



CAK38 Military Standard Wet Tantalum Capacitor

(Tantalum case with glass-to-tantalum hermetic seal, high reliability)

Datasheet



❖ Brief Introduction and Feature

- CAK38, Tantalum case ,hermetic seal, with insulation sleeve wet tantalum electrolytic capacitors.
- With polar, axial leads through hole, in stable and excellent performances.
- High reliability.long life,high ripple current,low ESR and low DC leakage current (DCL)..
- Widely used in electronic equipment for military applications such as telecommunication, aerospace and aviation.

Meet standard: GJB733A-96,QJ/PWV91-2000

Cross: MIL-PRF-39006/22 CLR79

❖ General Characteristics

Operating Temperature Range: $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (at 125°C with voltage derating);

Capacitance range: $1.7\mu\text{F} \sim 1200\mu\text{F}$

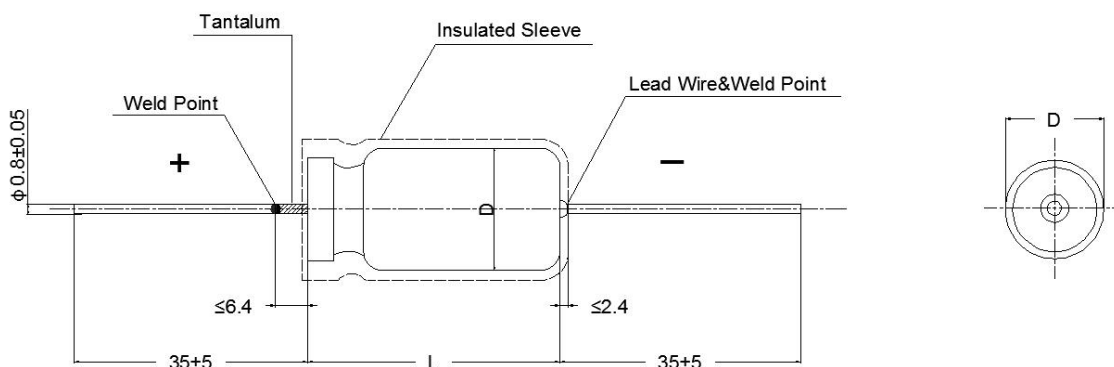
Ripple current: $415\text{mA} \sim 2360\text{mA}$

Capacitance Tolerance: $K=\pm 10\%$, $M=\pm 20\%$

Voltage: $6\text{V} \sim 125\text{V}$

Reverse voltage capability: 3V

❖ Drawing,Case Dimension and Max. Weight



Code	Max. weight (g)	Without sleeve		With sleeve max.	
		D ± 0.4 (mm)	L ± 0.8 (mm)	D ± 0.4 (mm)	L ± 0.8 (mm)
T1	3	4.78	11.51	5.18	13.12
T2	7	7.14	16.28	7.54	17.88
T3	12	9.52	19.46	10.00	21.06
T4	18	9.52	26.97	10.00	28.57



❖ Electric Performance Characteristics of CAK39 series.

Rated Voltage (V)	Voltage Derating (V)	Case size	Capacitance (μF)	DCL (μA)Max.		IMP. (Ω) -55℃ 100Hz	AC ripple 85℃ 40kHz (mA)	tgδ(%) 25℃ 100Hz
				25℃	85℃ 125℃			
6	4	T1	30	1	2	100	820	9
		T1	68	1	2	60	960	15
		T2	140	1	3	40	1200	21
		T2	270	1	6.5	25	1375	45
		T3	330	2	7.9	20	1800	36
		T3	560	2	13	25	1900	55
		T4	1200	3	14	20	2265	90
8	5	T1	25	1	2	100	820	7.5
		T1	56	1	2	59	900	14
		T2	120	1	2	50	1220	20
		T2	220	1	7	30	1370	37
		T3	290	2	6	25	1770	34
		T3	430	2	14	25	1825	46
		T4	850	4	16	22	2330	60
10	7	T1	20	1	2	175	820	6
		T1	47	1	2	100	855	13
		T2	100	1	4	60	1200	15
		T2	180	1	7	40	1365	30
		T3	250	2	10	30	1720	30
		T3	390	2	16	25	1800	44
		T4	750	4	16	23	2360	50
15	10	T1	15	1	2	155	780	5
		T1	33	1	2	90	820	10
		T2	70	1	4	75	1150	13
		T2	120	1	7	50	1450	18
		T3	170	2	10	35	1480	25
		T3	270	2	16	30	1740	32
		T4	540	6	24	23	2330	40
25	15	T1	10	1	2	220	715	4
		T1	22	1	2	140	825	6.6
		T2	50	1	2	70	1130	11
		T2	100	1	10	50	1435	15
		T3	120	2	16	38	1450	21
		T3	180	2	18	32	1525	26
		T4	350	7	28	24	1970	35



