LJ
22000	35 x 45	7.57	8.71	0.023	0.018	EETUQ1H223LA	EETUQ1H223LJ
27000	35 x 50	8.96	10.30	0.018	0.015	EETUQ1H273LA	EETUQ1H273LJ
<b>63 VDC Working, 79 VDC Surge</b>							
2200	22 x 25	2.52	2.90	0.188	0.141	EETUQ1J222HA	EETUQ1J222HJ
3300	22 x 30	4.10	4.72	0.126	0.094	EETUQ1J332HA	EETUQ1J332HJ
	25 x 25	4.10	4.72	0.126	0.094	EETUQ1J332JA	EETUQ1J332JJ
3900	22 x 35	4.44	5.11	0.106	0.080	EETUQ1J392HA	EETUQ1J392HJ
	25 x 30	4.44	5.11	0.106	0.080	EETUQ1J392JA	EETUQ1J392JJ
4700	22 x 40	4.86	5.59	0.088	0.066	EETUQ1J472HA	EETUQ1J472HJ
	25 x 35	4.86	5.59	0.088	0.066	EETUQ1J472JA	EETUQ1J472JJ
	30 x 25	4.86	5.59	0.088	0.066	EETUQ1J472KA	EETUQ1J472KJ
5600	22 x 45	5.36	6.16	0.074	0.056	EETUQ1J562HA	EETUQ1J562HJ
	25 x 40	5.36	6.16	0.074	0.056	EETUQ1J562JA	EETUQ1J562JJ
6800	25 x 45	5.84	6.72	0.061	0.046	EETUQ1J682JA	EETUQ1J682JJ
	30 x 30	5.84	6.72	0.061	0.046	EETUQ1J682KA	EETUQ1J682KJ
	35 x 25	5.84	6.72	0.061	0.046	EETUQ1J682LA	EETUQ1J682LJ
8200	25 x 50	6.00	6.90	0.051	0.038	EETUQ1J822JA	EETUQ1J822JJ
	30 x 35	6.00	6.90	0.051	0.038	EETUQ1J822KA	EETUQ1J822KJ
	35 x 30	6.00	6.90	0.051	0.038	EETUQ1J822LA	EETUQ1J822LJ
10000	30 x 40	6.52	7.50	0.041	0.031	EETUQ1J103KA	EETUQ1J103KJ
	35 x 35	6.52	7.50	0.041	0.031	EETUQ1J103LA	EETUQ1J103LJ
12000	30 x 45	7.15	8.22	0.035	0.026	EETUQ1J123KA	EETUQ1J123KJ
	35 x 40	7.15	8.22	0.035	0.026	EETUQ1J123LA	EETUQ1J123LJ
15000	35 x 45	7.91	9.10	0.028	0.021	EETUQ1J153LA	EETUQ1J153LJ
18000	35 x 50	8.55	9.83	0.023	0.018	EETUQ1J183LA	EETUQ1J183LJ
<b>80 VDC Working, 100 VDC Surge</b>							
1500	22 x 25	2.26	2.60	0.221	0.166	EETUQ1K152HA	EETUQ1K152HJ
1800	22 x 30	2.52	2.90	0.184	0.138	EETUQ1K182HA	EETUQ1K182HJ
2200	22 x 35	2.73	3.14	0.151	0.113	EETUQ1K222HA	EETUQ1K222HJ
	25 x 25	2.73	3.14	0.151	0.113	EETUQ1K222JA	EETUQ1K222JJ
2700	22 x 40	2.78	3.20	0.123	0.092	EETUQ1K272HA	EETUQ1K272HJ
	25 x 30	2.78	3.20	0.123	0.092	EETUQ1K272JA	EETUQ1K272JJ

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## TS-UQ Standard Ratings (continued)

