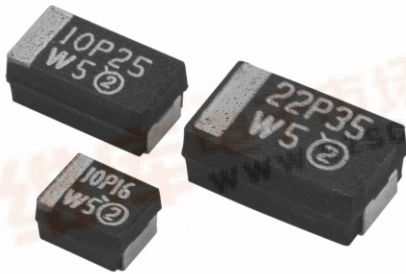




TP3

Vishay Sprague

Solid Tantalum Surface Mount Capacitors TANTAMOUNT® Molded Case, High Performance



FEATURES

- Terminations: 100 % matte tin, standard tin/lead available
- Molded case available in five case codes
- Compatible with "High Volume" automatic pick and place equipment
- High Ripple Current carrying capability
- Low ESR
- Meets EIA 535BAAC and IEC Specification QC300801/US0001 mechanical and performance requirements
- Compliant terminations
- 100 % surge current tested (B, C, D and E case sizes)
- AEC-Q200 qualified



RoHS*
COMPLIANT

PERFORMANCE/ELECTRICAL CHARACTERISTICS

Operating Temperature: - 55 °C to + 125 °C

Note: Refer to doc. 40088

Capacitance Range: 0.10 μ F to 470 μ F

Capacitance Tolerance: $\pm$ 10 %, $\pm$ 20 %

Voltage Rating: 4 VDC to 50 VDC

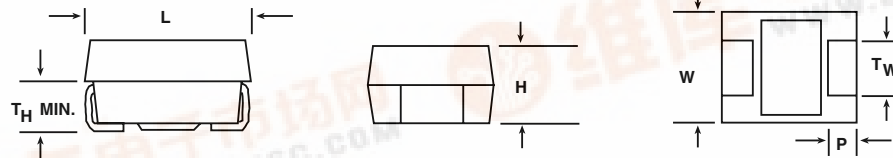
ORDERING INFORMATION

TP3	D	226	K	035	C	0500	AS
TYPE	CASE CODE	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85 °C	TERMINATION/ PACKAGING	ESR	SPECIFICATION OPTION
	See Ratings and Case Codes Table	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	K = $\pm$ 10 % M = $\pm$ 20 %	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)	C = Matte Tin/7" (178 mm) reels D = Matte Tin/13" (330 mm) reels E = Tin/Lead/7" (178 mm) reels F = Tin/Lead/13" (330 mm) reels	Maximum 100 kHz ESR 0500 = 500 m Ω 5000 = 5.0 Ω 10R0 = 10.0 Ω	AS = Standard

Note:

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	EIA SIZE	L	W	H	P	Tw	TH MIN.
A	3216-18	0.126 $\pm$ 0.008 [3.2 $\pm$ 0.20]	0.063 $\pm$ 0.008 [1.6 $\pm$ 0.20]	0.063 $\pm$ 0.008 [1.6 $\pm$ 0.20]	0.031 $\pm$ 0.012 [0.80 $\pm$ 0.30]	0.047 $\pm$ 0.004 [1.2 $\pm$ 0.10]	0.028 [0.70]
B	3528-21	0.138 $\pm$ 0.008 [3.5 $\pm$ 0.20]	0.110 $\pm$ 0.008 [2.8 $\pm$ 0.20]	0.075 $\pm$ 0.008 [1.9 $\pm$ 0.20]	0.031 $\pm$ 0.012 [0.80 $\pm$ 0.30]	0.087 $\pm$ 0.004 [2.2 $\pm$ 0.10]	0.028 [0.70]
C	6032-28	0.236 $\pm$ 0.012 [6.0 $\pm$ 0.30]	0.126 $\pm$ 0.012 [3.2 $\pm$ 0.30]	0.098 $\pm$ 0.012 [2.5 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.087 $\pm$ 0.004 [2.2 $\pm$ 0.10]	0.039 [1.0]
D	7343-31	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.30]	0.170 $\pm$ 0.012 [4.3 $\pm$ 0.30]	0.110 $\pm$ 0.012 [2.8 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.095 $\pm$ 0.004 [2.4 $\pm$ 0.10]	0.039 [1.0]
E	7343-43	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.30]	0.170 $\pm$ 0.012 [4.3 $\pm$ 0.30]	0.158 $\pm$ 0.012 [4.0 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.095 $\pm$ 0.004 [2.4 $\pm$ 0.10]	0.039 [1.0]

