

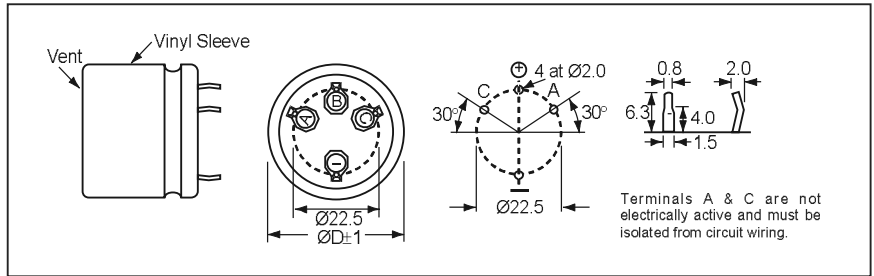
# Panasonic T-UP Series Snap-In Capacitors

**FEATURES:**

- 4 terminal mounting provides stability and keyed polarity
- Replaces T-U series with higher capacitance and ripple current per case size
- General purpose rated at 85°C, 2000 hour endurance
- 35 and 40 mm diameter case sizes up to 80 mm in length
- Top vent construction

<b>Rated Working Voltage</b>	16 ~ 250 VDC	350 ~ 450 VDC
<b>Operating Temperature</b>	-40 ~ +85°C	-25 ~ +85°C
<b>Nominal Capacitance</b>	1500 ~ 120000µF	470 ~ 1800µF
<b>Endurance</b>	2000 hours at +85°C with maximum specified ripple current	

<b>Rated DC Voltage:</b>	16	25	35	50	63	80	100	200	250	350	400	450
<b>Surge Voltage:</b>	20	32	44	63	79	100	125	250	300	400	450	500



