

## Solid Tantalum Surface Mount Chip Capacitors TANTAMOUNT<sup>®</sup>, Molded Case, Hi-Rel COTS



### PERFORMANCE/ELECTRICAL CHARACTERISTICS

[www.vishay.com/doc?40088](http://www.vishay.com/doc?40088)

**Operating Temperature:** - 55 °C to + 125 °C  
(above 85 °C, voltage derating is required)

**Capacitance Range:** 0.1 µF to 470 µF

**Capacitance Tolerance:** ± 10 %, ± 20 %

**Voltage Rating:** 4 V<sub>DC</sub> to 63 V<sub>DC</sub>

### FEATURES

- Standard and low ESR options
- Weibull grading and surge current test options
- Terminations: 100 % matte tin and tin/lead
- Standard EIA 535BAAC case sizes (A through E)
- Moisture sensitivity level 1
- Compliant terminations
- High reliability
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS\***  
COMPLIANT

### Note

\* Lead (Pb)-containing terminations are not RoHS-compliant. Exemptions may apply.

### APPLICATIONS

- Industrial
- Medical
- Military/aerospace
- Telecom

### ORDERING INFORMATION

| T83  | D                                 | 107  | K  | 010  | E   | A   | A  | S                  |
|------|-----------------------------------|--|--|--|---|---|--|--------------------|
| TYPE | CASE CODE                         | CAPACITANCE  | CAPACITANCE TOLERANCE                                    | DC VOLTAGE RATING AT + 85 °C   | TERMINATION AND PACKAGING                 | RELIABILITY LEVEL   | SURGE CURRENT  | ESR                |
|      | 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 = ± 10 %<br>M = ± 20 %<br>J = ± 5 %<br>(special order) | 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 V). | See table Termination and Packaging Codes | A = 1.0 %<br>B = 0.1 %<br>C = 0.01 %<br>S = Hi-Rel standard<br>Z = Non-ER | A = 10 cycles at + 25 °C<br>B = 10 cycles at - 55 °C/+ 85 °C<br>C = 10 cycles at - 55 °C/+ 85 °C (before Weibull grading)<br>Z = None<br>S = 3 cycles at + 25 °C | S = Std<br>L = Low |

### TERMINATION AND PACKAGING CODES

| CODE | TERMINATION             | PACKAGING                       |
|------|-------------------------|---------------------------------|
| C    | Matte tin               | 7" (178 mm) reels               |
| H    | Matte tin               | 7" (178 mm) reels, ½ reel       |
| U    | Matte tin               | 7" (178 mm) reels, partial reel |
| E    | Solder plated, tin/lead | 7" (178 mm) reels               |
| L    | Solder plated, tin/lead | 7" (178 mm) reels, ½ reel       |
| R    | Solder plated, tin/lead | 7" (178 mm) reels, partial reel |
| K    | Solder fused, tin/lead  | 7" (178 mm) reels               |
| M    | Solder fused, tin/lead  | 7" (178 mm) reels, ½ reel       |
| N    | Solder fused, tin/lead  | 7" (178 mm) reels, partial reel |

**DIMENSIONS** in inches (millimeters)


| CASE CODE | EIA SIZE | L                             | W                             | H                             | P                              | Tw                            | TH (MIN.)       |
|-----------|----------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|-----------------|
| A         | 3216-18  | 0.126 ± 0.008<br>[3.2 ± 0.20] | 0.063 ± 0.008<br>[1.6 ± 0.20] | 0.063 ± 0.008<br>[1.6 ± 0.20] | 0.031 ± 0.012<br>[0.80 ± 0.30] | 0.047 ± 0.004<br>[1.2 ± 0.10] | 0.028<br>[0.70] |
| B         | 3528-21  | 0.138 ± 0.008<br>[3.5 ± 0.20] | 0.110 ± 0.008<br>[2.8 ± 0.20] | 0.075 ± 0.008<br>[1.9 ± 0.20] | 0.031 ± 0.012<br>[0.80 ± 0.30] | 0.087 ± 0.004<br>[2.2 ± 0.10] | 0.028<br>[0.70] |
| C         | 6032-28  | 0.236 ± 0.012<br>[6.0 ± 0.30] | 0.126 ± 0.012<br>[3.2 ± 0.30] | 0.098 ± 0.012<br>[2.5 ± 0.30] | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.087 ± 0.004<br>[2.2 ± 0.10] | 0.039<br>[1.0]  |
| D         | 7343-31  | 0.287 ± 0.012<br>[7.3 ± 0.30] | 0.169 ± 0.012<br>[4.3 ± 0.30] | 0.110 ± 0.012<br>[2.8 ± 0.30] | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.094 ± 0.004<br>[2.4 ± 0.10] | 0.039<br>[1.0]  |
| E         | 7343-43  | 0.287 ± 0.012<br>[7.3 ± 0.30] | 0.169 ± 0.012<br>[4.3 ± 0.30] | 0.157 ± 0.012<br>[4.0 ± 0.30] | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.094 ± 0.004<br>[2.4 ± 0.10] | 0.039<br>[1.0]  |

