THC1W High Energy Tantalum Hybrid Capacitor

(Hermetic sealed & Military standard)

❖ **Feature and Applications**

- All tantalum case, hermetic sealed, Cylindrical, redial leads,polarized;
- With screws, convenient to fix;
- This product is made up of tantalum capacitor and electrochemical capacitor,small size with big capacitance.
- Stable electric performance, high reliability, long life, large energy density per unit volume,
- Used as battery in energy conversion circuit and power pulse circuit, Perform energy storage,filter, power-off delay in circuit. Widely use in aircraft,radar,ship,tank,satellite,aerospace equipment etc.
- Standard: GJB733A-96, QJ/PWV303-2008

❖ **How to order: THC1W-50V8000μF-M：100pcs**

❖ **Technical Performance**

Temperature range: -55℃~+125℃（＞125℃ use derated voltage）

Store environment temperature: -62℃~+130℃

Capacitance tolerance: K=±10%, M=±20%, Q=-10%~+30%

❖ **Notes：**

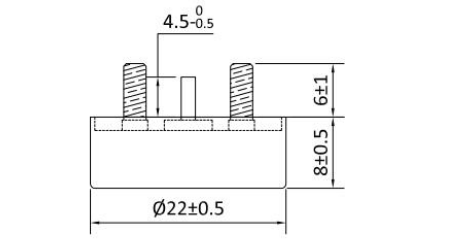
1, Tantalum capacitors can't been measured by multimeter (Easily cause irreversible damage and lead to reject)

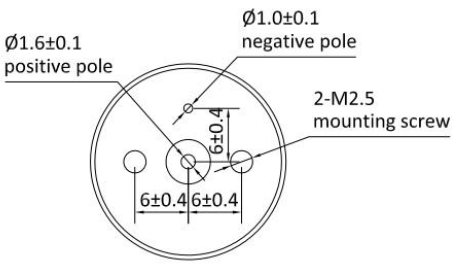
2, Capacitance, DF measure frequency: 100Hz,DC offset voltage $U_{-}=2.2^{0}_{-1.0}V$, Exchange offset voltage $U_{\sim}=1.0^{0}_{-0.5}V$(effective value), measure method is by series equivalent circuit.

3, Measure the leakage current above 125℃,please use derated voltage. DCL. value read at 5 minute.

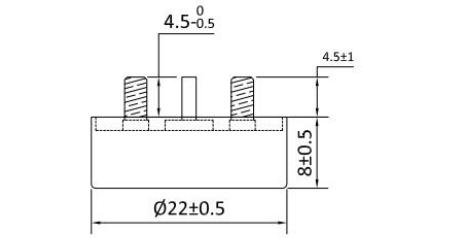
4, Special size and big capacitance products, please consult with GTCAP.

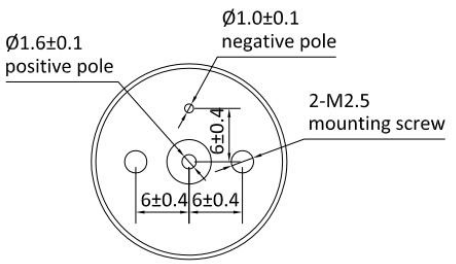
❖ **Outline and installation dimensions. Drawing 1（mm）**





THC1W Ø22X8 Layout (A type)



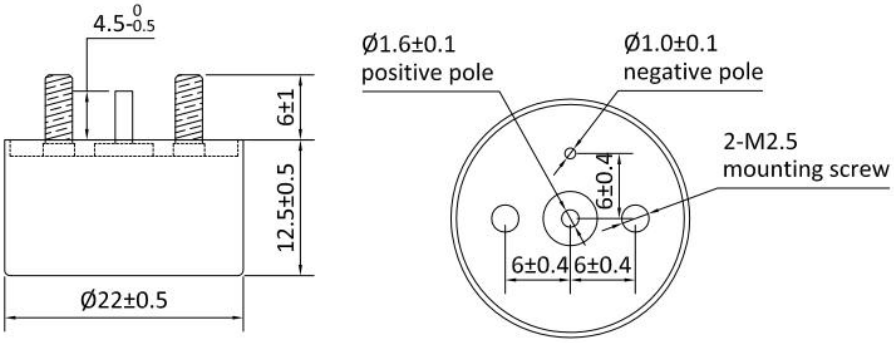


THC1W Ø22X8 Layout (B type)

❖ **Table 1 THC1W High Energy Tantalum Hybrid Capacitor's Characteristics. Size see drawing 1**

Rated Voltage	Derated Voltage	Surge Voltage	Cap.	tgδ(%)	ESR 1KHz	Max.DCL. (μA)		IMP. 100Hz（Ω）	Cap. Change （%）		Max. Weight
(V)	(V)	（V）	（μF）	100Hz	（Ω）	25℃	85/125℃	-55℃	-55℃	+85℃	(g)
10	6	11	8000	80	0.3	100	600	8	-80	+160	28
16	9.5	17.6	7000	70	0.3	120	750	8	-80	+160	28
25	15	27.5	5000	60	0.3	150	900	8	-75	+150	28
35	20	38.5	3500	50	0.3	150	900	8	-70	+140	28
50	30	55	2500	46	0.3	155	930	9.6	-60	+120	28
63	38	70	1200	35	0.4	85	510	11.2	-50	+80	28
80	48	88	860	30	0.4	90	540	12.8	-40	+80	28
100	60	110	400	25	0.5	25	150	14.4	-30	+60	28
110	66	121	200	20	0.5	25	150	16	-25	+50	28
125	75	138	160	20	0.6	25	150	19.2	-20	+50	28