* Pb containing terminations are not RoHS compliant, exemptions may apply

TP3

Vishay Sprague

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance



RATINGS AND CASE CODES								
µF	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
0.10							A (20.00, 10.00)	A (19.00, 10.00)
0.15							A (18.00, 6.00)	A (17.00, 10.00) B (14.00, 9.00)
0.22							A (15.00, 6.00)	A (15.00) B (12.00, 8.50)
0.33							A (13.00, 6.00)	A (14.00) B (10.00, 4.50)
0.47						A (12.00, 9.00)	A (10.00, 4.00) B (8.00, 2.50)	B (8.40, 4.00)
0.68					A (10.00, 8.00)	A (8.40) B (7.00, 5.00)	A (7.60, 4.00) B (6.50, 2.50)	B (7.60)
1.0				A (9.30, 6.00)	A (8.40, 5.50)	A (7.60, 4.00) B (5.00, 2.00)	A (7.50, 4.00) B (5.00, 2.00)	B (6.70, 2.00) C (4.60, 1.60)
1.5			A (8.00, 6.00)	A (6.70, 6.00)	A (6.30)	A (6.70, 4.00) B (4.60, 2.00)	B (4.20, 2.00) C (3.80, 0.90)	C (3.40, 1.50)
2.2		A (7.60, 6.00)	A (6.30)	A (5.90) B (4.60, 2.50)	A (5.90, 4.00) B (3.50, 1.50)	A (6.30, 4.00) B (3.80, 1.50)	B (3.80, 2.00) C (2.90, 0.90)	C (2.90, 1.50) D (2.10, 0.80)
3.3		A (6.30, 5.00)	A (5.50)	A (5.00, 3.50) B (3.50, 2.00)	A (5.90, 4.00) B (3.00, 1.30)	B (3.10, 1.50) C (2.30, 1.00)	B (3.50) C (2.10, 0.70)	C (2.50, 1.50) D (1.70, 0.80)
4.7		A (5.50, 3.50)	A (5.00, 3.00) B (3.40, 1.50)	A (5.00, 2.50) B (2.90, 1.50)	A (5.00, 3.50) B (2.90, 1.00) C (2.30, 0.60)	B (2.80, 1.50) C (2.00, 0.525)	B (3.10, 1.50) C (1.90, 0.50) D (1.30, 0.45)	D (1.20, 0.60)
6.8		A (5.00)	A (4.20, 3.00) B (2.90, 1.20)	A (4.20, 3.00) B (2.50) C (1.90, 0.60)	B (2.50, 1.00) C (1.90, 0.55)	B (2.40) C (1.70, 0.50)	C (1.80, 0.475) D (1.10, 0.30)	D (0.90, 0.60)
10		A (3.40, 2.00) B (2.90, 1.00)	A (3.40, 2.00) B (2.50) C (1.80, 0.55)	A (3.00, 1.70) B (2.00, 0.80) C (1.80, 0.45)	B (2.50, 1.00) C (1.70, 0.45)	C (1.50, 0.45) D (1.00, 0.30)	C (1.60, 0.45) D (0.80, 0.30, 0.135)	D (0.80, 0.55) E (0.80, 0.55)
15		A (2.90, 2.00) B (2.50)	A (2.90, 2.00) B (2.00, 0.70) C (1.80, 0.50)	B (2.00, 0.80) C (1.50, 0.40)	B (2.30, 1.00) C (1.50, 0.40) D (0.90, 0.30)	C (1.20, 0.425) D (0.80, 0.25)	D (0.70, 0.30)	
22		A (2.90, 2.00) B (2.00, 0.60) C (1.80, 0.50)	A (2.50, 1.50) B (1.90, 0.70) C (1.50, 0.345)	B (1.90, 1.70) C (1.40, 0.35) D (0.80, 0.25)	C (1.10, 0.375) D (0.70, 0.225)	C (1.20, 0.40) D (0.70, 0.20)	D (0.60, 0.30) E (0.60, 0.275)	
33	C (1.80, 0.50)	A (2.50, 0.80) B (1.90, 0.60) C (1.50)	B (1.90, 1.50, 0.60) C (1.40, 0.30) D (0.80, 0.25)	C (1.10, 0.30) D (0.70, 0.225)	C (1.00, 0.35) D (0.70, 0.20)	D (0.70, 0.20) E (0.60, 0.20)		
47		B (1.90, 0.55, 0.50) C (1.40, 0.30) D (0.80, 0.20)	B (1.80, 0.60) C (1.10, 0.30) D (0.70, 0.20)	C (1.00, 0.30) D (0.70, 0.15, 0.12)	D (0.70, 0.20, 0.15) E (0.60, 0.15)	E (0.60, 0.20)		
68		B (1.80, 0.55) C (0.80, 0.275) D (0.70, 0.20)	C (1.00, 0.275) D (0.70, 0.15)	D (0.60, 0.15)	D (0.70, 0.175) E (0.60, 0.15)			
100		C (0.80, 0.25) D (0.70, 0.14)	C (0.90, 0.20) D (0.60, 0.10)	D (0.60, 0.125) E (0.60, 0.10)	E (0.50, 0.15)			
150		C (0.70, 0.20) D (0.60, 0.15)	D (0.60, 0.10) E (0.50, 0.10)	E (0.50, 0.10)				
220		D (0.60, 0.10) E (0.50, 0.10)	D (0.60, 0.125) E (0.50, 0.10)	E (0.50, 0.10)				
330		D (0.60, 0.125) E (0.50, 0.10)	E (0.50, 0.10)					
470		E (0.50, 0.10)						

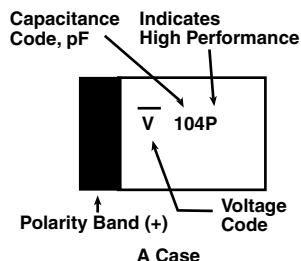
Note:

ESR limits in Ohms shown in parenthesis

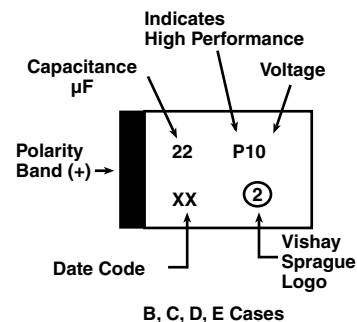
**TP3**

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance

Vishay Sprague

MARKING**"A" CASE VOLTAGE CODE**

4.0	G
6.3	J
10	A
16	C
20	D
25	E
35	V
50	T

**Marking:**

Capacitor marking includes an anode (+) polarity band, capacitance in microfarads and the voltage rating. "A" Case capacitors use a letter code for the voltage and EIA capacitance code.

The Vishay Sprague® trademark is included if space permits. Capacitors rated at 6.3 V are marked 6 V.

A manufacturing date code is marked on all capacitors.

Call the factory for further explanation.