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Rated Voltage (V)	Voltage Derating (V)	Case size	Capacitance (μF)	DCL (μA) Max.		IMP. (Ω) -55℃ 100Hz	AC ripple 85℃ 40kHz (mA)	tgδ(%) 100Hz
				25℃	85℃ 125℃			
30	20	T1	8	1	2	275	640	4
		T1	150	1	2	175	780	5
		T2	40	1	5	65	1120	10
		T2	68	1	8	60	1285	13
		T3	100	2	12	40	1450	17
		T3	150	2	18	35	1525	23
		T4	300	8	32	25	1950	31
50	30	T1	5	1	2	400	580	3
		T1	10	1	2	250	715	4
		T2	25	1	5	95	1005	8
		T2	47	1	9	70	1155	11
		T3	60	2	12	45	1335	12
		T3	82	2	16	45	1400	15
		T4	160	8	32	27	1900	17
60	40	T1	4	1	2	550	525	2.8
		T1	8.2	1	2	275	625	4
		T2	20	1	5	105	930	7
		T2	39	1	9	90	1110	10
		T3	50	2	12	50	1300	10
		T3	68	2	16	50	1365	13
		T4	140	8	32	28	1850	16
75	50	T1	3.5	1	2	650	525	2.5
		T1	6.8	1	2	300	610	3.5
		T2	15	1	5	150	890	6
		T2	33	1	10	90	1000	10
		T3	40	2	12	60	1250	9
		T3	56	2	17	60	1335	11
		T4	110	9	36	29	1850	12
100	65	T1	2.5	1	2	950	505	2
		T1	4.7	1	2	500	565	3
		T2	11	1	4	200	835	5
		T2	22	1	9	100	965	7.5
		T3	30	2	12	80	1240	7
		T3	43	2	17	70	1335	8.5
		T4	86	9	36	30	1800	10
125	85	T1	1.7	1	2	1250	415	2
		T1	3.6	1	2	600	520	2.7
		T2	9	1	5	240	755	5
		T2	14	1	7	167	860	6
		T3	18	2	9	129	1130	5
		T3	25	2	13	93	1200	6
		T4	56	10	40	32	1800	6.5



❖ How to order

(GTCAK38-866K100T4)

GT	CAK38	866	K	100	T4
Brand Name	Type	Capacitance	Tolerance	DC voltage	Size code
Green Tech	Military Wet Electrolytic Tantalum Capacitor	866: 86×10^6 (pF) This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	K=±10% M=±20%	6V=006 8V=008 10V=010 15V=015 25V=025 30V=030 50V=050 60V=060 75V=075 100V=100 125V=125	T1 T2 T3 T4

Notes:

- Tantalum capacitors can't been measured by multimeter.(Easily cause irreversible damage and lead to reject when reversed polarity)
- Capacitance, DF measure frequency: 100Hz,DC offset voltage $U_1=2.2^{0-1.0}V$,Exchange offset voltage $U_2=1.0^{0-0.5}V$ (effective value), measure method is by series equivalent circuit.
- Measure the leakage current at 125℃,please use derated voltage. DCL read at 5 minute.
- Special size and big capacitance products, please negotiate with GTCAP.