**RATINGS AND CASE CODES**

| μF   | 4 V | 6.3 V | 10 V  | 16 V  | 20 V  | 25 V  | 35 V | 50 V | 63 V |
|------|-----|-------|-------|-------|-------|-------|------|------|------|
| 0.10 |     |       |       |       |       |       | A    | A    |      |
| 0.15 |     |       |       |       |       |       | A    | A/B  |      |
| 0.22 |     |       |       |       |       |       | A    | B    |      |
| 0.33 |     |       |       |       |       | A     | A    | B    |      |
| 0.47 |     |       |       |       | A     | A     | A/B  | B/C  |      |
| 0.68 |     |       |       | A     | A     | B     | B    | C    |      |
| 1.0  |     |       | A     | A     | A     | A/B   | A/B  | B/C  |      |
| 1.5  |     | A     | A     | A     | B     | B     | B/C  | C/D  |      |
| 2.2  | A   | A     |       | B     | A/B   | A/B/C | B/C  | C/D  |      |
| 3.3  | A   | A     | B     | B     | B     | B/C   | B/C  | D    |      |
| 4.7  | A   | A/B   | A/B   | A/B   | A/B/C | B/C   | C/D  | D    | D    |
| 6.8  | B   | B     | B     | C     | C     | C/D   | C/D  | E    |      |
| 10   | B   | B     | A/C   | A/B/C | B/C   | B/C/D | C/D  | E    | E    |
| 15   | B   | C     | A/C   | B     | D     | C/D   | D    | E    |      |
| 22   |     | A/C   | A     | B/C/D | C/D   | D     | D/E  |      |      |
| 33   | A/C | B/C   | B/C/D | B/C/D | D     | D/E   |      |      |      |
| 47   | B/C | B/C/D | B/C/D | C/D   | D/E   | D/E   |      |      |      |
| 68   | D   | D     | D     | D     | D/E   |       |      |      |      |
| 100  | B/D | B/D   | C/D   | D/E   | E     |       |      |      |      |
| 150  | D   | D/E   | D     | E     |       |       |      |      |      |
| 220  |     | C/D/E | D/E   |       |       |       |      |      |      |
| 330  | E   | E     | E     |       |       |       |      |      |      |
| 470  |     |       | E     |       |       |       |      |      |      |

| MARKING   |   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
|---|---|-------|--------------------------------|------|-----|---|-----|---|----|---|----|---|----|---|----|---|----|---|----|
| <p><b>A Case</b></p>  | <b>"A" CASE VOLTAGE CODE</b>  |       | <p><b>B, C, D, E Cases</b></p> |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
|   | <table border="1"> <thead> <tr> <th>VOLTS</th> <th>CODE</th> </tr> </thead> <tbody> <tr><td>4.0</td><td>G</td></tr> <tr><td>6.3</td><td>J</td></tr> <tr><td>10</td><td>A</td></tr> <tr><td>16</td><td>C</td></tr> <tr><td>20</td><td>D</td></tr> <tr><td>25</td><td>E</td></tr> <tr><td>35</td><td>V</td></tr> <tr><td>50</td><td>T</td></tr> </tbody> </table> | VOLTS |                                | CODE | 4.0 | G | 6.3 | J | 10 | A | 16 | C | 20 | D | 25 | E | 35 | V | 50 |
| VOLTS   | CODE  |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 4.0   | G   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 6.3   | J   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 10  | A   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 16  | C   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 20  | D   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 25  | E   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 35  | V   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| 50  | T   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |
| <b>Marking</b><br>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.<br>The Vishay Sprague® trademark is included if space permits. Capacitors rated at 6.3 V are marked 6 V.<br>A manufacturing date code is marked on all capacitors.<br>Call the factory for further explanation. |   |       |                                |      |     |   |     |   |    |   |    |   |    |   |    |   |    |   |    |