Working Volt. DC	Cap (µF)	Size (mm) D X L	Max. 85°C Ripple (Arms)		Max. 20°C, 120Hz ESR (Ω)	Digi-Key Part No.	Pricing				Panasonic Part No.	
			120 Hz	10k~50kHz			1	5	25	50		
16	68000	35 x 50	9.05	10.41	0.018	P10000-ND	9.71	46.60	89.31	213.57	388.30	ECE-T1CP683EA
	82000	35 x 60	9.94	11.43	0.018	P10001-ND	11.45	54.97	105.36	251.94	458.08	ECE-T1CP823EA
	82000	40 x 50	10.29	11.83	0.019	P10003-ND	11.63	55.82	106.98	255.82	465.14	ECE-T1CP823FA
	100000	35 x 80	11.00	12.65	0.019	P10002-ND	14.68	70.45	135.03	322.91	587.10	ECE-T1CP104EA
	100000	40 x 60	11.36	13.06	0.020	P10004-ND	13.94	66.90	126.23	306.64	557.54	ECE-T1CP104FA
	120000	40 x 80	12.42	14.28	0.018	P10005-ND	17.09	82.04	157.24	376.01	683.65	ECE-T1CP124FA
25	47000	35 x 50	8.00	9.20	0.017	P10006-ND	9.63	46.22	88.59	211.84	385.17	ECE-T1EP473EA
	56000	35 x 60	8.64	9.94	0.017	P10007-ND	11.28	54.16	103.81	248.25	451.36	ECE-T1EP563EA
	56000	40 x 50	8.96	10.30	0.018	P10009-ND	11.46	55.00	105.41	252.07	458.30	ECE-T1EP563FA
	68000	35 x 80	9.44	10.86	0.017	P10008-ND	14.38	69.03	132.30	316.38	575.23	ECE-T1EP683EA
	68000	40 x 60	9.76	11.22	0.018	P10010-ND	13.67	65.61	125.76	300.73	546.78	ECE-T1EP683FA
	100000	40 x 80	11.68	13.43	0.018	P10011-ND	19.57	93.95	180.06	430.58	782.88	ECE-T1EP104FA
35	33000	35 x 50	7.15	8.22	0.018	P10012-ND	10.52	50.48	96.75	231.37	420.67	ECE-T1VP333EA
	39000	35 x 60	7.94	9.13	0.015	P10013-ND	11.94	57.29	109.81	262.60	477.46	ECE-T1VP393EA
	39000	40 x 50	7.79	8.96	0.017	P10015-ND	12.84	61.65	118.16	282.56	513.74	ECE-T1VP393FA
	47000	35 x 80	9.53	10.96	0.015	P10014-ND	15.22	73.06	140.03	334.86	608.83	ECE-T1VP473EA
	47000	40 x 60	8.58	9.87	0.017	P10016-ND	14.42	69.22	132.66	317.24	576.80	ECE-T1VP473FA
	56000	40 x 80	10.17	11.70	0.017	P10017-ND	17.65	84.71	162.37	388.26	705.94	ECE-T1VP563FA
50	22000	35 x 50	7.57	8.71	0.023	P10018-ND	11.42	54.84	105.10	251.33	456.96	ECE-T1HP223EA
	27000	35 x 60	8.31	9.56	0.018	P10019-ND	12.47	59.86	114.74	274.37	498.85	ECE-T1HP273EA
	27000	40 x 50	8.12	9.34	0.021	P10021-ND	13.38	64.20	123.06	294.26	535.02	ECE-T1HP273FA
	33000	35 x 80	9.23	10.51	0.015	P10020-ND	16.10	77.28	148.12	354.20	644.00	ECE-T1HP333EA
	33000	40 x 60	8.86	10.19	0.018	P10022-ND	15.23	73.13	140.16	335.17	609.39	ECE-T1HP333FA
	39000	40 x 80	9.79	11.26	0.015	P10023-ND	18.59	89.23	171.02	408.96	743.57	ECE-T1HP393FA
63	12000	35 x 50	7.15	8.22	0.035	P10024-ND	8.93	42.89	82.20	196.57	357.39	ECE-T1JP123EA
	15000	35 x 60	7.71	8.87	0.028	P10025-ND	10.72	51.46	98.64	235.87	428.85	ECE-T1JP153EA
	15000	40 x 50	7.53	8.66	0.033	P10027-ND	11.54	55.40	106.18	253.92	461.66	ECE-T1JP153FA
	18000	35 x 80	9.41	10.82	0.023	P10026-ND	13.43	64.47	123.57	295.50	537.26	ECE-T1JP183EA
	18000	40 x 60	8.28	9.52	0.028	P10028-ND	12.85	61.69	118.24	282.74	514.08	ECE-T1JP183FA
	22000	40 x 80	9.97	11.47	0.023	P10029-ND	15.86	76.14	145.93	348.96	634.48	ECE-T1JP223FA
80	8200	35 x 50	5.83	6.70	0.051	P10030-ND	9.83	47.19	90.44	216.28	393.23	ECE-T1KP822EA
	10000	35 x 60	6.38	7.34	0.041	P10031-ND	11.85	56.89	109.04	260.75	474.10	ECE-T1KP103EA
	10000	40 x 50	6.56	7.54	0.041	P10033-ND	12.68	60.84	116.62	278.86	507.02	ECE-T1KP103FA
	12000	35 x 80	6.92	7.96	0.035	P10032-ND	14.79	70.98	136.04	325.31	591.47	ECE-T1KP123EA
	12000	40 x 60	7.29	8.38	0.035	P10034-ND	14.27	68.52	131.32	314.04	570.98	ECE-T1KP123FA