RATINGS AND PART NUMBER REFERENCE

CAPACITANCE (μF)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μA)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I _{rms} (A)
4 VDC AT + 85 °C, 2.7 VDC AT + 125 °C						
33	C	TP3C336(1)004(2)1800AS	1.3	6	1.800	0.25
33	C	TP3C336(1)004(2)0500AS	1.3	6	0.500	0.47
6.3 VDC AT + 85 °C, 4 VDC AT + 125 °C						
2.2	A	TP3A225(1)6R3(2)7600AS	0.5	6	7.600	0.10
2.2	A	TP3A225(1)6R3(2)6000AS	0.5	6	6.000	0.11
3.3	A	TP3A335(1)6R3(2)6300AS	0.5	6	6.300	0.11
3.3	A	TP3A335(1)6R3(2)5000AS	0.5	6	5.000	0.12
4.7	A	TP3A475(1)6R3(2)5500AS	0.5	6	5.500	0.12
4.7	A	TP3A475(1)6R3(2)3500AS	0.5	6	3.500	0.15
6.8	A	TP3A685(1)6R3(2)5000AS	0.5	6	5.000	0.12
10	A	TP3A106(1)6R3(2)3400AS	0.6	6	3.400	0.15
10	A	TP3A106(1)6R3(2)2000AS	0.6	6	2.000	0.19
10	B	TP3B106(1)6R3(2)2900AS	0.6	6	2.900	0.17
10	B	TP3B106(1)6R3(2)1000AS	0.6	6	1.000	0.29
15	A	TP3A156(1)6R3(2)2900AS	0.9	6	2.900	0.16
15	A	TP3A156(1)6R3(2)2000AS	0.9	6	2.000	0.19
15	B	TP3B156(1)6R3(2)2500AS	0.9	6	2.500	0.18
22	A	TP3A226(1)6R3(2)2900AS	1.3	6	2.900	0.16
22	A	TP3A226(1)6R3(2)2000AS	1.3	6	2.000	0.19
22	B	TP3B226(1)6R3(2)2000AS	1.3	6	2.000	0.21
22	B	TP3B226(1)6R3(2)0600AS	1.3	6	0.600	0.38
22	C	TP3C226(1)6R3(2)1800AS	1.3	6	1.800	0.25
22	C	TP3C226(1)6R3(2)0500AS	1.3	6	0.500	0.47
33	A	TP3A336(1)6R3(2)2500AS	2.0	14	2.500	0.17
33	A	TP3A336(1)6R3(2)0800AS	2.0	14	0.800	0.31
33	B	TP3B336(1)6R3(2)1900AS	2.0	6	1.900	0.21
33	B	TP3B336(1)6R3(2)0600AS	2.0	6	0.600	0.38
33	C	TP3C336(1)6R3(2)1500AS	2.0	6	1.500	0.27

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

TP3

Vishay Sprague

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance



RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
6.3 VDC AT + 85 °C, 4 VDC AT + 125 °C						
47	B	TP3B476(1)6R3(2)1900AS	2.8	6	1.900	0.21
47	B	TP3B476(1)6R3(2)0550AS	2.8	6	0.550	0.39
47	B	TP3B476(1)6R3(2)0500AS	2.8	6	0.500	0.41
47	C	TP3C476(1)6R3(2)1400AS	2.8	6	1.400	0.28
47	C	TP3C476(1)6R3(2)0300AS	2.8	6	0.300	0.61
47	D	TP3D476(1)6R3(2)0800AS	2.8	6	0.800	0.43
47	D	TP3D476(1)6R3(2)0200AS	2.8	6	0.200	0.87
68	B	TP3B686(1)6R3(2)1800AS	4.1	6	1.800	0.22
68	B	TP3B686(1)6R3(2)0550AS	4.1	6	0.550	0.39
68	C	TP3C686(1)6R3(2)0800AS	4.1	6	0.800	0.37
68	C	TP3C686(1)6R3(2)0275AS	4.1	6	0.275	0.63
68	D	TP3D686(1)6R3(2)0700AS	4.1	6	0.700	0.46
68	D	TP3D686(1)6R3(2)0200AS	4.1	6	0.200	0.87
100	C	TP3C107(1)6R3(2)0800AS	6.0	6	0.800	0.37
100	C	TP3C107(1)6R3(2)0250AS	6.0	6	0.250	0.66
100	D	TP3D107(1)6R3(2)0700AS	6.0	6	0.700	0.46
100	D	TP3D107(1)6R3(2)0140AS	6.0	6	0.140	1.04
150	C	TP3C157(1)6R3(2)0700AS	9.0	8	0.700	0.40
150	C	TP3C157(1)6R3(2)0200AS	9.0	8	0.200	0.74
150	D	TP3D157(1)6R3(2)0600AS	9.0	8	0.600	0.60
150	D	TP3D157(1)6R3(2)0150AS	9.0	8	0.150	1.10
220	D	TP3D227(1)6R3(2)0600AS	13.2	8	0.600	0.50
220	D	TP3D227(1)6R3(2)0100AS	13.2	8	0.100	1.22
220	E	TP3E227(1)6R3(2)0500AS	13.2	8	0.500	0.57
220	E	TP3E227(1)6R3(2)0100AS	13.2	8	0.100	1.28
330	D	TP3D337(1)6R3(2)0600AS	19.8	8	0.600	0.50
330	D	TP3D337(1)6R3(2)0125AS	19.8	8	0.125	1.10
330	E	TP3E337(1)6R3(2)0500AS	19.8	8	0.500	0.57
330	E	TP3E337(1)6R3(2)0100AS	19.8	8	0.100	1.28
470	E	TP3E477(1)6R3(2)0500AS	28.2	10	0.500	0.57
470	E	TP3E477(1)6R3(2)0100AS	28.2	10	0.100	1.28
10 VDC AT + 85 °C, 7 VDC AT + 125 °C						
1.5	A	TP3A155(1)010(2)8000AS	0.5	6	8.000	0.10
1.5	A	TP3A155(1)010(2)6000AS	0.5	6	6.000	0.11
2.2	A	TP3A225(1)010(2)6300AS	0.5	6	6.300	0.11
3.3	A	TP3A335(1)010(2)5500AS	0.5	6	5.500	0.12
4.7	A	TP3A475(1)010(2)5000AS	0.5	6	5.000	0.12
4.7	A	TP3A475(1)010(2)3000AS	0.5	6	3.000	0.16
4.7	B	TP3B475(1)010(2)3400AS	0.5	6	3.400	0.16
4.7	B	TP3B475(1)010(2)1500AS	0.5	6	1.500	0.24
6.8	A	TP3A685(1)010(2)4200AS	0.7	6	4.200	0.13
6.8	A	TP3A685(1)010(2)3000AS	0.7	6	3.000	0.16
6.8	B	TP3B685(1)010(2)2900AS	0.7	6	2.900	0.17
6.8	B	TP3B685(1)010(2)1200AS	0.7	6	1.200	0.27

