

# TANTALUM CAPACITOR- DIPPED

RESIN COATED, INFLAMMABLE AND MOISTURE RESISTANT EPOXY POWDER

# TS19

## FEATURES

- TS19 Series are epoxy-coated solid electrolyte tantalum capacitors are encapsulated with flame-retardant yellow epoxy powder, marked with laser.
- TS19 meets and exceeds the requirements of IEC Specification 384-15-3, IECQ Specification QC300201/US0003 and Technical Specification SJ/T10856-96.
- Highly used in military and civil applications , such as TV sets, camcorders, computers, program-controlled electronic telephone switching systems, telephones, instruments and meters.
- RoHS Compliance & Lead Free Terminations.

## SPECIFICATIONS

Rated Voltage	D.C. 4V ~ 50V
Operating Temperature Range	-55°C to +125°C (>85°C with rated voltage derating.)
Capacitance Range	0.047μF to 680μF
Capacitance Tolerance	±20%(M), ±10%(K), ±5%(J) (For special order)
DC Leakage Current	$I_o \leq 0.02C_R V_R$ or 1 μA (25°C) (Whichever is greater)
Case Sizes and Dimensions	Please see Table 2
Dissipation Factor at 25°C	Please see Table 1
Temperature Characteristics	Please see Table 1



## TEMPERATURE CHARACTERISTICS

Table 1

Capacitance (μF)	Capacitance Change (%)			DF Max. (%)				DCL Max. (μA)		
	-55°C	+85°C	+125°C	-55°C	+25°C	+85°C	+125°C	+25°C	+85°C	+125°C
≤1.0	±10	±15	±25	6	4	6	6	I <sub>o</sub> ≤0.02 C <sub>R</sub> U <sub>R</sub> or 1μA whichever is greater	+10 I <sub>o</sub>	+12.5 I <sub>o</sub>
1.5 ~ 68				8	6	8	8			
10 ~ 68				10	8	10	10			
100 ~ 680				12	10	12	12			

## DIMENSIONS - MILLIMETERS

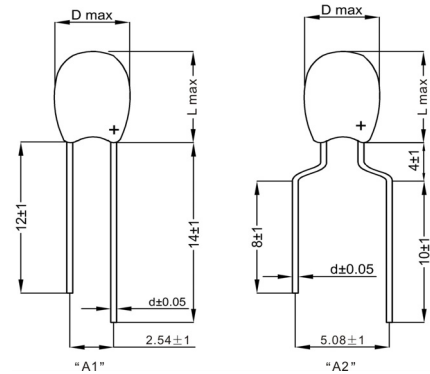
Table 2

Case Size	D (max)	L (max)	"A1"	"A2"	d (±0.05mm)
A	4.5	7.0	2.54	5.08	0.5
B	5.0	8.0	2.54	5.08	0.5
C	5.5	9.5	2.54	5.08	0.5
D	6.5	11.0	2.54	5.08	0.5
E	8.5	13.0	2.54	5.08	0.5
F	9.5	16.5	2.54	5.08	0.5

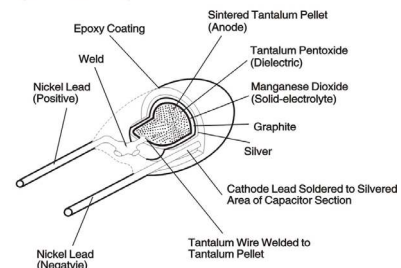
## Rated Voltage, Nominal Capacitance and Case Sizes

Table 3

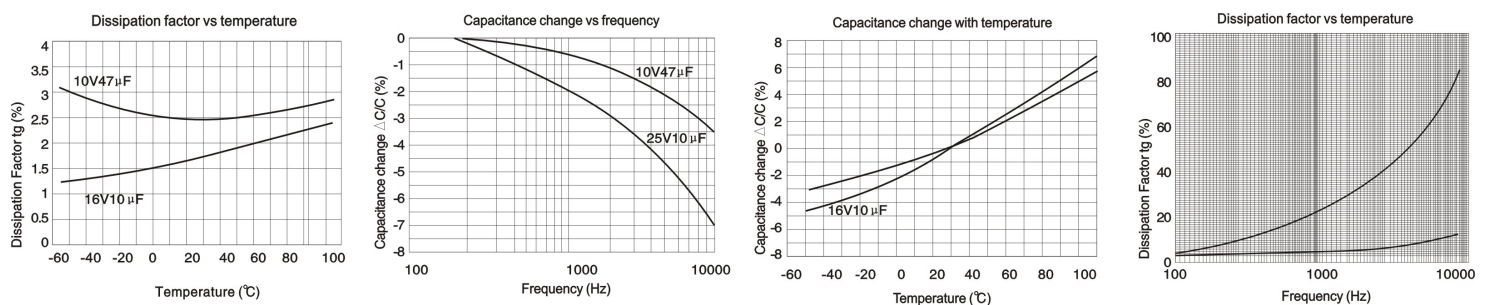
U <sub>R</sub>	V	4	6.3	10	16	20	25	35	50
Derated Voltage ≤+125°C(V)	2.7	4	7	10	15	17	23	33	
Surge Voltage ≤+85°C(V)	5	8	13	20	26	32	46	65	
Capacitance (μF)	Case Size								
0.1								A	A
0.15								A	A
0.22								A	A
0.33							A	A	A
0.47						A	A	A	A
0.68					A	A	A	A	B
1.0				A	A	A	A	A	B
1.5				A	A	A	A	A	B
2.2			A	A	A	A	A	B	C
3.3		A	A	A	A	A	A	B	C
4.7	A	A	A	A	A	A	B	B	D
6.8	A	A	A	A	B	B	C	C	D
10	A	A	A	A	B	B	C	C	E
15	A	A	A	B	C	C	C	D	E
22	A	A	B	B	C	C	C	D	F
33	A	B	B	C	C	C	D	E	
47	B	B	C	C	C	D	D	E	
68	B	C	C	D	D	D	E		
100	C	C	C	D	E	E			
150	C	D	D	E	E				
220	D	D	E	E					
330	D	E	E						
470	E	E							
680	E	F							



Sintered Cylindrical Epoxy-coated Solid Electrolyte Tantalum Capacitor



## Typical Characteristic Curve



Note: Specifications are subject to change without notice. For more details and updates, please visit our website.