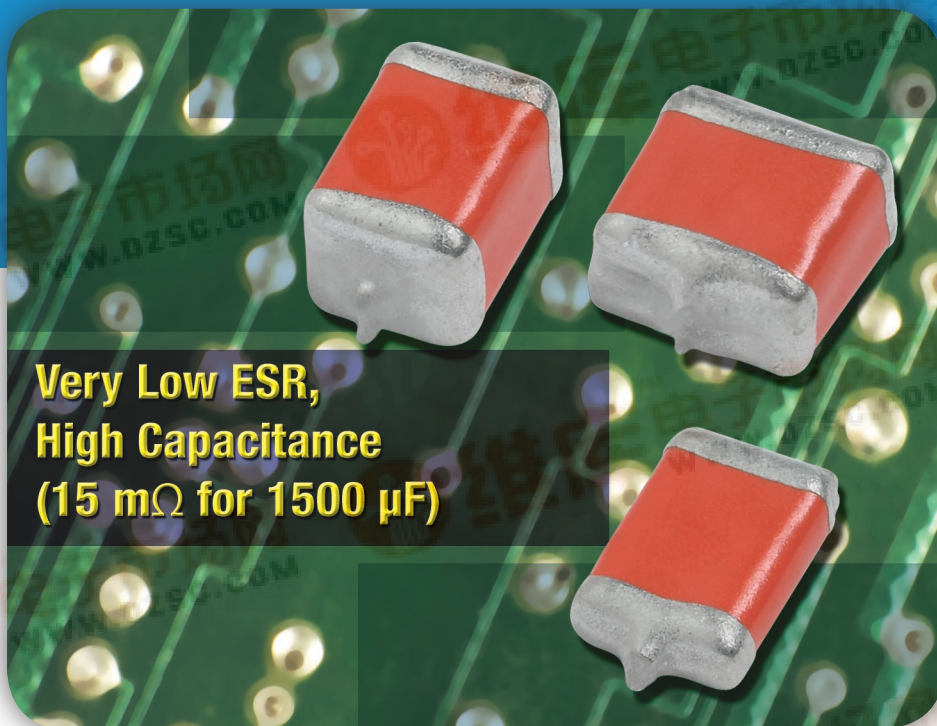


VISHAY

CAPACITORS – Model 597D

PRODUCT SHEET



Tantamount® Multi-Anode, Surface-Mount, Ultra-Low-ESR, Conformal-Coated Tantalum Chip Capacitor

597D

FEATURES

- Lead (Pb)-free terminations standard
- Ultra-Low ESR: down to 15 mΩ
- **Higher voltage offerings than other molded types**
- Less noise/interference of signals/reception
- Replaces several lower-value capacitors in small footprint, which allows decreased density and more board space on PCB
- Cost-efficient alternative to multi-anode molded types
- **Low profile case, V case (2 mm) maximum height**

APPLICATIONS

- DC/DC converters
- Power supplies
- Line cards
- Motherboards

The datasheet for Model 597D is available on our web site at www.vishay.com/doc?40047