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

**TP3**

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance

Vishay Sprague

RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
10 VDC AT + 85 °C, 7 VDC AT + 125 °C						
10	A	TP3A106(1)010(2)3400AS	1.0	6	3.400	0.15
10	A	TP3A106(1)010(2)2000AS	1.0	6	2.000	0.19
10	B	TP3B106(1)010(2)2500AS	1.0	6	2.500	0.18
10	C	TP3C106(1)010(2)1800AS	1.0	6	1.800	0.25
10	C	TP3C106(1)010(2)0550AS	1.0	6	0.550	0.45
15	A	TP3A156(1)010(2)2900AS	1.5	6	2.900	0.16
15	A	TP3A156(1)010(2)2000AS	1.5	6	2.000	0.19
15	B	TP3B156(1)010(2)2000AS	1.5	6	2.000	0.21
15	B	TP3B156(1)010(2)0700AS	1.5	6	0.700	0.35
15	C	TP3C156(1)010(2)1800AS	1.5	6	1.800	0.25
15	C	TP3C156(1)010(2)0500AS	1.5	6	0.500	0.47
22	A	TP3A226(1)010(2)2500AS	2.2	8	2.500	0.17
22	A	TP3A226(1)010(2)1500AS	2.2	8	1.500	0.22
22	B	TP3B226(1)010(2)1900AS	2.2	6	1.900	0.21
22	B	TP3B226(1)010(2)0700AS	2.2	6	0.700	0.35
22	C	TP3C226(1)010(2)1500AS	2.2	6	1.500	0.27
22	C	TP3C226(1)010(2)0345AS	2.2	6	0.345	0.56
33	B	TP3B336(1)010(2)1900AS	3.3	6	1.900	0.21
33	B	TP3B336(1)010(2)1500AS	3.3	6	1.500	0.24
33	B	TP3B336(1)010(2)0600AS	3.3	6	0.600	0.38
33	C	TP3C336(1)010(2)1400AS	3.3	6	1.400	0.28
33	C	TP3C336(1)010(2)0300AS	3.3	6	0.300	0.61
33	D	TP3D336(1)010(2)0800AS	3.3	6	0.800	0.43
33	D	TP3D336(1)010(2)0250AS	3.3	6	0.250	0.77
47	B	TP3B476(1)010(2)1800AS	4.7	6	1.800	0.22
47	B	TP3B476(1)010(2)0600AS	4.7	6	0.600	0.38
47	C	TP3C476(1)010(2)1100AS	4.7	6	1.100	0.32
47	C	TP3C476(1)010(2)0300AS	4.7	6	0.300	0.61
47	D	TP3D476(1)010(2)0700AS	4.7	6	0.700	0.46
47	D	TP3D476(1)010(2)0200AS	4.7	6	0.200	0.87
68	C	TP3C686(1)010(2)1000AS	6.8	6	1.000	0.33
68	C	TP3C686(1)010(2)0275AS	6.8	6	0.275	0.63
68	D	TP3D686(1)010(2)0700AS	6.8	6	0.700	0.46
68	D	TP3D686(1)010(2)0150AS	6.8	6	0.150	1.00
100	C	TP3C107(1)010(2)0900AS	10.0	8	0.900	0.35
100	C	TP3C107(1)010(2)0200AS	10.0	8	0.200	0.74
100	D	TP3D107(1)010(2)0600AS	10.0	8	0.600	0.50
100	D	TP3D107(1)010(2)0100AS	10.0	8	0.100	1.22
150	D	TP3D157(1)010(2)0600AS	15.0	8	0.600	0.50
150	D	TP3D157(1)010(2)0100AS	15.0	8	0.100	1.22
150	E	TP3E157(1)010(2)0500AS	15.0	8	0.500	0.57
150	E	TP3E157(1)010(2)0100AS	15.0	8	0.100	1.28
220	D	TP3D227(1)010(2)0600AS	22.0	8	0.600	0.50
220	D	TP3D227(1)010(2)0125AS	22.0	8	0.125	1.10
220	E	TP3E227(1)010(2)0500AS	22.0	8	0.500	0.57
220	E	TP3E227(1)010(2)0100AS	22.0	8	0.100	1.28
330	E	TP3E337(1)010(2)0500AS	33.0	10	0.500	0.57

Notes

- (1) Capacitance Tolerance Codes: K, M
- (2) Terminations and Packaging Codes: C, D, E, F