Part numbers shown with 2 pins and 4.0mm length terminal

Cap. ( $\mu$ F)	Size (mm) D x L	Max 85°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number (By Sleeve Style)	
		120Hz	10kHz~	120Hz	20kHz	PVC with Top Plate	PET without Top Plate
<b>80 VDC Working, 105 VDC Surge (continued)</b>							
3300	22 x 45	3.21	3.69	0.100	0.075	EETUQ1K332HA	EETUQ1K332HJ
	25 x 35	3.21	3.69	0.100	0.075	EETUQ1K332JA	EETUQ1K332JJ
	30 x 25	3.21	3.69	0.100	0.075	EETUQ1K332KA	EETUQ1K332KJ
3900	22 x 50	3.59	4.13	0.085	0.064	EETUQ1K392HA	EETUQ1K392HJ
	25 x 40	3.59	4.13	0.085	0.064	EETUQ1K392JA	EETUQ1K392JJ
	35 x 25	3.59	4.13	0.085	0.064	EETUQ1K392LA	EETUQ1K392LJ
4700	25 x 45	4.09	4.70	0.071	0.053	EETUQ1K472JA	EETUQ1K472JJ
	30 x 30	4.09	4.70	0.071	0.053	EETUQ1K472KA	EETUQ1K472KJ
5600	25 x 50	4.55	5.23	0.059	0.044	EETUQ1K562JA	EETUQ1K562JJ
	30 x 35	4.55	5.23	0.059	0.044	EETUQ1K562KA	EETUQ1K562KJ
	35 x 30	4.55	5.23	0.059	0.044	EETUQ1K562LA	EETUQ1K562LJ
6800	30 x 45	5.16	5.93	0.049	0.037	EETUQ1K682KA	EETUQ1K682KJ
	35 x 35	5.16	5.93	0.049	0.037	EETUQ1K682LA	EETUQ1K682LJ
8200	30 x 50	5.83	6.70	0.040	0.030	EETUQ1K822KA	EETUQ1K822KJ
	35 x 40	5.83	6.70	0.040	0.030	EETUQ1K822LA	EETUQ1K822LJ
10000	35 x 45	6.51	7.49	0.033	0.025	EETUQ1K103LA	EETUQ1K103LJ
12000	35 x 50	7.28	8.37	0.028	0.021	EETUQ1K123LA	EETUQ1K123LJ
<b>100 VDC Working, 125 VDC Surge</b>							
1000	22 x 25	1.96	2.25	0.332	0.216	EETUQ2A102HA	EETUQ2A102HJ
1200	25 x 25	2.31	2.66	0.276	0.180	EETUQ2A122JA	EETUQ2A122JJ
1500	22 x 30	2.57	2.96	0.221	0.144	EETUQ2A152HA	EETUQ2A152HJ
1800	22 x 35	2.84	3.27	0.184	0.120	EETUQ2A182HA	EETUQ2A182HJ
	25 x 30	2.84	3.27	0.184	0.120	EETUQ2A182JA	EETUQ2A182JJ
2200	22 x 45	3.14	3.61	0.151	0.098	EETUQ2A222HA	EETUQ2A222HJ
	25 x 35	3.14	3.61	0.151	0.098	EETUQ2A222JA	EETUQ2A222JJ
	30 x 25	3.14	3.61	0.151	0.098	EETUQ2A222KA	EETUQ2A222KJ
2700	22 x 50	3.71	4.27	0.123	0.080	EETUQ2A272HA	EETUQ2A272HJ
	25 x 40	3.71	4.27	0.123	0.080	EETUQ2A272JA	EETUQ2A272JJ
	30 x 30	3.71	4.27	0.123	0.080	EETUQ2A272KA	EETUQ2A272KJ
