

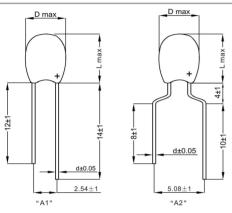


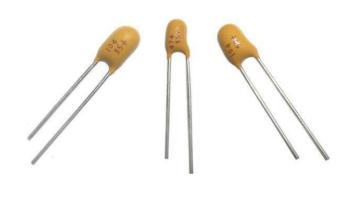
#### **FEATURES**

- Epoxy-coated, Radial-lead, Polarized.
- > Small in size, Long life-span, High reliability.
- Stable in electrical & storage performances.
- > Applying in TV sets, Telephones, Camcorders, Instruments and Meters,

such Electrical Equipment with High-reliable SMT DC & Impulse high-density assembled printed Circuit for Military use.

## **DRAWING (mm)**





#### **SPECIFICATIONS**

TECHTICATIONS									
Temperature Range:	-55°C to +125°C	55°C to +125°C							
Capacitance Range:	0.47μF ~ 680μF	).47μF ~ 680μF							
Capacitance Tolerance:	±20%, ±10%,±5% (for special order)								
Technical Data:	All technical data relate to an ambient temperature of +25 $^{\circ}\mathrm{C}$								
Rated Voltage ( $V_R$ ):	≤+85°C:	4	6.3	10	16	20	25	35	40
Category Voltage( $V_c$ ):	≤+125℃:	2.5	4	6.3	10	13	16	20	25
Surge Voltage (V <sub>s</sub> ):	≤+85°C:	5	8	13	20	26	32	46	52
Surge Voltage (V <sub>s</sub> ):	≤+125℃:	3	5	8	12	16	19	28	31

#### **TEMPERATURE STABILITY**

Capacitance Range (μF)	Cap	acitance Cha ΔC/C (%)	inge	Dissipation Factor (%)			sipation Factor (%) DC Leakage		
y- (p)	-55℃	+85℃	+ <b>125℃</b>	-55℃	+25℃	+85℃	+125℃	+85℃	+125℃
0.47~1.0				6	4	6	6		
1.5~6.8				8	6	8	8		
10~68				10	8	10	10		
100~330	±10	±10	±15	12	10	12	12	8 I <sub>0</sub> <sup>(1)</sup>	10 l <sub>0</sub>
470~680				14	12	14	14		
>680				16	14	16	16		

(1)  $_{\mathrm{I}_{\mathrm{0}}}$  refer to initial value of DC leakage current



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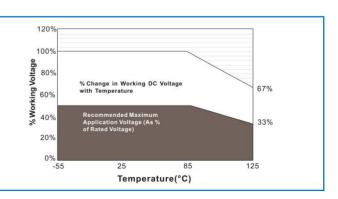


# **Capacitance and Rated Voltage Range**

Ra	Rate Voltage U <sub>R</sub> (V)		4	6.3	10	16	20	25	35	40	50
Ca	Category Voltage U <sub>c</sub> (V)		2.5	4	6.3	10	13	16	20	25	32
D	imensions (mm)					Rate	d Capacitanc	e (μF)			
DxL	d	P									
			3.3	1.5	1	0.68	0.33	0.33	0.1	0.1	0.1
			4.7	2.2	1.5	1	0.47	0.47	0.15	0.15	0.15
4.4x6.5	0.5	2.54 /5.08	6.8	3.3	2.2	1.5	0.68	0.68	0.22	0.22	0.22
(A case)	0.5	2.54 / 5.00	10	4.7	3.3	2.2	1	1	0.33	0.33	0.33
			15	6.8	6.8	3.3	1.5	1.5	0.47	0.47	0.47
			22	10	10	4.7	2.2	2.2	0.68	0.68	
			33	15	15	6.8	3.3	3.3	1		
				22		10			1.5		
5.0x7.5			47	33	22	15	4.7	4.7	2.2	1	0.68
(B case)	0.5	2.54 / 5.08	68	47	33	22	6.8	6.8	3.3	1.5	1
							10	10	4.7	2.2	1.5
5.5x9.0			100	68	47	33	15	15	6.8	3.3	2.2
(C case)	0.5	2.54 / 5.08	150	100	68	47	22	22	10	4.7	3.3
					100						
6.3x10.5	0.5	0.5 2.54 / 5.08	220	150	150	68	33	33	15	6.8	4.7
(D case)			330	220		100	47	47	22	10	6.8
7.2x12	0.5	2.54 / 5.08	470	330	220	150	68	68	33	15	10
(E case)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	680	470	330	220	100	100	47	22	15
8.5x13 (F case)	0.5	2.54 / 5.08		680	470	330	150	150	68	33	22

- 1. Please do not use multimeter through the measuring procedures.
- 2. Capacitance and DF measured at: 100Hz U\_=2.2°-1.0V, U~=1.0°-0.5V, Frequency=100Hz. Test only applied in series equivalent circuit.
- 3. Voltage derating is applied at +125°C. (The DCL parameter should be read after 5 minutes when it connected to the circuit).
- 4. Special size and demand could consult with us.