| STANDARD RATINGS   |           |                           |                          |                               |  |   |                              |
|--|-----------|---------------------------|--------------------------|-------------------------------|--|---|------------------------------|
| CAPACITANCE (µF)   | CASE CODE | PART NUMBER               | MAX. DCL AT + 25 °C (µA) | MAX. DF AT + 25 °C 120 Hz (%) | STD. (S) MAX. ESR AT + 25 °C 100 kHz (Ω) | LOW (L) MAX. ESR AT + 25 °C 100 kHz (Ω) | AVAILABLE RELIABILITY LEVELS |
| <b>4 V<sub>DC</sub> AT + 85 °C; 2.7 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                          |                               |  |   |                              |
| 2.2  | A         | T83A225(1)004(2)(6)(4)(5) | 0.50                     | 6                             | 7.600                                    | 6.000                                   | A, B, C, S, Z                |
| 3.3  | A         | T83A335(1)004(2)(3)(4)(5) | 0.50                     | 6                             | 7.600                                    | 4.000                                   | A, B, S, Z                   |
| 4.7  | A         | T83A475(1)004(2)(6)(4)(5) | 0.50                     | 6                             | 6.300                                    | 3.500                                   | A, B, C, S, Z                |
| 6.8  | B         | T83B685(1)004(2)(6)(4)(5) | 0.50                     | 6                             | 4.500                                    | 2.000                                   | A, B, C, S, Z                |
| 10   | B         | T83B106(1)004(2)(6)(4)(5) | 0.50                     | 6                             | 3.500                                    | 1.200                                   | A, B, C, S, Z                |
| 15   | B         | T83B156(1)004(2)(6)(4)(5) | 0.60                     | 6                             | 2.900                                    | 1.200                                   | A, B, C, S, Z                |
| 33   | A         | T83A336(1)004(2)(3)(4)(5) | 1.3                      | 6                             | 2.900                                    | 1.500                                   | A, B, S, Z                   |
| 33   | C         | T83C336(1)004(2)(6)(4)(5) | 1.3                      | 6                             | 1.800                                    | 0.500                                   | A, B, C, S, Z                |
| 47   | B         | T83B476(1)004(2)(3)(4)(5) | 1.9                      | 6                             | 2.500                                    | 0.600                                   | A, B, S, Z                   |
| 47   | C         | T83C476(1)004(2)(3)(4)(5) | 1.9                      | 6                             | 1.800                                    | 0.400                                   | A, B, S, Z                   |
| 68   | D         | T83D686(1)004(2)(6)(4)(5) | 2.7                      | 6                             | 0.800                                    | 0.175                                   | A, B, C, S, Z                |
| 100  | B         | T83B107(1)004(2)(3)(4)(5) | 4.0                      | 6                             | 1.800                                    | 0.450                                   | A, B, S, Z                   |
| 100  | D         | T83D107(1)004(2)(6)(4)(5) | 4.0                      | 6                             | 0.700                                    | 0.175                                   | A, B, C, S, Z                |
| 150  | D         | T83D157(1)004(2)(3)(4)(5) | 6.0                      | 8                             | 0.600                                    | 0.150                                   | A, B, S, Z                   |
| 330  | E         | T83E337(1)004(2)(3)(4)(5) | 13.2                     | 8                             | 0.500                                    | 0.100                                   | A, B, S, Z                   |
| <b>6 V<sub>DC</sub> AT + 85 °C; 4 V<sub>DC</sub> AT + 125 °C</b>   |           |                           |                          |                               |  |   |                              |
| 1.5  | A         | T83A155(1)6R3(2)(6)(4)(5) | 0.50                     | 6                             | 8.000                                    | 6.000                                   | A, B, C, S, Z                |
| 2.2  | A         | T83A225(1)6R3(2)(6)(4)(5) | 0.50                     | 6                             | 7.600                                    | 6.000                                   | A, B, C, S, Z                |
| 3.3  | A         | T83A335(1)6R3(2)(6)(4)(5) | 0.50                     | 6                             | 6.300                                    | 5.000                                   | A, B, C, S, Z                |
| 4.7  | A         | T83A475(1)6R3(2)(3)(4)(5) | 0.50                     | 6                             | 5.500                                    | 3.500                                   | A, B, S, Z                   |
| 4.7  | B         | T83B475(1)6R3(2)(6)(4)(5) | 0.50                     | 6                             | 3.400                                    | 1.800                                   | A, B, C, S, Z                |
| 6.8  | B         | T83B685(1)6R3(2)(6)(4)(5) | 0.50                     | 6                             | 3.400                                    | 1.200                                   | A, B, C, S, Z                |

**Note**

- Part number definitions:
  - Capacitance tolerance: K, M
  - Termination and packaging: C, E, K, H, L, M, U, R, N
  - Reliability level: A, B, S, Z
  - Surge current: A, B, C, Z, S
  - ESR: L, S
  - Reliability level: A, B, C, S, Z
  - Reliability level: A, S, Z