	35 x 25	3.71	4.27	0.123	0.080	EETUQ2A272LA	EETUQ2A272LJ
3300	25 x 45	4.06	4.67	0.100	0.065	EETUQ2A332JA	EETUQ2A332JJ
	30 x 35	4.06	4.67	0.100	0.065	EETUQ2A332KA	EETUQ2A332KJ
3900	25 x 50	4.54	5.22	0.085	0.055	EETUQ2A392JA	EETUQ2A392JJ
	30 x 40	4.54	5.22	0.085	0.055	EETUQ2A392KA	EETUQ2A392KJ
	35 x 30	4.54	5.22	0.085	0.055	EETUQ2A392LA	EETUQ2A392LJ
4700	30 x 45	5.13	5.90	0.071	0.046	EETUQ2A472KA	EETUQ2A472KJ
	35 x 35	5.13	5.90	0.071	0.046	EETUQ2A472LA	EETUQ2A472LJ
5600	30 x 50	5.75	6.61	0.059	0.041	EETUQ2A562KA	EETUQ2A562KJ
	35 x 40	5.75	6.61	0.059	0.038	EETUQ2A562LA	EETUQ2A562LJ
6800	35 x 45	6.60	7.59	0.049	0.034	EETUQ2A682LA	EETUQ2A682LJ
8200	35 x 50	7.29	8.38	0.040	0.030	EETUQ2A822LA	EETUQ2A822LJ
<b>160 VDC Working, 200 VDC Surge</b>							
560	22 x 25	2.25	3.15	0.355	0.160	EETUQ2C561HA	EETUQ2C561HJ
680	22 x 30	2.50	3.50	0.293	0.132	EETUQ2C681HA	EETUQ2C681HJ
820	22 x 35	2.75	3.85	0.243	0.109	EETUQ2C821HA	EETUQ2C821HJ
1000	22 x 40	3.00	4.20	0.199	0.090	EETUQ2C102HA	EETUQ2C102HJ
	25 x 30	3.00	4.20	0.199	0.090	EETUQ2C102JA	EETUQ2C102JJ
1200	22 x 45	3.25	4.55	0.166	0.075	EETUQ2C122HA	EETUQ2C122HJ
	25 x 35	3.25	4.55	0.166	0.075	EETUQ2C122JA	EETUQ2C122JJ
	30 x 25	3.25	4.55	0.166	0.075	EETUQ2C122KA	EETUQ2C122KJ
1500	22 x 50	3.73	5.22	0.133	0.060	EETUQ2C152HA	EETUQ2C152HJ
	25 x 40	3.73	5.22	0.133	0.060	EETUQ2C152JA	EETUQ2C152JJ
	30 x 30	3.73	5.22	0.133	0.060	EETUQ2C152KA	EETUQ2C152KJ
	35 x 25	3.73	5.22	0.133	0.060	EETUQ2C152LA	EETUQ2C152LJ
1800	25 x 45	4.20	5.88	0.111	0.050	EETUQ2C182JA	EETUQ2C182JJ
	30 x 35	4.20	5.88	0.120	0.060	EETUQ2C182KA	EETUQ2C182KJ
	35 x 30	4.20	5.88	0.111	0.050	EETUQ2C182LA	EETUQ2C182LJ
2200	30 x 40	4.78	6.69	0.090	0.041	EETUQ2C222KA	EETUQ2C222KJ
	35 x 35	4.78	6.69	0.098	0.049	EETUQ2C222LA	EETUQ2C222LJ
2700	30 x 45	5.45	7.63	0.074	0.033	EETUQ2C272KA	EETUQ2C272KJ
	35 x 40	5.45	7.63	0.080	0.040	EETUQ2C272LA	EETUQ2C272LJ
3300	35 x 45	5.75	8.05	0.070	0.035	EETUQ2C332LA	EETUQ2C332LJ
3900	35 x 50	6.00	8.40	0.055	0.028	EETUQ2C392LA	EETUQ2C392LJ