**597D**

Solid Tantalum Chip Capacitors

TANTAMOUNT[®], Ultra-Low ESR, Conformal Coated, Maximum CV

Vishay Sprague

STANDARD / EXTENDED RATINGS

CAPACITANCE (μ F)	CASE CODE	PART NUMBER	Max. DCL	Max. DF	Max. ESR	Max. RIPPLE
			@ + 25°C (μ A)	@ + 25°C 120 Hz (%)	@ + 25°C 100kHz (Ohms)	100kHz Irms (Amps)
4 WVDC @ + 85°C, SURGE = 5.2 V . . . 2.7 WVDC @ + 125°C, SURGE = 3.4 V						
470	V	597D477X_004V2T	18.8	8	0.030	2.2
680	E	597D687X_004E2T	27.2	6	0.025	2.9
1000	E	597D108X_004E2T	40	8	0.020	3.3
1000	R	597D108X_004R2T	40	8	0.018	3.7
1500	R	597D158X_004R2T	60	8	0.015	2.9
6.3 WVDC @ + 85°C, SURGE = 8 V . . . 4 WVDC @ + 125°C, SURGE = 5 V						
330	V	597D337X_6R3V2T	20.8	8	0.035	2.2
470	E	597D477X_6R3E2T	29.6	6	0.030	2.7
680	E	597D687X_6R3E2T	42.8	6	0.025	2.9
680*	R*	597D687X_6R3R2T*	42.8*	6*	0.023*	3.3*
1000	R	597D108X_6R3R2T	63	8	0.020	3.5
10 WVDC @ + 85C, SURGE = 13 V . . . 7 WVDC @ + 125C, SURGE = 8 V						
330	E	597D337X_010E2T	33	6	0.035	2.5
470	E	597D477X_010E2T	47	6	0.030	2.7
470*	R	597D477X_010R2T	47	6	0.025	3.2*
680*	R*	597D687X_010R2T*	68*	6*	0.025*	3.2*
16 WVDC @ + 85C, SURGE = 20 V . . . 10 WVDC @ + 125C, SURGE = 12 V						
220	E	597D227X_016E2T	35.2	8	0.04	2.3
50 WVDC @ + 85C, SURGE = 65 V . . . 33 WVDC @ + 125C, SURGE = 38 V						
22	R	597D226X_050R2T	11	6	0.17	0.8
33*	R*	597D336X_050R2T*	16.5*	6*	0.17*	0.8*

* Preliminary values. Contact factory for availability.

ORDERING INFORMATION

597D TYPE	687 CAPACITANCE	X0 CAPACITANCE TOLERANCE	6R3 DC VOLTAGE RATING @ + 85°C	E CASE CODE	2 TERMINATION	T REEL SIZE AND PACKAGING
	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	X0 = $\pm$ 20% X9 = $\pm$ 10%	This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 volts).	See Ratings and Case Codes Table.	2 = 100% Tin.	T = Tape and Reel 7" [500] Reel W = 13" [N/A] Reel

Note: Preferred Tolerance and reel sizes are in bold.

We reserve the right to supply higher voltage ratings and tighter capacitance tolerance capacitors in the same case size. Voltage substitutions will be marked with the higher voltage rating

DIMENSIONS in inches [millimeters]

CASE CODE	L	W	H	A	B	D (REF.)	J (MAX.)
E	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.3]	0.173 $\pm$ 0.016 [4.4 $\pm$ 0.4]	0.157 $\pm$ 0.016 [4.0 $\pm$ 0.4]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.3]	0.180 $\pm$ 0.025 [4.6 $\pm$ 0.6]	0.253 [6.4]	0.004 [0.1]
R	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.3]	0.238 $\pm$ 0.016 [6.0 $\pm$ 0.4]	0.142 $\pm$ 0.016 [3.6 $\pm$ 0.4]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.3]	0.180 $\pm$ 0.025 [4.6 $\pm$ 0.6]	0.243 [6.2]	0.004 [0.1]
V	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.3]	0.173 $\pm$ 0.016 [4.4 $\pm$ 0.4]	0.079 [2.0] Max.	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.3]	0.180 $\pm$ 0.025 [4.6 $\pm$ 0.6]	0.253 [6.4]	0.004 [0.1]

Note: The anode termination (D less B) will be a minimum of 0.012" [0.3mm].**FEATURES**

- New case size offerings.
- Case profiles: E case (4mm) and R case (3.6mm).
- Low profile case: V case (2mm).
- Terminations: Tin (2) standard.
- Extremely low ESR.
- Ripple current up to 4.1 Amps.

PERFORMANCE CHARACTERISTICS**Operating Temperature:**

- 55°C to + 85°C.

(To + 125°C with voltage derating.)

Capacitance Range:22 μ F to 1500 μ F**Capacitance Tolerance:** $\pm$ 10%, $\pm$ 20% standard.**Voltage Rating:**

4WVDC to 50WVDC