TP3

Vishay Sprague

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance



RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
16 VDC AT + 85 °C, 10 VDC AT + 125 °C						
1.0	A	TP3A105(1)016(2)9300AS	0.5	4	9.300	0.09
1.0	A	TP3A105(1)016(2)6000AS	0.5	4	6.000	0.11
1.5	A	TP3A55(1)016A(2)6700AS	0.5	6	6.700	0.11
1.5	A	TP3A55(1)016A(2)6000AS	0.5	6	6.000	0.11
2.2	A	TP3A225(1)016(2)5900AS	0.5	6	5.900	0.11
2.2	B	TP3B225(1)016(2)4600AS	0.5	6	4.600	0.14
2.2	B	TP3B225(1)016(2)2500AS	0.5	6	2.500	0.18
3.3	A	TP3A335(1)016(2)5000AS	0.5	6	5.000	0.12
3.3	A	TP3A335(1)016(2)3500AS	0.5	6	3.500	0.15
3.3	B	TP3B335(1)016(2)3500AS	0.5	6	3.500	0.16
3.3	B	TP3B335(1)016(2)2000AS	0.5	6	2.000	0.21
4.7	A	TP3A475(1)016(2)5000AS	0.8	6	5.000	0.12
4.7	A	TP3A475(1)016(2)2500AS	0.8	6	2.500	0.17
4.7	B	TP3B475(1)016(2)2900AS	0.8	6	2.900	0.17
4.7	B	TP3B475(1)016(2)1500AS	0.8	6	1.500	0.24
6.8	A	TP3A685(1)016(2)4200AS	1.1	6	4.200	0.13
6.8	A	TP3A685(1)016(2)3000AS	1.1	6	3.000	0.16
6.8	B	TP3B685(1)016(2)2500AS	1.1	6	2.500	0.18
6.8	C	TP3C685(1)016(2)1900AS	1.1	6	1.900	0.24
6.8	C	TP3C685(1)016(2)0600AS	1.1	6	0.600	0.43
10	A	TP3A106(1)016(2)3000AS	1.6	6	3.000	0.16
10	A	TP3A106(1)016(2)1700AS	1.6	6	1.700	0.21
10	B	TP3B106(1)016(2)2000AS	1.6	6	2.000	0.21
10	B	TP3B106(1)016(2)0800AS	1.6	6	0.800	0.33
10	C	TP3C106(1)016(2)1800AS	1.6	6	1.800	0.25
10	C	TP3C106(1)016(2)0450AS	1.6	6	0.450	0.49
15	B	TP3B156(1)016(2)2000AS	2.4	6	2.000	0.21
15	B	TP3B156(1)016(2)0800AS	2.4	6	0.800	0.33
15	C	TP3C156(1)016(2)1500AS	2.4	6	1.500	0.27
15	C	TP3C156(1)016(2)0400AS	2.4	6	0.400	0.52
22	B	TP3B226(1)016(2)1900AS	3.5	6	1.900	0.21
22	B	TP3B226(1)016(2)0700AS	3.5	6	0.700	0.35
22	C	TP3C226(1)016(2)1400AS	3.5	6	1.400	0.28
22	C	TP3C226(1)016(2)0350AS	3.5	6	0.350	0.56
22	D	TP3D226(1)016(2)0800AS	3.5	6	0.800	0.43
22	D	TP3D226(1)016(2)0250AS	3.5	6	0.250	0.77
33	C	TP3C336(1)016(2)1100AS	5.3	6	1.100	0.32
33	C	TP3C336(1)016(2)0300AS	5.3	6	0.300	0.61
33	D	TP3D336(1)016(2)0700AS	5.3	6	0.700	0.46
33	D	TP3D336(1)016(2)0225AS	5.3	6	0.225	0.82

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

**TP3**

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance

Vishay Sprague

RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
16 VDC AT + 85 °C, 10 VDC AT + 125 °C						
47	C	TP3C476(1)016(2)1000AS	7.5	6	1.000	0.33
47	C	TP3C476(1)016(2)0300AS	7.5	6	0.300	0.61
47	D	TP3D476(1)016(2)0700AS	7.5	6	0.700	0.46
47	D	TP3D476(1)016(2)0150AS	7.5	6	0.150	1.00
47	D	TP3D476(1)016(2)0120AS	7.5	6	0.120	1.12
68	D	TP3D686(1)016(2)0600AS	10.9	6	0.600	0.50
68	D	TP3D686(1)016(2)0150AS	10.9	6	0.150	1.00
100	D	TP3D107(1)016(2)0600AS	16.0	8	0.600	0.50
100	D	TP3D107(1)016(2)0125AS	16.0	8	0.125	1.10
100	E	TP3E107(1)016(2)0600AS	16.0	8	0.600	0.52
100	E	TP3E107(1)016(2)0100AS	16.0	8	0.100	1.28
150	E	TP3E157(1)016(2)0500AS	24.0	8	0.500	0.57
150	E	TP3E157(1)016(2)0100AS	24.0	8	0.100	1.28
220	E	TP3E227(1)016(2)0500AS	35.2	14	0.500	0.57
220	E	TP3E227(1)016(2)0100AS	35.2	14	0.100	1.28
20 VDC AT + 85 °C, 13 VDC AT + 125 °C						
0.68	A	TP3A684(1)020(2)10R0AS	0.5	4	10.000	0.09
0.68	A	TP3A684(1)020(2)8000AS	0.5	4	8.000	0.10
1.0	A	TP3A105(1)020(2)8400AS	0.5	4	8.400	0.09
1.0	A	TP3A105(1)020(2)5500AS	0.5	4	5.500	0.12
1.5	A	TP3A155(1)020(2)6300AS	0.5	6	6.300	0.11
2.2	A	TP3A225(1)020(2)5900AS	0.5	6	5.900	0.11
2.2	A	TP3A225(1)020(2)4000AS	0.5	6	4.000	0.14
2.2	B	TP3B225(1)020(2)3500AS	0.5	6	3.500	0.16
2.2	B	TP3B225(1)020(2)1500AS	0.5	6	1.500	0.24
3.3	A	TP3A335(1)020(2)5900AS	0.7	6	5.900	0.11
3.3	A	TP3A335(1)020(2)4000AS	0.7	6	4.000	0.14
3.3	B	TP3B335(1)020(2)3000AS	0.7	6	3.000	0.17
3.3	B	TP3B335(1)020(2)1300AS	0.7	6	1.300	0.26
4.7	A	TP3A475(1)020(2)5000AS	0.9	6	5.000	0.12
4.7	A	TP3A475(1)020(2)3500AS	0.9	6	3.500	0.15
4.7	B	TP3B475(1)020(2)2900AS	0.9	6	2.900	0.17
4.7	B	TP3B475(1)020(2)1000AS	0.9	6	1.000	0.29
4.7	C	TP3C475(1)020(2)2300AS	0.9	6	2.300	0.22
4.7	C	TP3C475(1)020(2)0600AS	0.9	6	0.600	0.43
6.8	B	TP3B685(1)020(2)2500AS	1.4	6	2.500	0.18
6.8	B	TP3B685(1)020(2)1000AS	1.4	6	1.000	0.29
6.8	C	TP3C685(1)020(2)1900AS	1.4	6	1.900	0.24
6.8	C	TP3C685(1)020(2)0550AS	1.4	6	0.550	0.45
10	B	TP3B106(1)020(2)2500AS	2.0	6	2.500	0.18
10	B	TP3B106(1)020(2)1000AS	2.0	6	1.000	0.29
10	C	TP3C106(1)020(2)1700AS	2.0	6	1.700	0.25
10	C	TP3C106(1)020(2)0450AS	2.0	6	0.450	0.49