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## TS-UQ Standard Ratings (continued)

Part numbers shown with 2 pins and 4.0mm length terminal

Cap. ( $\mu$ F)	Size (mm) D x L	Max 85°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number (By Slewing Style)	
		120Hz	10kHz~	120Hz	20kHz	PVC sleeve with Top Plate	PET sleeve without Top Plate
<b>200 VDC Working, 250 VDC Surge</b>							
390	22 x 25	1.68	2.35	0.510	0.230	EETUQ2D391HA	EETUQ2D391HJ
470	22 x 30	1.85	2.59	0.423	0.190	EETUQ2D471HA	EETUQ2D471HJ
560	22 x 30	2.43	3.40	0.355	0.160	EETUQ2D561HA	EETUQ2D561HJ
	25 x 25	2.43	3.40	0.355	0.160	EETUQ2D561JA	EETUQ2D561JJ
680	22 x 35	2.68	3.75	0.293	0.132	EETUQ2D681HA	EETUQ2D681HJ
	25 x 30	2.68	3.75	0.293	0.132	EETUQ2D681JA	EETUQ2D681JJ
820	22 x 40	2.93	4.10	0.243	0.109	EETUQ2D821HA	EETUQ2D821HJ
	25 x 30	2.93	4.10	0.243	0.109	EETUQ2D821JA	EETUQ2D821JJ
	30 x 25	2.93	4.10	0.243	0.109	EETUQ2D821KA	EETUQ2D821KJ
1000	22 x 45	3.25	4.55	0.199	0.090	EETUQ2D102HA	EETUQ2D102HJ
	25 x 35	3.25	4.55	0.199	0.090	EETUQ2D102JA	EETUQ2D102JJ
	30 x 30	3.25	4.55	0.199	0.090	EETUQ2D102KA	EETUQ2D102KJ
	35 x 25	3.25	4.55	0.232	0.116	EETUQ2D102LA	EETUQ2D102LJ
1200	22 x 50	3.50	4.90	0.166	0.075	EETUQ2D122HA	EETUQ2D122HJ
	25 x 40	3.50	4.90	0.166	0.075	EETUQ2D122JA	EETUQ2D122JJ
	30 x 30	3.50	4.90	0.166	0.075	EETUQ2D122KA	EETUQ2D122KJ
1500	25 x 50	3.87	5.42	0.133	0.060	EETUQ2D152JA	EETUQ2D152JJ
	30 x 35	3.87	5.42	0.144	0.065	EETUQ2D152KA	EETUQ2D152KJ
	35 x 30	3.87	5.42	0.144	0.065	EETUQ2D152LA	EETUQ2D152LJ
1800	30 x 45	4.32	6.05	0.120	0.060	EETUQ2D182KA	EETUQ2D182KJ
	35 x 35	4.32	6.05	0.120	0.060	EETUQ2D182LA	EETUQ2D182LJ
2200	30 x 50	4.92	6.89	0.098	0.049	EETUQ2D222KA	EETUQ2D222KJ
	35 x 40	4.92	6.89	0.105	0.053	EETUQ2D222LA	EETUQ2D222LJ
2700	35 x 50	5.45	7.63	0.086	0.043	EETUQ2D272LA	EETUQ2D272LJ
<b>250 VDC Working, 300 VDC Surge</b>							
270	22 x 25	1.31	1.83	0.737	0.332	EETUQ2E271HA	EETUQ2E271HJ
330	22 x 30	1.75	2.45	0.603	0.271	EETUQ2E331HA	EETUQ2E331HJ
390	22 x 30	1.91	2.67	0.510	0.230	EETUQ2E391HA	EETUQ2E391HJ
