

Solid Tantalum Chip Capacitors TANTAMOUNT[®], Ultra-Low ESR, Conformal Coated, Maximum CV



FEATURES

- New case size offerings
- Low profile case: V case (2 mm)
- Terminations: Tin (2) standard
- Extremely low ESR
- Ripple current up to 4.1 A
- Compliant to RoHS Directive 2002/95/EC


RoHS*
COMPLIANT

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55 °C to + 85 °C
(To + 125 °C with voltage derating)

Note: Refer to doc. 40088

Capacitance Range: 10 μF to 1500 μF

Capacitance Tolerance: ± 10 %, ± 20 % standard

Voltage Rating: 4 WV_{DC} to 75 WV_{DC}

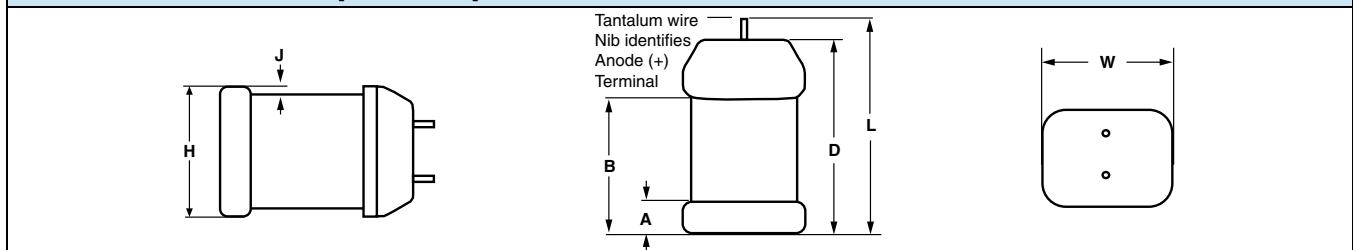
ORDERING INFORMATION

597D	687	X0	6R3	E	2	T
TYPE	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT +85 °C	CASE CODE	TERMINATION	REEL SIZE AND PACKAGING
	This is expressed in pF. The first two digits are the significant figures. The third is the number of zeros to follow.	X0 = ± 20 % X9 = ± 10 %	This is expressed in V. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 V).	See Ratings and Case Code table	2 = 100 % tin 8 = Solder plated (60/40) special order	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 (MAX.)	W	H	A	B	D (REF.)	J (MAX.)
E	0.299 [7.6]	0.173 ± 0.016 [4.4 ± 0.4]	0.157 ± 0.016 [4.0 ± 0.4]	0.051 ± 0.012 [1.3 ± 0.3]	0.180 ± 0.025 [4.6 ± 0.6]	0.253 [6.4]	0.004 [0.1]
F	0.299 [7.6]	0.238 ± 0.016 [6.0 ± 0.4]	0.187 ± 0.016 [4.7 ± 0.4]	0.056 ± 0.017 [1.4 ± 0.4]	0.180 ± 0.025 [4.6 ± 0.6]	0.243 [6.2]	0.004 [0.1]
R	0.299 [7.6]	0.238 ± 0.016/- 0.024 [6.0 ± 0.4/- 0.6]	0.142 ± 0.016 [3.6 ± 0.4]	0.051 ± 0.012 [1.3 ± 0.3]	0.180 ± 0.025 [4.6 ± 0.6]	0.243 [6.2]	0.004 [0.1]
V	0.299 [7.6]	0.173 ± 0.016 [4.4 ± 0.4]	0.079 [2.0] Max.	0.051 ± 0.012 [1.3 ± 0.3]	0.180 ± 0.025 [4.6 ± 0.6]	0.253 [6.4]	0.004 [0.1]
Z	0.299 [7.6]	0.238 ± 0.016 [6.0 ± 0.4]	0.238 ± 0.016 [6.0 ± 0.4]	0.056 ± 0.017 [1.4 ± 0.4]	0.180 ± 0.025 [4.6 ± 0.6]	0.243 [6.2]	0.004 [0.1]
D	0.299 [7.6]	0.173 ± 0.016 [4.4 ± 0.4]	0.137 [3.5] Max.	0.051 ± 0.012 [1.3 ± 0.3]	0.180 ± 0.025 [4.6 ± 0.6]	0.253 [6.4]	0.004 [0.1]
M	0.315 [8.0]	0.259 ± 0.016/-0.024 [6.6 ± 0.4/-0.6]	0.141 ± 0.016 [3.6 ± 0.4]	0.051 ± 0.012 [1.3 ± 0.3]	0.196 ± 0.025 [5.0 ± 0.6]	0.259 [6.6]	0.004 [0.1]
H	0.315 [8.0]	0.259 ± 0.016/-0.024 [6.6 ± 0.4/-0.6]	0.204 ± 0.016 [5.2 ± 0.4]	0.056 ± 0.017 [1.4 ± 0.4]	0.196 ± 0.025 [5.0 ± 0.6]	0.259 [6.6]	0.004 [0.1]
N	0.315 [8.0]	0.259 ± 0.016/-0.024 [6.6 ± 0.4/-0.6]	0.252 ± 0.016 [6.4 ± 0.4]	0.056 ± 0.017 [1.4 ± 0.4]	0.196 ± 0.025 [5.0 ± 0.6]	0.259 [6.6]	0.004 [0.1]