❖ **Outline and installation dimensions. Drawing 2（mm）**

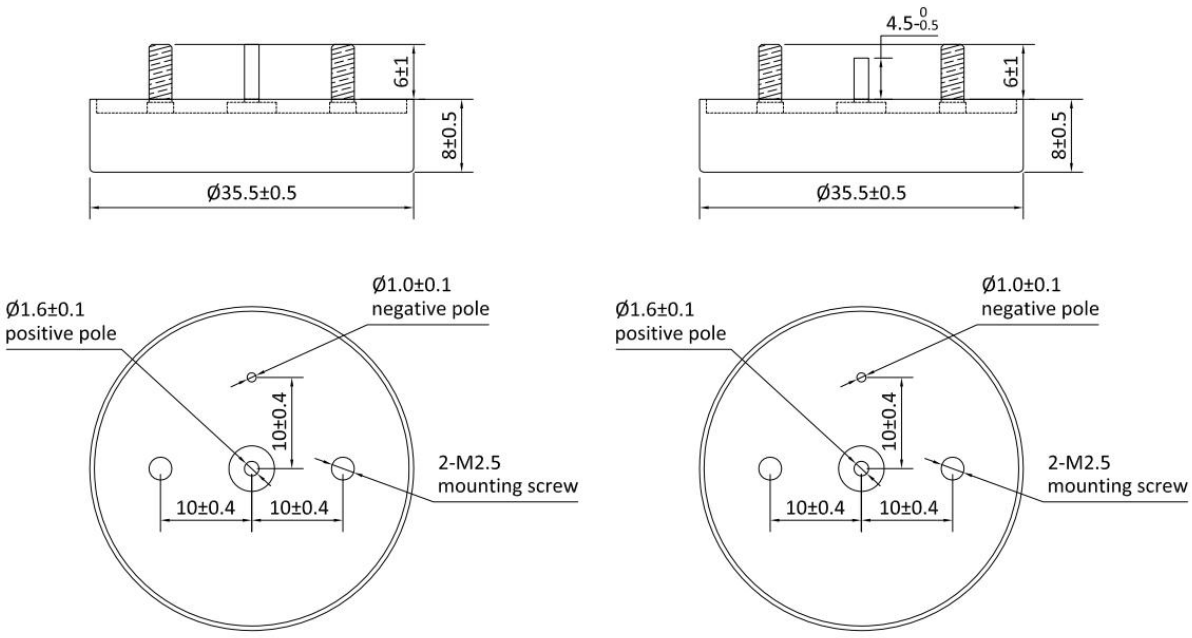


THC1W Ø22X12.5 Layout

❖ **Table 2 THC1W High Energy Tantalum Hybrid Capacitor's Characteristics. Size see drawing 2**

Rated Voltage	Derated Voltage	Surge Voltage	Cap.	tgδ(%)	ESR 1KHz	Max.DCL. (μA)		IMP. 100Hz（Ω）	Cap. Change （%）		Max. Weight
(V)	(V)	（V）	（μF）	100Hz	（Ω）	25℃	85/125℃	-55℃	-55℃	+85℃	(g)
10	6	11	20000	90	0.1	150	900	2.5	-80	+160	35
16	9.5	17.6	18000	80	0.1	150	900	2.5	-80	+160	35
25	15	27.5	13000	70	0.1	150	900	2.5	-75	+150	35
35	20	38.5	9000	60	0.1	170	1000	2.5	-70	+140	35
50	30	55	6800	65	0.1	170	1000	1.2	-45	+120	35
63	38	70	2800	55	0.2	170	1000	3.5	-50	+80	35
80	48	88	2000	45	0.2	200	1200	3.5	-40	+80	35
100	60	110	1000	40	0.2	200	1200	4.0	-30	+60	35
110	66	121	800	30	0.2	200	1200	4.0	-25	+50	35
125	75	138	600	30	0.3	200	1200	4.0	-20	+50	35

❖ **Outline and installation dimensions. Drawing 3（mm）**



THC1W Ø35.5X8 Layout(A type)

THC1W Ø35.5X8 Layout (B Type)

❖ **Table 3 THC1W High Energy Tantalum Hybrid Capacitor's Characteristics. Size see drawing 3**

Rated Voltage	Derated Voltage	Surge Voltage	Cap.	tgδ(%)	ESR 1KHz	Max.DCL. (μA)		IMP. 100Hz（Ω）	Cap. Change （%）		Max. Weight
(V)	(V)	（V）	（μF）	100Hz	（Ω）	25℃	85/125℃	-55℃	-55℃	+85℃	(g)
10	6	11	50000	180	0.05	150	900	1.0	-75	+140	52
16	9.5	17.6	30000	160	0.05	150	900	1.0	-70	+140	52
25	15	27.5	18000	120	0.05	150	900	1.0	-65	+120	52
35	20	38.5	12000	90	0.065	150	900	1.0	-50	+120	52
50	30	55	8000	65	0.07	170	1000	1.2	-40	+120	52
50	30	55	9000	65	0.07	170	1000	1.2	-45	+120	52
63	38	70	1800	40	0.2	126	1000	1.4	-20	+60	52
63	38	70	4000	45	0.1	170	1000	1.4	-30	+80	52
80	48	88	1600	20	0.15	100	1000	1.6	-20	+60	52
80	48	88	2800	40	0.1	200	1200	1.6	-30	+80	52
100	60	110	1200	35	0.125	200	1200	1.8	-25	+60	52
100	60	110	1900	35	0.125	200	1200	1.8	-25	+60	52
110	66	121	580	35	0.2	200	1200	2.0	-20	+50	52
110	66	121	1500	35	0.2	200	1200	2.0	-20	+50	52
125	75	138	560	35	0.2	200	1200	2.4	-15	+50	52
125	75	138	1100	35	0.2	200	1200	2.4	-15	+50	52