	25 x 25	1.91	2.67	0.510	0.230	EETUQ2E391JA	EETUQ2E391JJ
470	22 x 35	2.11	2.95	0.423	0.190	EETUQ2E471HA	EETUQ2E471HJ
	25 x 30	2.11	2.95	0.423	0.190	EETUQ2E471JA	EETUQ2E471JJ
560	22 x 40	2.25	3.15	0.355	0.160	EETUQ2E561HA	EETUQ2E561HJ
	25 x 30	2.25	3.15	0.355	0.160	EETUQ2E561JA	EETUQ2E561JJ
	30 x 25	2.25	3.15	0.355	0.160	EETUQ2E561KA	EETUQ2E561KJ
680	22 x 45	2.50	3.50	0.293	0.132	EETUQ2E681HA	EETUQ2E681HJ
	25 x 35	2.50	3.50	0.293	0.132	EETUQ2E681JA	EETUQ2E681JJ
	30 x 25	2.30	3.22	0.293	0.132	EETUQ2E681KF	EETUQ2E681KC
	30 x 30	2.50	3.50	0.293	0.132	EETUQ2E681KA	EETUQ2E681KJ
820	22 x 50	2.77	3.88	0.243	0.109	EETUQ2E821HA	EETUQ2E821HJ
	25 x 40	2.77	3.88	0.243	0.109	EETUQ2E821JA	EETUQ2E821JJ
	30 x 30	2.77	3.88	0.243	0.109	EETUQ2E821KA	EETUQ2E821KJ
	35 x 25	2.77	3.88	0.243	0.121	EETUQ2E821LA	EETUQ2E821LJ
1000	25 x 45	3.32	4.65	0.199	0.090	EETUQ2E102JA	EETUQ2E102JJ
	30 x 35	3.32	4.65	0.199	0.090	EETUQ2E102KA	EETUQ2E102KJ
	35 x 30	3.32	4.65	0.199	0.090	EETUQ2E102LA	EETUQ2E102LJ
1200	30 x 40	3.53	4.94	0.166	0.075	EETUQ2E122KA	EETUQ2E122KJ
	35 x 35	3.53	4.94	0.166	0.083	EETUQ2E122LA	EETUQ2E122LJ
1500	30 x 50	4.04	5.66	0.133	0.066	EETUQ2E152KA	EETUQ2E152KJ
	35 x 40	4.04	5.66	0.133	0.066	EETUQ2E152LA	EETUQ2E152LJ
1800	35 x 45	4.55	6.37	0.111	0.055	EETUQ2E182LA	EETUQ2E182LJ
2200	35 x 50	4.75	6.65	0.098	0.049	EETUQ2E222LA	EETUQ2E222LJ
<b>350 VDC Working, 400 VDC Surge</b>							
150	22 x 25	1.12	1.57	1.326	0.663	EETUQ2V151HA	EETUQ2V151HJ
180	22 x 30	1.22	1.71	1.105	0.553	EETUQ2V181HA	EETUQ2V181HJ
220	22 x 35	1.44	2.02	0.904	0.452	EETUQ2V221HA	EETUQ2V221HJ
270	22 x 40	1.66	2.32	0.737	0.368	EETUQ2V271HA	EETUQ2V271HJ
	25 x 30	1.66	2.32	0.737	0.368	EETUQ2V271JA	EETUQ2V271JJ
330	22 x 45	1.88	2.63	0.603	0.301	EETUQ2V331HA	EETUQ2V331HJ
	25 x 35	1.88	2.63	0.603	0.301	EETUQ2V331JA	EETUQ2V331JJ
390	22 x 50	2.06	2.88	0.510	0.255	EETUQ2V391HA	EETUQ2V391HJ
	25 x 40	2.06	2.88	0.510	0.255	EETUQ2V391JA	EETUQ2V391JJ
	30 x 30	2.06	2.88	0.510	0.255	EETUQ2V391KA	EETUQ2V391KJ
	35 x 25	2.06	2.88	0.510	0.255	EETUQ2V391LA	EETUQ2V391LJ