| STANDARD RATINGS  |           |                           |                          |                               |  |   |                              |  |
|---|-----------|---------------------------|--------------------------|-------------------------------|--|---|------------------------------|--|
| CAPACITANCE (μF)  | CASE CODE | PART NUMBER               | MAX. DCL AT + 25 °C (μA) | MAX. DF AT + 25 °C 120 Hz (%) | STD. (S) MAX. ESR AT + 25 °C 100 kHz (Ω) | LOW (L) MAX. ESR AT + 25 °C 100 kHz (Ω) | AVAILABLE RELIABILITY LEVELS |  |
| <b>6 V<sub>DC</sub> AT + 85 °C; 4 V<sub>DC</sub> AT + 125 °C</b>  |           |                           |                          |                               |  |   |                              |  |
| 10  | B         | T83B106(1)6R3(2)(6)(4)(5) | 0.60                     | 6                             | 2.900                                    | 1.000                                   | A, B, C, S, Z                |  |
| 15  | C         | T83C156(1)6R3(2)(6)(4)(5) | 0.90                     | 6                             | 1.800                                    | 0.600                                   | A, B, C, S, Z                |  |
| 22  | A         | T83A226(1)6R3(2)(3)(4)(5) | 1.3                      | 6                             | 2.900                                    | 2.000                                   | A, B, S, Z                   |  |
| 22  | C         | T83C226(1)6R3(2)(6)(4)(5) | 1.3                      | 6                             | 1.800                                    | 0.500                                   | A, B, C, S, Z                |  |
| 33  | B         | T83B336(1)6R3(2)(3)(4)(5) | 2.0                      | 6                             | 1.900                                    | 0.600                                   | A, B, S, Z                   |  |
| 33  | C         | T83C336(1)6R3(2)(3)(4)(5) | 2.0                      | 6                             | 1.500                                    | 0.400                                   | A, B, S, Z                   |  |
| 47  | B         | T83B476(1)6R3(2)(3)(4)(5) | 2.8                      | 6                             | 1.900                                    | 0.550                                   | A, B, S, Z                   |  |
| 47  | C         | T83C476(1)6R3(2)(3)(4)(5) | 2.8                      | 6                             | 1.400                                    | 0.300                                   | A, B, S, Z                   |  |
| 47  | D         | T83D476(1)6R3(2)(6)(4)(5) | 2.8                      | 6                             | 0.800                                    | 0.200                                   | A, B, C, S, Z                |  |
| 68  | D         | T83D686(1)6R3(2)(6)(4)(5) | 4.1                      | 6                             | 0.700                                    | 0.200                                   | A, B, C, S, Z                |  |
| 100   | B         | T83B107(1)6R3(2)(3)(4)(5) | 6.0                      | 15                            | 1.700                                    | 0.500                                   | A, B, S, Z                   |  |
| 100   | D         | T83D107(1)6R3(2)(3)(4)(5) | 6.0                      | 6                             | 0.700                                    | 0.140                                   | A, B, S, Z                   |  |
| 150   | D         | T83D157(1)6R3(2)(3)(4)(5) | 9.0                      | 8                             | 0.600                                    | 0.125                                   | A, B, S, Z                   |  |
| 150   | E         | T83E157(1)6R3(2)(3)(4)(5) | 9.0                      | 8                             | 0.500                                    | 0.100                                   | A, B, S, Z                   |  |
| 220   | C         | T83C227(1)6R3(2)(3)(4)(5) | 13.2                     | 14                            | 0.700                                    | 0.300                                   | A, B, S, Z                   |  |
| 220   | D         | T83D227(1)6R3(2)(3)(4)(5) | 13.2                     | 8                             | 0.600                                    | 0.100                                   | A, B, S, Z                   |  |
| 220   | E         | T83E227(1)6R3(2)(3)(4)(5) | 13.2                     | 8                             | 0.500                                    | 0.100                                   | A, B, S, Z                   |  |
| 330   | E         | T83E337(1)6R3(2)(3)(4)(5) | 19.8                     | 8                             | 0.500                                    | 0.100                                   | A, B, S, Z                   |  |
| <b>10 V<sub>DC</sub> AT + 85 °C; 7 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                          |                               |  |   |                              |  |
| 1.0   | A         | T83A105(1)010(2)(6)(4)(5) | 0.50                     | 4                             | 9.300                                    | 6.000                                   | A, B, C, S, Z                |  |
| 1.5   | A         | T83A155(1)010(2)(6)(4)(5) | 0.50                     | 6                             | 8.000                                    | 6.000                                   | A, B, C, S, Z                |  |
| 3.3   | B         | T83B335(1)010(2)(6)(4)(5) | 0.50                     | 6                             | 3.500                                    | 2.500                                   | A, B, C, S, Z                |  |
| 4.7   | A         | T83A475(1)010(2)(3)(4)(5) | 0.50                     | 6                             | 5.000                                    | 3.000                                   | A, B, S, Z                   |  |
| 4.7   | B         | T83B475(1)010(2)(6)(4)(5) | 0.50                     | 6                             | 3.400                                    | 1.500                                   | A, B, C, S, Z                |  |
| 6.8   | B         | T83B685(1)010(2)(6)(4)(5) | 0.70                     | 6                             | 2.900                                    | 1.200                                   | A, B, C, S, Z                |  |
| 10  | A         | T83A106(1)010(2)(3)(4)(5) | 1.0                      | 6                             | 3.400                                    | 1.800                                   | A, B, C, S, Z                |  |
| 10  | C         | T83C106(1)010(2)(3)(4)(5) | 1.0                      | 6                             | 1.800                                    | 0.550                                   | A, B, S, Z                   |  |
| 15  | A         | T83A156(1)010(2)(3)(4)(5) | 1.5                      | 6                             | 2.900                                    | 2.000                                   | A, B, S, Z                   |  |
| 15  | C         | T83C156(1)010(2)(6)(4)(5) | 1.5                      | 6                             | 1.800                                    | 0.500                                   | A, B, C, S, Z                |  |
| 22  | A         | T83A226(1)010(2)(3)(4)(5) | 2.2                      | 8                             | 2.500                                    | 1.500                                   | A, B, S, Z                   |  |
| 33  | B         | T83B336(1)010(2)(3)(4)(5) | 3.3                      | 6                             | 1.900                                    | 0.600                                   | A, B, S, Z                   |  |
| 33  | C         | T83C336(1)010(2)(3)(4)(5) | 3.3                      | 6                             | 1.400                                    | 0.350                                   | A, B, S, Z                   |  |
| 33  | D         | T83D336(1)010(2)(6)(4)(5) | 3.3                      | 6                             | 0.800                                    | 0.250                                   | A, B, S, Z                   |  |
| 47  | B         | T83B476(1)010(2)(3)(4)(5) | 4.7                      | 6                             | 1.800                                    | 0.600                                   | A, B, S, Z                   |  |
| 47  | C         | T83C476(1)010(2)(3)(4)(5) | 4.7                      | 6                             | 1.100                                    | 0.300                                   | A, B, S, Z                   |  |
| 47  | D         | T83D476(1)010(2)(6)(4)(5) | 4.7                      | 6                             | 0.700                                    | 0.200                                   | A, B, C, S, Z                |  |
| 68  | D         | T83D686(1)010(2)(3)(4)(5) | 6.8                      | 6                             | 0.700                                    | 0.150                                   | A, B, S, Z                   |  |
| 100   | C         | T83C107(1)010(2)(6)(4)(5) | 10.0                     | 8                             | 0.900                                    | 0.200                                   | A, B, C, S, Z                |  |
| 100   | D         | T83D107(1)010(2)(6)(4)(5) | 10.0                     | 8                             | 0.600                                    | 0.100                                   | A, B, C, S, Z                |  |
| 150   | D         | T83D157(1)010(2)(3)(4)(5) | 15.0                     | 8                             | 0.600                                    | 0.100                                   | A, B, S, Z                   |  |
| 220   | D         | T83D227(1)010(2)(6)(4)(5) | 22.0                     | 8                             | 0.600                                    | 0.360                                   | A, B, C, S, Z                |  |
| 220   | E         | T83E227(1)010(2)(3)(4)(5) | 22.0                     | 8                             | 0.500                                    | 0.100                                   | A, B, C, S, Z                |  |
| 330   | E         | T83E337(1)010(2)(3)(4)(5) | 33.0                     | 10                            | 0.500                                    | 0.100                                   | A, B, S, Z                   |  |
| 470   | E         | T83E477(1)010(2)(3)(4)(5) | 47.0                     | 15                            | 0.500                                    | 0.100                                   | A, B, S, Z                   |  |