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

TP3

Vishay Sprague

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance



RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
20 VDC AT + 85 °C, 13 VDC AT + 125 °C						
15	B	TP3B156(1)020(2)2300AS	3.0	6	2.300	0.19
15	B	TP3B156(1)020(2)1000AS	3.0	6	1.000	0.29
15	C	TP3C156(1)020(2)1500AS	3.0	6	1.500	0.27
15	C	TP3C156(1)020(2)0400AS	3.0	6	0.400	0.52
15	D	TP3D156(1)020(2)0900AS	3.0	6	0.900	0.41
15	D	TP3D156(1)020(2)0300AS	3.0	6	0.300	0.71
22	C	TP3C226(1)020(2)1100AS	4.4	6	1.100	0.32
22	C	TP3C226(1)020(2)0375AS	4.4	6	0.375	0.54
22	D	TP3D226(1)020(2)0700AS	4.4	6	0.700	0.46
22	D	TP3D226(1)020(2)0225AS	4.4	6	0.225	0.82
33	C	TP3C336(1)020(2)1000AS	6.6	6	1.000	0.33
33	C	TP3C336(1)020(2)0350AS	6.6	6	0.350	0.56
33	D	TP3D336(1)020(2)0700AS	6.6	6	0.700	0.46
33	D	TP3D336(1)020(2)0200AS	6.6	6	0.200	0.87
47	D	TP3D476(1)020(2)0700AS	9.4	6	0.700	0.46
47	D	TP3D476(1)020(2)0200AS	9.4	6	0.200	0.87
47	D	TP3D476(1)020(2)0150AS	9.4	6	0.150	1.00
47	E	TP3E476(1)020(2)0600AS	9.4	6	0.600	0.52
47	E	TP3E476(1)020(2)0150AS	9.4	6	0.150	1.05
68	D	TP3D686(1)020(2)0700AS	13.6	6	0.700	0.46
68	D	TP3D686(1)020(2)0175AS	13.6	6	0.175	0.93
68	E	TP3E686(1)020(2)0600AS	13.6	6	0.600	0.52
68	E	TP3E686(1)020(2)0150AS	13.6	6	0.150	1.05
100	E	TP3E107(1)020(2)0500AS	20.0	8	0.500	0.57
100	E	TP3E107(1)020(2)0150AS	20.0	8	0.150	1.05
25 VDC AT + 85 °C, 17 VDC AT + 125 °C						
0.47	A	TP3A474(1)025(2)12R0AS	0.5	4	12.000	0.08
0.47	A	TP3A474(1)025(2)9000AS	0.5	4	9.000	0.09
0.68	A	TP3A684(1)025(2)8400AS	0.5	4	8.400	0.09
0.68	B	TP3B684(1)025(2)7000AS	0.5	4	7.000	0.11
0.68	B	TP3B684(1)025(2)5000AS	0.5	4	5.000	0.13
1.0	A	TP3A105(1)025(2)7600AS	0.5	4	7.600	0.10
1.0	A	TP3A105(1)025(2)4000AS	0.5	4	4.000	0.14
1.0	B	TP3B105(1)025(2)5000AS	0.5	4	5.000	0.13
1.0	B	TP3B105(1)025(2)2000AS	0.5	4	2.000	0.21
1.5	A	TP3A155(1)025(2)6700AS	0.5	6	6.700	0.11
1.5	A	TP3A155(1)025(2)4000AS	0.5	6	4.000	0.14
1.5	B	TP3B155(1)025(2)4600AS	0.5	6	4.600	0.14
1.5	B	TP3B155(1)025(2)2000AS	0.5	6	2.000	0.21
2.2	A	TP3A225(1)025(2)6300AS	0.6	6	6.300	0.11
2.2	A	TP3A225(1)025(2)4000AS	0.6	6	4.000	0.14
2.2	B	TP3A225(1)025(2)4000AS	0.6	6	3.800	0.15
2.2	B	TP3A225(1)025(2)1500AS	0.6	6	1.500	0.24
3.3	B	TP3B335(1)025(2)3100AS	0.8	6	3.100	0.17
3.3	B	TP3B335(1)025(2)1500AS	0.8	6	1.500	0.24
3.3	C	TP3C335(1)025(2)2300AS	0.8	6	2.300	0.22
3.3	C	TP3C335(1)025(2)1000AS	0.8	6	1.000	0.33