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## TS-UQ Standard Ratings (continued)

Part numbers shown with 2 pins and 4.0mm length terminal

Cap. ( $\mu$ F)	Size (mm) D x L	Max 85°C R.C. ( $A_{rms}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number (By Slewing Style)	
		120Hz	10kHz~	120Hz	20kHz	PVC with Top Plate	PET without Top Plate
<b>350 VDC Working, 400 VDC Surge (continued)</b>							
470	25 x 45	2.40	3.36	0.423	0.212	EETUQ2V471JA	EETUQ2V471JJ
	30 x 35	2.40	3.36	0.423	0.212	EETUQ2V471KA	EETUQ2V471KJ
	35 x 30	2.40	3.36	0.423	0.233	EETUQ2V471LA	EETUQ2V471LJ
560	25 x 50	2.60	3.64	0.355	0.178	EETUQ2V561JA	EETUQ2V561JJ
	30 x 40	2.60	3.64	0.355	0.178	EETUQ2V561KA	EETUQ2V561KJ
	35 x 30	2.60	3.64	0.355	0.195	EETUQ2V561LA	EETUQ2V561LJ
680	30 x 45	2.96	4.14	0.293	0.146	EETUQ2V681KA	EETUQ2V681KJ
	35 x 35	2.96	4.14	0.293	0.146	EETUQ2V681LA	EETUQ2V681LJ
820	30 x 50	3.25	4.55	0.243	0.121	EETUQ2V821KA	EETUQ2V821KJ
	35 x 45	3.25	4.55	0.243	0.121	EETUQ2V821LA	EETUQ2V821LJ
1000	35 x 50	3.54	4.96	0.199	0.109	EETUQ2V102LA	EETUQ2V102LJ
<b>400 VDC Working, 450 VDC Surge</b>							
120	22 x 25	1.02	1.43	1.658	0.829	EETUQ2G121HA	EETUQ2G121HJ
150	22 x 30	1.16	1.62	1.326	0.663	EETUQ2G151HA	EETUQ2G151HJ
180	22 x 30	1.44	2.02	1.105	0.553	EETUQ2G181HF	EETUQ2G181HC
	22 x 35	1.44	2.02	1.105	0.553	EETUQ2G181HA	EETUQ2G181HJ
220	22 x 35	1.49	2.09	0.904	0.452	EETUQ2G221HF	EETUQ2G221HC
	22 x 40	1.49	2.09	0.904	0.452	EETUQ2G221HA	EETUQ2G221HJ
	25 x 30	1.49	2.09	0.904	0.452	EETUQ2G221JA	EETUQ2G221JJ
270	22 x 45	1.67	2.34	0.737	0.368	EETUQ2G271HA	EETUQ2G271HJ
	25 x 35	1.67	2.34	0.737	0.368	EETUQ2G271JA	EETUQ2G271JJ
	30 x 30	1.67	2.34	0.737	0.368	EETUQ2G271KA	EETUQ2G271KJ
	30 x 25	1.67	2.34	0.737	0.368	EETUQ2G271KF	EETUQ2G271KC
330	22 x 50	1.90	2.66	0.603	0.301	EETUQ2G331HA	EETUQ2G331HJ
	25 x 40	1.90	2.66	0.603	0.301	EETUQ2G331JA	EETUQ2G331JJ
	30 x 30	1.90	2.66	0.603	0.301	EETUQ2G331KA	EETUQ2G331KJ
	35 x 25	1.90	2.66	0.603	0.301	EETUQ2G331LA	EETUQ2G331LJ
390	25 x 45	2.13	2.98	0.510	0.255	EETUQ2G391JA	EETUQ2G391JJ