Note

- Part number definitions:
  - Capacitance tolerance: K, M
  - Termination and packaging: C, E, K, H, L, M, U, R, N
  - Reliability level: A, B, S, Z
  - Surge current: A, B, C, Z, S
  - ESR: L, S
  - Reliability level: A, B, C, S, Z
  - Reliability level: A, S, Z



| STANDARD RATINGS   |           |                           |                          |                               |  |   |                              |
|--|-----------|---------------------------|--------------------------|-------------------------------|--|---|------------------------------|
| CAPACITANCE (μF)   | CASE CODE | PART NUMBER               | MAX. DCL AT + 25 °C (μA) | MAX. DF AT + 25 °C 120 Hz (%) | STD. (S) MAX. ESR AT + 25 °C 100 kHz (Ω) | LOW (L) MAX. ESR AT + 25 °C 100 kHz (Ω) | AVAILABLE RELIABILITY LEVELS |
| <b>16 V<sub>DC</sub> AT + 85 °C; 10 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                          |                               |  |   |                              |
| 0.68   | A         | T83A684(1)016(2)(3)(4)(5) | 0.50                     | 4                             | 11.000                                   | 8.000                                   | A, B, S, Z                   |
| 1.0  | A         | T83A105(1)016(2)(3)(4)(5) | 0.50                     | 4                             | 9.300                                    | 6.000                                   | A, B, S, Z                   |
| 1.5  | A         | T83A155(1)016(2)(3)(4)(5) | 0.50                     | 6                             | 6.700                                    | 6.000                                   | A, B, S, Z                   |
| 2.2  | B         | T83B225(1)016(2)(3)(4)(5) | 0.50                     | 6                             | 4.600                                    | 2.500                                   | A, B, S, Z                   |
| 3.3  | B         | T83B335(1)016(2)(3)(4)(5) | 0.50                     | 6                             | 3.500                                    | 2.000                                   | A, B, S, Z                   |
| 4.7  | A         | T83A475(1)016(2)(3)(4)(5) | 0.80                     | 6                             | 5.000                                    | 2.500                                   | A, B, S, Z                   |
| 4.7  | B         | T83B475(1)016(2)(3)(4)(5) | 0.80                     | 6                             | 2.900                                    | 1.500                                   | A, B, S, Z                   |
| 6.8  | C         | T83C685(1)016(2)(3)(4)(5) | 1.1                      | 6                             | 1.900                                    | 0.600                                   | A, B, S, Z                   |
| 10   | A         | T83A106(1)016(2)(6)(4)(5) | 1.6                      | 6                             | 3.000                                    | 1.700                                   | A, B, C, S, Z                |
| 10   | B         | T83B106(1)016(2)(3)(4)(5) | 1.6                      | 6                             | 2.800                                    | 0.500                                   | A, B, C, S, Z                |
| 10   | C         | T83C106(1)016(2)(3)(4)(5) | 1.6                      | 6                             | 1.800                                    | 0.450                                   | A, B, S, Z                   |
| 15   | B         | T83B156(1)016(2)(6)(4)(5) | 2.4                      | 6                             | 2.000                                    | 0.800                                   | A, B, C, S, Z                |
| 22   | B         | T83B226(1)016(2)(6)(4)(5) | 3.5                      | 6                             | 1.900                                    | 1.000                                   | A, B, C, S, Z                |
| 22   | C         | T83C226(1)016(2)(6)(4)(5) | 3.5                      | 6                             | 1.100                                    | 0.375                                   | A, B, C, S, Z                |
| 22   | D         | T83D226(1)016(2)(3)(4)(5) | 3.5                      | 6                             | 0.800                                    | 0.250                                   | A, B, S, Z                   |
| 33   | B         | T83B336(1)016(2)(3)(4)(5) | 5.3                      | 6                             | 1.800                                    | 0.500                                   | A, B, S, Z                   |
| 33   | C         | T83C336(1)016(2)(3)(4)(5) | 5.3                      | 6                             | 1.100                                    | 0.300                                   | A, B, S, Z                   |
| 33   | D         | T83D336(1)016(2)(3)(4)(5) | 5.3                      | 6                             | 0.700                                    | 0.225                                   | A, B, S, Z                   |
| 47   | C         | T83C476(1)016(2)(3)(4)(5) | 7.5                      | 6                             | 1.000                                    | 0.300                                   | A, B, S, Z                   |
| 47   | D         | T83D476(1)016(2)(6)(4)(5) | 7.5                      | 6                             | 0.700                                    | 0.150                                   | A, B, C, S, Z                |
| 68   | D         | T83D686(1)016(2)(3)(4)(5) | 10.9                     | 6                             | 0.600                                    | 0.150                                   | A, B, S, Z                   |