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

**TP3**

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance

Vishay Sprague

RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
25 VDC AT + 85 °C, 17 VDC AT + 125 °C						
4.7	B	TP3B475(1)025(2)2800AS	1.2	6	2.800	0.17
4.7	B	TP3B475(1)025(2)1500AS	1.2	6	1.500	0.24
4.7	C	TP3C475(1)025(2)2000AS	1.2	6	2.000	0.24
4.7	C	TP3C475(1)025(2)0525AS	1.2	6	0.525	0.46
6.8	B	TP3B685(1)025(2)2400AS	1.7	6	2.400	0.19
6.8	C	TP3C685(1)025(2)1700AS	1.7	6	1.700	0.25
6.8	C	TP3C685(1)025(2)0500AS	1.7	6	0.500	0.47
10	C	TP3C106(1)025(2)1500AS	2.5	6	1.500	0.27
10	C	TP3C106(1)025(2)0450AS	2.5	6	0.450	0.49
10	D	TP3D106(1)025(2)1000AS	2.5	6	1.000	0.39
10	D	TP3D106(1)025(2)0300AS	2.5	6	0.300	0.71
15	C	TP3C156(1)025(2)1200AS	3.8	6	1.200	0.30
15	C	TP3C156(1)025(2)0425AS	3.8	6	0.425	0.51
15	D	TP3D156(1)025(2)0800AS	3.8	6	0.800	0.43
15	D	TP3D156(1)025(2)0250AS	3.8	6	0.250	0.77
22	C	TP3C226(1)025(2)1200AS	5.5	6	1.200	0.30
22	C	TP3C226(1)025(2)0400AS	5.5	6	0.400	0.52
22	D	TP3D226(1)025(2)0700AS	5.5	6	0.700	0.46
22	D	TP3D226(1)025(2)0200AS	5.5	6	0.200	0.87
33	D	TP3D336(1)025(2)0700AS	8.3	6	0.700	0.46
33	D	TP3D336(1)025(2)0200AS	8.3	6	0.200	0.87
33	E	TP3E336(1)025(2)0600AS	8.3	6	0.600	0.52
33	E	TP3E336(1)025(2)0200AS	8.3	6	0.200	0.91
47	E	TP3E476(1)025(2)0600AS	11.8	6	0.600	0.52
47	E	TP3E476(1)025(2)0200AS	11.8	6	0.200	0.91
35 VDC AT + 85 °C, 23 VDC AT + 125 °C						
0.10	A	TP3A104(1)035(2)20R0AS	0.5	4	20.000	0.06
0.10	A	TP3A104(1)035(2)10R0AS	0.5	4	10.000	0.09
0.15	A	TP3A154(1)035(2)18R0AS	0.5	4	18.000	0.07
0.15	A	TP3A154(1)035(2)6000AS	0.5	4	6.000	0.11
0.22	A	TP3A224(1)035(2)15R0AS	0.5	4	15.000	0.07
0.22	A	TP3A224(1)035(2)6000AS	0.5	4	6.000	0.11
0.33	A	TP3A334(1)035(2)13R0AS	0.5	4	13.000	0.08
0.33	A	TP3A334(1)035(2)6000AS	0.5	4	6.000	0.11
0.47	A	TP3A474(1)035(2)10R0AS	0.5	4	10.000	0.09
0.47	A	TP3A474(1)035(2)4000AS	0.5	4	4.000	0.14
0.47	B	TP3B474(1)035(2)8000AS	0.5	4	8.000	0.10
0.47	B	TP3B474(1)035(2)2500AS	0.5	4	2.500	0.18
0.68	A	TP3A684(1)035(2)7600AS	0.5	4	7.600	0.10
0.68	A	TP3A684(1)035(2)4000AS	0.5	4	4.000	0.14
0.68	B	TP3B684(1)035(2)6500AS	0.5	4	6.500	0.11
0.68	B	TP3B684(1)035(2)2500AS	0.5	4	2.500	0.18
1.0	A	TP3A105(1)035(2)7500AS	0.5	4	7.500	0.10
1.0	A	TP3A105(1)035(2)4000AS	0.5	4	4.000	0.14
1.0	B	TP3B105(1)035(2)5000AS	0.5	4	5.000	0.13
1.0	B	TP3B105(1)035(2)2000AS	0.5	4	2.000	0.21

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

TP3

Vishay Sprague

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance



RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
35 VDC AT + 85 °C, 23 VDC AT + 125 °C						
1.5	B	TP3B155(1)035(2)4200AS	0.5	6	4.200	0.14
1.5	B	TP3B155(1)035(2)2000AS	0.5	6	2.000	0.21
1.5	C	TP3C155(1)035(2)3800AS	0.5	6	3.800	0.17
1.5	C	TP3C155(1)035(2)0900AS	0.5	6	0.900	0.35
2.2	B	TP3B225(1)035(2)3800AS	0.8	6	3.800	0.15
2.2	B	TP3B225(1)035(2)2000AS	0.8	6	2.000	0.21
2.2	C	TP3C225(1)035(2)2900AS	0.8	6	2.900	0.20
2.2	C	TP3C225(1)035(2)0900AS	0.8	6	0.900	0.35
3.3	B	TP3B335(1)035(2)3500AS	1.2	6	3.500	0.16
3.3	C	TP3C335(1)035(2)2100AS	1.2	6	2.100	0.23
3.3	C	TP3C335(1)035(2)0700AS	1.2	6	0.700	0.40
4.7	B	TP3B475(1)035(2)3100AS	1.7	6	3.100	0.17
4.7	B	TP3B475(1)035(2)1500AS	1.7	6	1.500	0.24
4.7	C	TP3C475(1)035(2)1900AS	1.6	6	1.900	0.24
4.7	C	TP3C475(1)035(2)0500AS	1.6	6	0.500	0.47
4.7	D	TP3D475(1)035(2)1300AS	1.6	6	1.300	0.34
4.7	D	TP3D475(1)035(2)0450AS	1.6	6	0.450	0.58
6.8	C	TP3C685(1)035(2)1800AS	2.4	6	1.800	0.25
6.8	C	TP3C685(1)035(2)0475AS	2.4	6	0.475	0.48
6.8	D	TP3D685(1)035(2)1100AS	2.4	6	1.100	0.37
6.8	D	TP3D685(1)035(2)0300AS	2.4	6	0.300	0.71
10	C	TP3C106(1)035(2)1600AS	3.5	6	1.600	0.26
10	C	TP3C106(1)035(2)0450AS	3.5	6	0.450	0.49
10	D	TP3D106(1)035(2)0800AS	3.5	6	0.800	0.43
10	D	TP3D106(1)035(2)0300AS	3.5	6	0.300	0.71
10	D	TP3D106(1)035(2)0135AS	3.5	6	0.135	1.05
15	D	TP3D156(1)035(2)0700AS	5.3	6	0.700	0.46
15	D	TP3D156(1)035(2)0300AS	5.3	6	0.300	0.71
22	D	TP3D226(1)035(2)0600AS	7.7	6	0.600	0.50
22	D	TP3D226(1)035(2)0300AS	7.7	6	0.300	0.71
22	E	TP3E226(1)035(2)0600AS	7.7	6	0.600	0.52
22	E	TP3E226(1)035(2)0275AS	7.7	6	0.275	0.77
50 VDC AT + 85 °C, 33 VDC AT + 125 °C						
0.10	A	TP3A104(1)050(2)19R0AS	0.5	4	19.000	0.06
0.10	A	TP3A104(1)050(2)10R0AS	0.5	4	10.000	0.09
0.15	A	TP3A154(1)050(2)17R0AS	0.5	4	17.000	0.07
0.15	A	TP3A154(1)050(2)10R0AS	0.5	4	10.000	0.09
0.15	B	TP3B154(1)050(2)14R0AS	0.5	4	14.000	0.08
0.15	B	TP3B154(1)050(2)9000AS	0.5	4	9.000	0.10
0.22	A	TP3A224(1)050(2)15R0AS	0.5	4	15.000	0.07
0.22	B	TP3B224(1)050(2)12R0AS	0.5	4	12.000	0.08
0.22	B	TP3B224(1)050(2)8500AS	0.5	4	8.500	0.10
0.33	A	TP3A334(1)050(2)14R0AS	0.5	4	14.000	0.07
0.33	B	TP3B334(1)050(2)10R0AS	0.5	4	10.000	0.09
0.33	B	TP3B334(1)050(2)4500AS	0.5	4	4.500	0.14
0.47	B	TP3B474(1)050(2)8400AS	0.5	4	8.400	0.10
0.47	B	TP3B474(1)050(2)4000AS	0.5	4	4.000	0.15
0.68	B	TP3B684(1)050(2)7600AS	0.5	4	7.600	0.11