Note

- The anode termination (D less B) will be a minimum of 0.012" [0.3 mm]
- * Pb containing terminations are not RoHS compliant, exemptions may apply

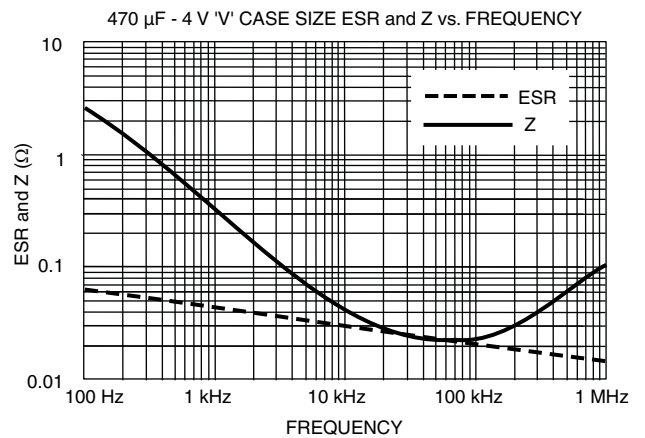
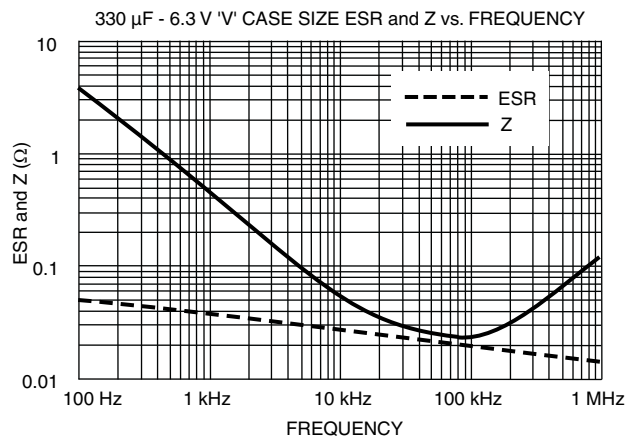
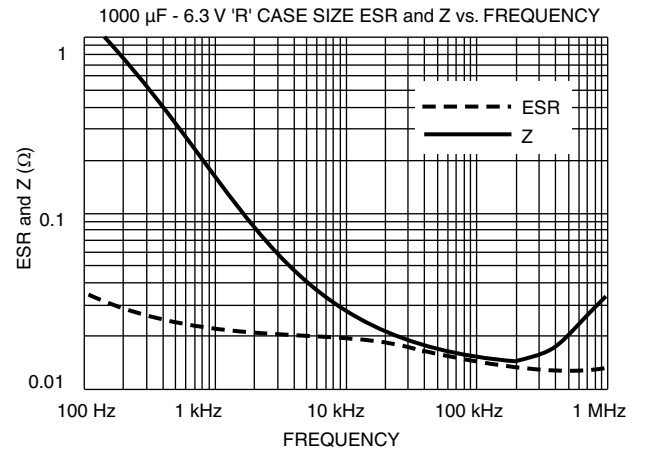
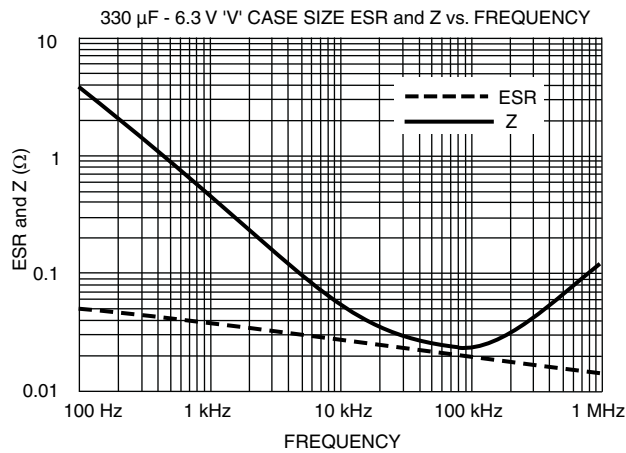
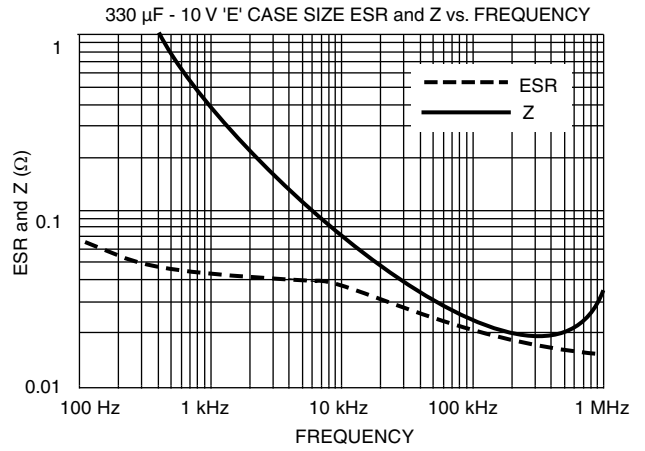
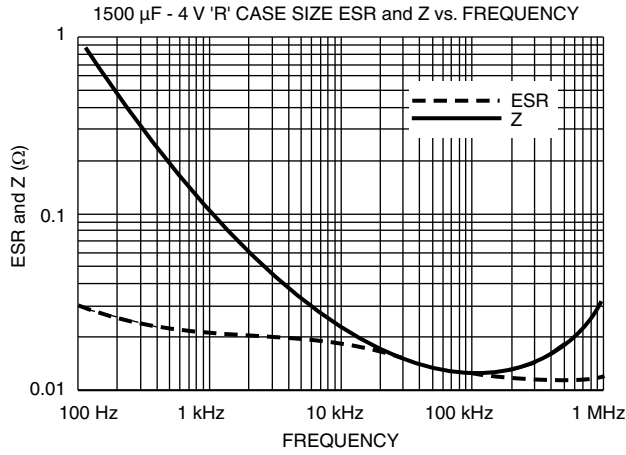
RATINGS AND CASE CODE										
μF	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V	63 V	75 V
10									D	R*
15								E/R	R	
22								R	F	
33								F		
47							R	Z		
68						R	F			
100							F			
150						F				
220				E	R	M				
330		V	E		H					
470	V	E	E	H						
680	E	E	R							
1000	E/R	R	F							
1500	R									