| 100  | D         | T83D107(1)016(2)(6)(4)(5) | 16.0                     | 8                             | 0.600                                    | 0.125                                   | A, B, C, S, Z                |
| 100  | E         | T83E107(1)016(2)(3)(4)(5) | 16.0                     | 8                             | 0.600                                    | 0.100                                   | A, B, C, S, Z                |
| 150  | E         | T83E157(1)016(2)(3)(4)(5) | 24.0                     | 8                             | 0.500                                    | 0.150                                   | A, B, S, Z                   |
| <b>20 V<sub>DC</sub> AT + 85 °C; 13 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                          |                               |  |   |                              |
| 0.47   | A         | T83A474(1)020(2)(3)(4)(5) | 0.50                     | 4                             | 12.000                                   | 9.000                                   | A, B, S, Z                   |
| 0.68   | A         | T83A684(1)020(2)(6)(4)(5) | 0.50                     | 4                             | 10.000                                   | 8.000                                   | A, B, C, S, Z                |
| 1.0  | A         | T83A105(1)020(2)(6)(4)(5) | 0.50                     | 4                             | 8.400                                    | 5.500                                   | A, B, C, S, Z                |
| 1.5  | B         | T83B155(1)020(2)(3)(4)(5) | 0.50                     | 6                             | 4.600                                    | 2.500                                   | A, B, S, Z                   |
| 2.2  | A         | T83A225(1)020(2)(3)(4)(5) | 0.50                     | 6                             | 5.900                                    | 4.000                                   | A, B, S, Z                   |
| 2.2  | B         | T83B225(1)020(2)(6)(4)(5) | 0.50                     | 6                             | 3.500                                    | 1.500                                   | A, B, C, S, Z                |
| 3.3  | B         | T83B335(1)020(2)(6)(4)(5) | 0.70                     | 6                             | 3.000                                    | 1.300                                   | A, B, C, S, Z                |
| 4.7  | A         | T83A475(1)020(2)(3)(4)(5) | 0.90                     | 6                             | 5.000                                    | 3.500                                   | A, B, S, Z                   |
| 4.7  | B         | T83B475(1)020(2)(3)(4)(5) | 0.90                     | 6                             | 2.900                                    | 1.000                                   | A, B, S, Z                   |
| 4.7  | C         | T83C475(1)020(2)(3)(4)(5) | 0.90                     | 6                             | 2.300                                    | 0.600                                   | A, B, S, Z                   |
| 6.8  | C         | T83C685(1)020(2)(6)(4)(5) | 1.4                      | 6                             | 1.900                                    | 0.550                                   | A, B, C, S, Z                |
| 10   | B         | T83B106(1)020(2)(3)(4)(5) | 2.0                      | 6                             | 2.500                                    | 1.000                                   | A, B, S, Z                   |
| 10   | C         | T83C106(1)020(2)(3)(4)(5) | 2.0                      | 6                             | 1.700                                    | 0.450                                   | A, B, S, Z                   |
| 15   | D         | T83D156(1)020(2)(6)(4)(5) | 3.0                      | 6                             | 0.900                                    | 0.300                                   | A, B, C, S, Z                |
| 22   | C         | T83C226(1)020(2)(6)(4)(5) | 4.4                      | 6                             | 1.100                                    | 0.375                                   | A, B, C, S, Z                |
| 22   | D         | T83D226(1)020(2)(6)(4)(5) | 4.4                      | 6                             | 0.700                                    | 0.225                                   | A, B, C, S, Z                |
| 33   | D         | T83D336(1)020(2)(3)(4)(5) | 6.6                      | 6                             | 0.700                                    | 0.200                                   | A, B, S, Z                   |
| 47   | D         | T83D476(1)020(2)(3)(4)(5) | 9.4                      | 6                             | 0.700                                    | 0.200                                   | A, B, S, Z                   |
| 47   | E         | T83E476(1)020(2)(3)(4)(5) | 9.4                      | 6                             | 0.600                                    | 0.150                                   | A, B, S, Z                   |
| 68   | D         | T83D686(1)020(2)(3)(4)(5) | 13.6                     | 6                             | 0.700                                    | 0.175                                   | A, B, S, Z                   |
| 68   | E         | T83E686(1)020(2)(6)(4)(5) | 13.6                     | 6                             | 0.600                                    | 0.150                                   | A, B, C, S, Z                |
| 100  | E         | T83E107(1)020(2)(3)(4)(5) | 20.0                     | 8                             | 0.500                                    | 0.150                                   | A, B, S, Z                   |