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

**TP3**

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, High Performance

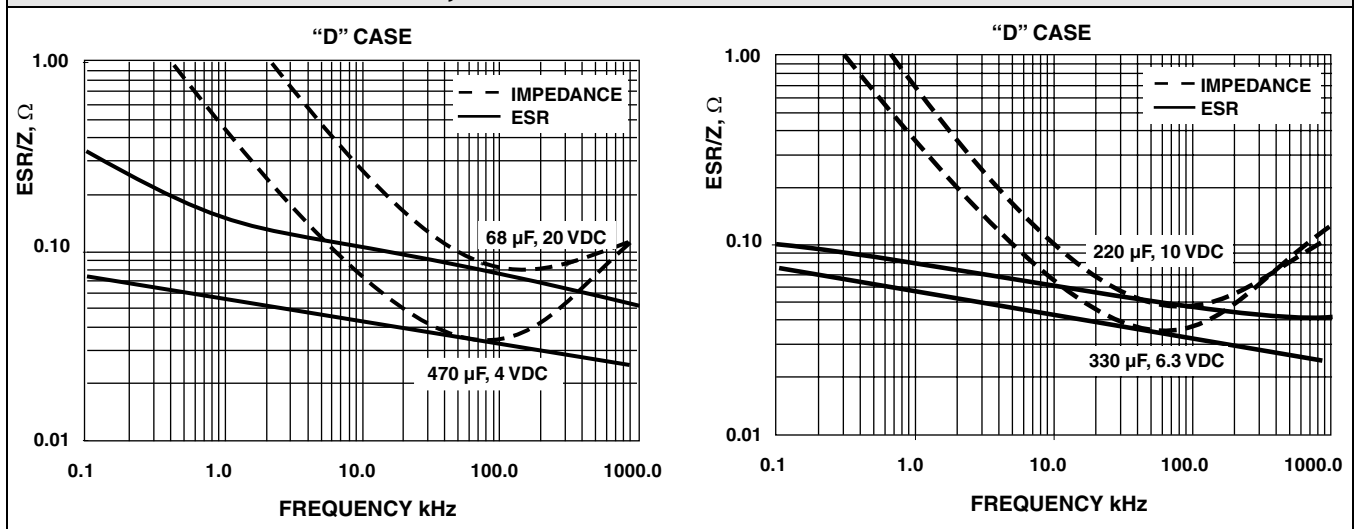
Vishay Sprague

RATINGS AND PART NUMBER REFERENCE

CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I_{rms} (A)
50 VDC AT + 85 °C, 33 VDC AT + 125 °C						
1.0	B	TP3B105(1)050(2)6700AS	0.5	4	6.700	0.11
1.0	B	TP3B105(1)050(2)2000AS	0.5	4	2.000	0.21
1.0	C	TP3C105(1)050(2)4600AS	0.5	4	4.600	0.16
1.0	C	TP3C105(1)050(2)1600AS	0.5	4	1.600	0.26
1.5	C	TP3C155(1)050(2)3400AS	0.8	6	3.400	0.18
1.5	C	TP3C155(1)050(2)1500AS	0.8	6	1.500	0.27
2.2	C	TP3C225(1)050(2)2900AS	1.1	6	2.900	0.20
2.2	C	TP3C225(1)050(2)1500AS	1.1	6	1.500	0.27
2.2	D	TP3D225(1)050(2)2100AS	1.1	6	2.100	0.27
2.2	D	TP3D225(1)050(2)0800AS	1.1	6	0.800	0.43
3.3	C	TP3C335(1)050(2)2500AS	1.7	6	2.500	0.21
3.3	C	TP3C335(1)050(2)1500AS	1.7	6	1.500	0.27
3.3	D	TP3D335(1)050(2)1700AS	1.7	6	1.700	0.30
3.3	D	TP3D335(1)050(2)0800AS	1.7	6	0.800	0.43
4.7	D	TP3D475(1)050(2)1200AS	2.4	6	1.200	0.37
4.7	D	TP3D475(1)050(2)0600AS	2.4	6	0.600	0.50
6.8	D	TP3D685(1)050(2)0900AS	3.4	6	0.900	0.41
6.8	D	TP3D685(1)050(2)0600AS	3.4	6	0.600	0.50
10	D	TP3D106(1)050(2)0800AS	5.0	6	0.800	0.43
10	D	TP3D106(1)050(2)0550AS	5.0	6	0.550	0.52
10	E	TP3E106(1)050(2)0800AS	5.0	6	0.800	0.45
10	E	TP3E106(1)050(2)0550AS	5.0	6	0.550	0.55

Notes

- (1) Tolerance: K, M
- (2) Terminations and Packaging: C, D, E, F

TYPICAL CURVES AT + 25 °C, IMPEDANCE AND ESR VS. FREQUENCY



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