Operating Voltage				
	-55°C to 85°C	85°C to 125°C		
% Change in WorkingDC  Voltage with Temperature	VR	67% of VR		
Recommended Max Application Voltage	50% of VR	33% of VR		





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#### **Reverse Voltage**

Since tantalum capacitor has polarity, do not apply a reverse voltage to it. Do not apply capacitor to a circuit which only has alternating current.

- a) If there is no alternation, applying a low reverse voltage which is listed below to capacitor in ashort time is approved.
- b) In principle, testing a circuit with tantalum capacitor or capacitor itself by using a resistor gear of millimeters in ignorance of polarity is forbidden.
- c) During measurement and application, if the tantalum capacitor is subjected to an undersirable reverse voltage due to carelessness, please dispose it, even if its electrical characteristics are still qualified.

Temp.	Max. Reverse voltage in a short time
25°C	10% UR (rated voltage), working voltage to maximum of 1.0V.
85°C	3% UR (rated voltage), working voltage to maximum of 0.5V.
125°C	1% UR (rated voltage), working voltage to maximum of 0.1V.

### Ripple Voltage

Please use the capacitor within permissible ripple voltage.

- a) The sum of DC bias voltage and the maximum AC branch voltage should not exceed rated voltage during operation.
- b) The sum of negative peak AC value and DC bias voltage should not exceed the specified reverse voltage.
- c) Ripple current applied to capacitor will generate active power loss, which will raise the rate of the failure caused by heat due to self-heat generation of capacitor. Therefore, ripple current and permissible power loss must be in control.

### **Soldering Process**

WEET tantalum capacitors are compatible with wave (single or dual), convection, IR, or vapor phase reflow techniques. Preheating of these components is recommended to avoid extreme thermal stress. WEET's recommended profile conditions for convection and IR reflow reflect the profile conditions of the IPC/J-STD-020D standard for moisture sensitivity testing. The devices can safely withstand a maximum of three reflow passes at these conditions.

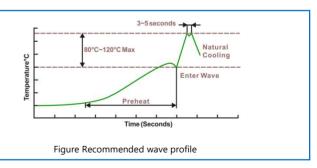
Hand soldering should be performed with care due to the difficulty in process control. If performed, care should be taken to avoid contact of the soldering iron to the molded case. The iron should be used to heat the solder pad, applying solder between the pad and the termination, until reflow occurs. Once reflow occurs, the iron should be removed immediately. "Wiping" the edges of a chip and heating the top surface is notrecommended.

During typical reflow operations, a slight darkening of the gold-colored epoxy may be observed. This slight darkening is normal and not harmful to the product. Marking permanency is not affected by this change.

**Soldering Process** 

Profile Feature	Profile Feature Pb-free Assembly	
2 1	50~165°C	50~165°C
Pre-heating	90~120 sec.	90~120 sec.
Max. Peak Temperature	250~260°C	240~250°C
	3~5 sec.	3~5 sec.
Time of wave	(max. 10 sec.)	(max. 10 sec.)

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The upper side temperature of the board should not exceed +150°C.



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#### **PN Structure:**

<u>WTA</u>	<u>250</u>	<u>K</u>	<u>100</u>	<u>2</u>	Α	R
<u>Series</u>	<u>Voltage</u>	<u>Tolerance</u>	<u>Capacitance</u>	<u>Pitch</u>	<u>Packing</u>	<u>Pb</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>

# 1. Voltage

040	4V
060	6.3V
100	10V
160	16V
200	20V
250	25V
350	35V
500	50V

#### 2. Tolerance

J	±5.0%
K	±10%
М	±20%

#### 3. Capacitance

0R1	0.1uF
R22	0.22uF
010	1uF
2R2	2.2uF
100	10uF
221	220uF

## 4. Pitch (mm)

2.54	2
5.08	5

## 5. Packing

А	Ammo
В	Bulk

#### 6. Pb

	D - LIC
K	KOH2



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