	30 x 35	2.13	2.98	0.510	0.255	EETUQ2G391KA	EETUQ2G391KJ
	35 x 30	2.13	2.98	0.510	0.255	EETUQ2G391LA	EETUQ2G391LJ
470	25 x 50	2.39	3.35	0.423	0.212	EETUQ2G471JA	EETUQ2G471JJ
	30 x 40	2.39	3.35	0.423	0.212	EETUQ2G471KA	EETUQ2G471KJ
	35 x 30	2.39	3.35	0.423	0.212	EETUQ2G471LA	EETUQ2G471LJ
560	30 x 45	2.69	3.77	0.355	0.178	EETUQ2G561KA	EETUQ2G561KJ
	35 x 35	2.69	3.77	0.355	0.178	EETUQ2G561LA	EETUQ2G561LJ
680	30 x 50	2.96	4.14	0.293	0.146	EETUQ2G681KA	EETUQ2G681KJ
	35 x 40	2.96	4.14	0.293	0.146	EETUQ2G681LF	EETUQ2G681LC
	35 x 45	2.96	4.14	0.293	0.146	EETUQ2G681LA	EETUQ2G681LJ
820	35 x 45	3.25	4.55	0.243	0.121	EETUQ2G821LF	EETUQ2G821LC
	35 x 50	3.25	4.55	0.243	0.121	EETUQ2G821LA	EETUQ2G821LJ
<b>420 VDC Working, 470 VDC Surge</b>							
120	22 x 25	1.08	1.51	1.658	0.829	EETUQ2S121HA	EETUQ2S121HJ
150	22 x 30	1.30	1.82	1.326	0.663	EETUQ2S151HA	EETUQ2S151HJ
	25 x 25	1.30	1.82	1.326	0.663	EETUQ2S151JA	EETUQ2S151JJ
180	22 x 35	1.48	2.07	1.105	0.553	EETUQ2S181HA	EETUQ2S181HJ
	25 x 30	1.48	2.07	1.105	0.553	EETUQ2S181JA	EETUQ2S181JJ
220	22 x 40	1.65	2.31	0.904	0.452	EETUQ2S221HF	EETUQ2S221HC
	25 x 35	1.65	2.31	0.904	0.452	EETUQ2S221JA	EETUQ2S221JJ
	30 x 25	1.65	2.31	0.904	0.452	EETUQ2S221KA	EETUQ2S221KJ
270	22 x 45	1.94	2.72	0.737	0.368	EETUQ2S271HF	EETUQ2S271HC
	25 x 40	1.94	2.72	0.737	0.368	EETUQ2S271JA	EETUQ2S271JJ
	30 x 30	1.94	2.72	0.737	0.368	EETUQ2S271KA	EETUQ2S271KJ
330	25 x 45	2.17	3.03	0.603	0.301	EETUQ2S331JA	EETUQ2S331JJ
	30 x 30	2.17	3.03	0.603	0.301	EETUQ2S331KF	EETUQ2S331KC
	35 x 25	2.17	3.03	0.603	0.301	EETUQ2S331LA	EETUQ2S331LJ
390	25 x 50	2.27	3.18	0.510	0.255	EETUQ2S391JA	EETUQ2S391JJ
	30 x 35	2.27	3.18	0.510	0.255	EETUQ2S391KA	EETUQ2S391KJ
	35 x 30	2.27	3.18	0.510	0.255	EETUQ2S391LA	EETUQ2S391LJ
470	30 x 40	2.61	3.65	0.423	0.212	EETUQ2S471KF	EETUQ2S471KC
	35 x 35	2.61	3.65	0.423	0.212	EETUQ2S471LA	EETUQ2S471LJ
560	30 x 45	2.82	3.95	0.355	0.178	EETUQ2S561KF	EETUQ2S561KC
	35 x 40	2.82	3.95	0.355	0.178	EETUQ2S561LA	EETUQ2S561LJ
680	30 x 50	3.11	4.35	0.293	0.146	EETUQ2S681KF	EETUQ2S681KC
	35 x 45	3.11	4.35	0.293	0.146	EETUQ2S681LA	EETUQ2S681LJ