	15000	40 x 80	8.93	10.27	0.028	P10035-ND	17.78	85.36	163.60	391.22	711.31	ECE-T1KP153FA
100	6800	35 x 50	6.60	7.59	0.049	P10036-ND	13.30	63.84	122.36	292.60	532.00	ECE-T2AP682EA
	8200	35 x 60	7.05	8.12	0.040	P10037-ND	14.73	70.72	135.55	324.14	589.34	ECE-T2AP822EA
	8200	40 x 50	7.28	8.37	0.040	P10039-ND	15.70	75.36	144.44	345.39	627.98	ECE-T2AP822FA
	10000	35 x 80	7.74	8.90	0.033	P10038-ND	18.95	90.95	174.32	416.85	757.90	ECE-T2AP103EA
	10000	40 x 60	7.97	9.17	0.033	P10040-ND	18.16	87.14	167.03	399.41	726.21	ECE-T2AP103FA
	12000	40 x 80	8.65	9.95	0.026	P10041-ND	22.27	106.92	204.92	490.03	890.96	ECE-T2AP123FA
200	2200	35 x 50	4.92	6.89	0.113	P10042-ND	10.63	51.02	97.78	233.83	425.15	ECE-T2DP222EA
	2700	35 x 60	5.41	7.57	0.092	P10043-ND	11.13	53.42	102.40	244.86	445.20	ECE-T2DP272EA
	2700	40 x 50	5.41	7.57	0.092	P10045-ND	12.55	60.24	115.46	276.09	501.98	ECE-T2DP272FA
	3300	35 x 80	5.90	8.26	0.075	P10044-ND	14.93	71.66	137.35	328.45	597.18	ECE-T2DP332EA
	3300	40 x 60	5.90	8.26	0.075	P10046-ND	13.55	65.04	124.65	298.08	541.97	ECE-T2DP332FA
	3900	40 x 80	6.40	8.96	0.064	P10047-ND	17.25	82.80	158.71	379.52	690.03	ECE-T2DP392FA
250	1500	35 x 50	4.04	5.66	0.166	P10048-ND	11.00	52.82	101.24	242.09	440.16	ECE-T2EP152EA
	1800	35 x 60	4.49	6.29	0.138	P10049-ND	12.09	58.05	111.26	266.05	483.73	ECE-T2EP182EA
	1800	40 x 50	4.49	6.29	0.138	P10051-ND	12.23	58.72	112.55	269.13	489.33	ECE-T2EP182FA
	2200	35 x 80	4.94	6.92	0.113	P10050-ND	15.22	73.06	140.03	334.86	608.83	ECE-T2EP222EA
	2200	40 x 60	4.94	6.92	0.113	P10052-ND	14.72	70.65	135.42	323.83	588.78	ECE-T2EP222FA
	2700	40 x 80	5.39	7.55	0.092	P10053-ND	18.08	86.77	166.31	397.69	723.07	ECE-T2EP272FA
350	680	35 x 50	2.96	4.14	0.366	P10054-ND	10.94	52.52	100.67	240.73	437.70	ECE-T2VP681EA
	1000	35 x 60	3.19	4.47	0.249	P10055-ND	14.31	68.68	131.63	314.78	572.32	ECE-T2VP102EA
	1000	40 x 50	3.19	4.47	0.249	P10057-ND	14.37	68.97	132.20	316.13	574.78	ECE-T2VP102FA
	1200	35 x 80	3.64	5.10	0.207	P10056-ND	17.96	86.23	165.28	395.23	718.59	ECE-T2VP122EA
	1200	40 x 60	3.64	5.10	0.207	P10058-ND	16.20	77.75	149.02	356.36	647.92	ECE-T2VP122FA
	1800	40 x 80	4.10	5.74	0.136	P10059-ND	24.37	116.95	224.16	536.04	974.62	ECE-T2VP182FA
400	560	35 x 50	2.69	3.77	0.444	P10060-ND	10.77	51.68	99.05	236.85	430.64	ECE-T2GP561EA
	680	35 x 60	2.93	4.10	0.366	P10061-ND	12.85	61.69	118.24	282.74	514.08	ECE-T2GP681EA
	820	40 x 50	3.18	4.45	0.303	P10063-ND	14.19	68.10	130.53	312.13	567.50	ECE-T2GP821FA
	1000	35 x 80	3.42	4.79	0.249	P10062-ND	17.82	85.55	163.96	392.08	712.88	ECE-T2GP102EA
	1000	40 x 60	3.42	4.79	0.249	P10064-ND	16.06	77.11	147.79	353.40	642.54	ECE-T2GP102FA
	1500	40 x 80	3.91	5.47	0.166	P10065-ND	24.83	119.19	228.44	546.27	993.22	ECE-T2GP152FA
450	470	35 x 50	2.53	3.54	0.529	P10066-ND	11.82	56.74	108.76	260.08	472.86	ECE-T2WP471EA
	560	35 x 60	2.76	3.86	0.444	P10067-ND	12.33	59.16	113.40	271.16	493.02	ECE-T2WP561EA
	680	40 x 50	2.99	4.19	0.366	P10069-ND	15.67	75.22	144.18	344.78	626.86	ECE-T2WP681FA
	820	35 x 80	3.22	4.51	0.303	P10068-ND	19.80	95.02	182.12	435.51	791.84	ECE-T2WP821EA
	820	40 x 60	3.22	4.51	0.303	P10070-ND	17.81	85.48	163.83	391.78	712.32	ECE-T2WP821FA
	1200	40 x 80	3.45	4.83	0.207	P10071-ND	27.37	131.36	251.78	602.08	1094.69	ECE-T2WP122FA

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