Note

- Part number definitions:
  - (1) Capacitance tolerance: K, M
  - (2) Termination and packaging: C, E, K, H, L, M, U, R, N
  - (3) Reliability level: A, B, S, Z
  - (4) Surge current: A, B, C, Z, S
  - (5) ESR: L, S
  - (6) Reliability level: A, B, C, S, Z
  - (7) Reliability level: A, S, Z



| STANDARD RATINGS   |           |                           |                                      |  |   |  |                                    |
|--|-----------|---------------------------|--------------------------------------|--|---|--|------------------------------------|
| CAPACITANCE<br>( $\mu$ F)  | CASE CODE | PART NUMBER               | MAX. DCL<br>AT + 25 °C<br>( $\mu$ A) | MAX. DF<br>AT + 25 °C<br>120 Hz<br>(%) | STD. (S)<br>MAX. ESR<br>AT + 25 °C<br>100 kHz<br>( $\Omega$ ) | LOW (L)<br>MAX. ESR<br>AT + 25 °C<br>100 kHz<br>( $\Omega$ ) | AVAILABLE<br>RELIABILITY<br>LEVELS |
| <b>25 V<sub>DC</sub> AT + 85 °C; 17 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                                      |  |   |  |                                    |
| 0.33   | A         | T83A334(1)025(2)(6)(4)(5) | 0.50                                 | 4                                      | 14.000  | 10.000   | A, B, C, S, Z                      |
| 0.47   | A         | T83A474(1)025(2)(3)(4)(5) | 0.50                                 | 4                                      | 12.000  | 9.000  | A, B, S, Z                         |
| 0.68   | B         | T83B684(1)025(2)(3)(4)(5) | 0.50                                 | 4                                      | 7.000   | 5.000  | A, B, S, Z                         |
| 1.0  | A         | T83A105(1)025(2)(6)(4)(5) | 0.50                                 | 4                                      | 7.600   | 4.000  | A, B, C, S, Z                      |
| 1.0  | B         | T83B105(1)025(2)(6)(4)(5) | 0.50                                 | 4                                      | 5.000   | 2.000  | A, B, C, S, Z                      |
| 1.5  | B         | T83B155(1)025(2)(6)(4)(5) | 0.50                                 | 6                                      | 4.600   | 2.000  | A, B, C, S, Z                      |
| 2.2  | A         | T83A225(1)025(2)(3)(4)(5) | 0.60                                 | 6                                      | 6.300   | 4.000  | A, B, S, Z                         |
| 2.2  | B         | T83B225(1)025(2)(3)(4)(5) | 0.60                                 | 6                                      | 3.800   | 2.300  | A, B, S, Z                         |
| 2.2  | C         | T83C225(1)025(2)(6)(4)(5) | 0.60                                 | 6                                      | 2.900   | 1.000  | A, B, C, S, Z                      |
| 3.3  | B         | T83B335(1)025(2)(3)(4)(5) | 0.80                                 | 6                                      | 3.100   | 1.500  | A, B, S, Z                         |
| 3.3  | C         | T83C335(1)025(2)(3)(4)(5) | 0.80                                 | 6                                      | 2.300   | 1.000  | A, B, S, Z                         |
| 4.7  | B         | T83B475(1)025(2)(3)(4)(5) | 1.2                                  | 6                                      | 2.800   | 1.500  | A, B, S, Z                         |
| 4.7  | C         | T83C475(1)025(2)(6)(4)(5) | 1.2                                  | 6                                      | 2.000   | 0.525  | A, B, C, S, Z                      |
| 6.8  | C         | T83C685(1)025(2)(3)(4)(5) | 1.7                                  | 6                                      | 1.700   | 0.500  | A, B, S, Z                         |
| 6.8  | D         | T83D685(1)025(2)(6)(4)(5) | 1.7                                  | 6                                      | 1.200   | 0.350  | A, B, C, S, Z                      |
| 10   | B         | T83B106(1)025(2)(3)(4)(5) | 2.5                                  | 6                                      | 2.300   | 1.300  | A, B, S, Z                         |
| 10   | C         | T83C106(1)025(2)(6)(4)(5) | 2.5                                  | 6                                      | 1.500   | 0.350  | A, B, C, S, Z                      |
| 10   | D         | T83D106(1)025(2)(6)(4)(5) | 2.5                                  | 6                                      | 1.000   | 0.300  | A, B, C, S, Z                      |
| 15   | C         | T83C156(1)025(2)(3)(4)(5) | 3.8                                  | 6                                      | 1.200   | 0.425  | A, B, S, Z                         |