STANDARD RATINGS						
CAPACITANCE (μF)	CASE CODE	PART NUMBER	MAX. DCL AT + 25 °C (μA)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz (mΩ)	MAX. RIPPLE 100 kHz I _{RMS} (A)
4 WV_{DC} AT + 85 °C, 2.7 WV_{DC} AT + 125 °C						
470	V	597D477X_004V__	19	8	30	2.2
680	E	597D687X_004E__	27	6	25	2.9
1000	E	597D108X_004E__	40	8	20	3.3
1000	R	597D108X_004R__	40	8	18	3.7
1500	R	597D158X_004R__	60	8	15	4.1
6.3 WV_{DC} AT + 85 °C, 4 WV_{DC} AT + 125 °C						
330	V	597D337X_6R3V__	21	8	38	2.0
470	E	597D477X_6R3E__	30	6	30	2.7
680	E	597D687X_6R3E__	43	6	25	2.9
1000	R	597D108X_6R3R__	63	8	20	3.5
10 WV_{DC} AT + 85 °C, 7 WV_{DC} AT + 125 °C						
330	E	597D337X_010E__	33	6	35	2.5
470	E	597D477X_010E__	47	6	28	2.8
680	R	597D687X_010R__	68	6	28	3.0
1000	F	597D108X_010F__	100	20	120	1.4
16 WV_{DC} AT + 85 °C, 10 WV_{DC} AT + 125 °C						
220	E	597D227X_016E__	35	8	60	2.3
470	H	597D477X_016H__	75	14	100	1.4
20 WV_{DC} AT + 85 °C, 13 WV_{DC} AT + 125 °C						
220	R	597D227X_020R__	44	8	80	1.8
330	H	597D337X_020H__	66	10	100	1.6
25 WV_{DC} AT + 85 °C, 17 WV_{DC} AT + 125 °C						
68	R	597D686X_025R__	17	6	100	1.6
150	F	597D157X_025F__	38	8	80	1.8
220	M	597D227X_025M__	55	8	100	1.6
35 WV_{DC} AT + 85 °C, 23 WV_{DC} AT + 125 °C						
47	R	597D476X_035R__	17	6	100	1.8
68	F	597D686X_035F__	24	6	100	1.6
100	F	597D107X0035F__	35	8	100	1.6
50 WV_{DC} AT + 85 °C, 33 WV_{DC} AT + 125 °C						
15	E	597D156X_050E__	8	6	350	0.9
15	R	597D156X_050R__	8	6	250	1.0
22	R	597D226X_050R__	11	6	220	1.2
33	F	597D336X_050F__	17	6	150	1.3
47	Z	597D476X_050Z__	24	6	240	1.4
63 WV_{DC} AT + 85 °C, 42 WV_{DC} AT + 125 °C						
10	D	597D106X_063D__	10	6	400	0.6
15	R	597D156X_063R__	10	6	400	0.8
22	F	597D226X_063F__	14	6	250	1.1
75 WV_{DC} AT + 85 °C, 50 WV_{DC} AT + 125 °C						
10	R	597D106X_075R__	8	6	500	0.7

Note

* Preliminary values, contact factory for availability

TYPICAL CURVES





Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.