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## TS-UQ Standard Ratings (continued)

Part numbers shown with 2 pins and 4.0mm length terminal

Cap. ( $\mu\text{F}$ )	Size (mm) D x L	Max 85°C R.C. ( $A_{\text{rms}}$ )		20°C ESR ( $\Omega$ , max.)		Panasonic Part Number (By Sleeving Style)	
		120Hz	10kHz~	120Hz	20kHz	PVC with Top Plate	PET without Top Plate
<b>420 VDC Working, 470 VDC Surge (continued)</b>							
820	35 x 50	3.30	4.62	0.243	0.121	EETUQ2S821LA	EETUQ2S821LJ
<b>450 VDC Working, 500 VDC Surge</b>							
82	22 x 25	0.83	1.16	2.426	1.213	EETUQ2W820HA	EETUQ2W820HJ
100	22 x 25	0.93	1.30	1.989	0.995	EETUQ2W101HA	EETUQ2W101HJ
120	22 x 30	1.04	1.46	1.658	0.829	EETUQ2W121HA	EETUQ2W121HJ
150	22 x 30	1.19	1.67	1.326	0.663	EETUQ2W151HF	EETUQ2W151HC
	22 x 35	1.19	1.67	1.326	0.663	EETUQ2W151HA	EETUQ2W151HJ
	25 x 25	1.19	1.67	1.326	0.663	EETUQ2W151JF	EETUQ2W151JC
	25 x 30	1.19	1.67	1.326	0.663	EETUQ2W151JA	EETUQ2W151JJ
180	22 x 35	1.35	1.89	1.105	0.553	EETUQ2W181HF	EETUQ2W181HC
	22 x 40	1.35	1.89	1.105	0.553	EETUQ2W181HA	EETUQ2W181HJ
	25 x 30	1.35	1.89	1.105	0.553	EETUQ2W181JA	EETUQ2W181JJ
220	22 x 45	1.55	2.17	0.904	0.452	EETUQ2W221HA	EETUQ2W221HJ
	25 x 35	1.45	2.03	0.904	0.452	EETUQ2W221JF	EETUQ2W221JC
	25 x 40	1.55	2.17	0.904	0.452	EETUQ2W221JA	EETUQ2W221JJ
	30 x 25	1.55	2.17	0.904	0.452	EETUQ2W221KF	EETUQ2W221KC
	30 x 30	1.55	2.17	0.904	0.452	EETUQ2W221KA	EETUQ2W221KJ
	35 x 25	1.55	2.17	0.904	0.452	EETUQ2W221LA	EETUQ2W221LJ
270	22 x 50	1.78	2.49	0.737	0.368	EETUQ2W271HA	EETUQ2W271HJ
	25 x 40	1.78	2.49	0.737	0.368	EETUQ2W271JA	EETUQ2W271JJ
	30 x 30	1.78	2.49	0.737	0.368	EETUQ2W271KA	EETUQ2W271KJ
	35 x 25	1.78	2.49	0.737	0.368	EETUQ2W271LF	EETUQ2W271LC
330	25 x 45	2.01	2.81	0.603	0.301	EETUQ2W331JF	EETUQ2W331JC
	30 x 35	2.01	2.63	0.603	0.301	EETUQ2W331KF	EETUQ2W331KC
	30 x 40	2.01	2.81	0.603	0.301	EETUQ2W331KA	EETUQ2W331KJ
	35 x 30	2.01	2.81	0.603	0.301	EETUQ2W331LA	EETUQ2W331LJ
390	30 x 40	2.24	3.14	0.510	0.255	EETUQ2W391KA	EETUQ2W391KJ
	35 x 30	2.24	3.14	0.510	0.255	EETUQ2W391LF	EETUQ2W391LC
	35 x 35	2.24	3.14	0.510	0.255	EETUQ2W391LA	EETUQ2W391LJ
470	30 x 45	2.53	3.54	0.423	0.212	EETUQ2W471KA	EETUQ2W471KJ
	35 x 35	2.53	3.54	0.423	0.212	EETUQ2W471LF	EETUQ2W471LC
	35 x 40	2.53	3.54	0.423	0.212	EETUQ2W471LA	EETUQ2W471LJ
560	30 x 50	2.82	3.95	0.355	0.178	EETUQ2W561KA	EETUQ2W561KJ
	35 x 40	2.82	3.95	0.355	0.178	EETUQ2W561LF	EETUQ2W561LC
	35 x 45	2.82	3.95	0.355	0.178	EETUQ2W561LA	EETUQ2W561LJ
680	35 x 45	3.02	4.23	0.293	0.146	EETUQ2W681LF	EETUQ2W681LC

Design and specifications are subject to change without notice.

Contact the factory or your sales representative for technical specifications before purchase and/or use.

When safety concerns arise, please contact Panasonic immediately for technical consultation.