| 15   | D         | T83D156(1)025(2)(6)(4)(5) | 3.8                                  | 6                                      | 0.800   | 0.250  | A, B, C, S, Z                      |
| 22   | D         | T83D226(1)025(2)(6)(4)(5) | 5.5                                  | 6                                      | 0.700   | 0.200  | A, B, C, S, Z                      |
| 33   | D         | T83D336(1)025(2)(6)(4)(5) | 8.3                                  | 6                                      | 0.700   | 0.300  | A, B, C, S, Z                      |
| 33   | E         | T83E336(1)025(2)(3)(4)(5) | 8.3                                  | 6                                      | 0.600   | 0.200  | A, B, S, Z                         |
| 47   | D         | T83D476(1)025(2)(6)(4)(5) | 11.8                                 | 8                                      | 0.700   | 0.175  | A, B, C, S, Z                      |
| 47   | E         | T83E476(1)025(2)(3)(4)(5) | 11.8                                 | 6                                      | 0.600   | 0.300  | A, B, S, Z                         |
| <b>35 V<sub>DC</sub> AT + 85 °C; 23 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                                      |  |   |  |                                    |
| 0.10   | A         | T83A104(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 20.000  | 10.000   | A, B, C, S, Z                      |
| 0.15   | A         | T83A154(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 18.000  | 6.000  | A, B, C, S, Z                      |
| 0.22   | A         | T83A224(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 15.000  | 6.000  | A, B, C, S, Z                      |
| 0.33   | A         | T83A334(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 13.000  | 6.000  | A, B, C, S, Z                      |
| 0.47   | A         | T83A474(1)035(2)(3)(4)(5) | 0.50                                 | 4                                      | 10.000  | 4.000  | A, B, S, Z                         |
| 0.47   | B         | T83B474(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 8.000   | 2.500  | A, B, C, S, Z                      |
| 0.68   | B         | T83B684(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 6.500   | 2.500  | A, B, C, S, Z                      |
| 1.0  | A         | T83A105(1)035(2)(3)(4)(5) | 0.50                                 | 4                                      | 7.500   | 6.000  | A, B, S, Z                         |
| 1.0  | B         | T83B105(1)035(2)(6)(4)(5) | 0.50                                 | 4                                      | 5.000   | 2.000  | A, B, C, S, Z                      |
| 1.5  | B         | T83B155(1)035(2)(3)(4)(5) | 0.50                                 | 6                                      | 4.200   | 2.000  | A, B, S, Z                         |
| 1.5  | C         | T83C155(1)035(2)(3)(4)(5) | 0.50                                 | 6                                      | 3.800   | 1.500  | A, B, S, Z                         |
| 2.2  | B         | T83B225(1)035(2)(3)(4)(5) | 0.80                                 | 6                                      | 3.800   | 2.300  | A, B, S, Z                         |
| 2.2  | C         | T83C225(1)035(2)(6)(4)(5) | 0.80                                 | 6                                      | 2.900   | 0.900  | A, B, C, S, Z                      |

**Note**

- Part number definitions:
  - (1) Capacitance tolerance: K, M
  - (2) Termination and packaging: C, E, K, H, L, M, U, R, N
  - (3) Reliability level: A, B, S, Z
  - (4) Surge current: A, B, C, Z, S
  - (5) ESR: L, S
  - (6) Reliability level: A, B, C, S, Z
  - (7) Reliability level: A, S, Z



| STANDARD RATINGS   |           |                           |                          |                               |  |   |                              |
|--|-----------|---------------------------|--------------------------|-------------------------------|--|---|------------------------------|
| CAPACITANCE (μF)   | CASE CODE | PART NUMBER               | MAX. DCL AT + 25 °C (μA) | MAX. DF AT + 25 °C 120 Hz (%) | STD. (S) MAX. ESR AT + 25 °C 100 kHz (Ω) | LOW (L) MAX. ESR AT + 25 °C 100 kHz (Ω) | AVAILABLE RELIABILITY LEVELS |
| <b>35 V<sub>DC</sub> AT + 85 °C; 23 V<sub>DC</sub> AT + 125 °C</b>   |           |                           |                          |                               |  |   |                              |
| 3.3  | B         | T83B335(1)035(2)(3)(4)(5) | 1.2                      | 6                             | 3.500                                    | 1.500                                   | A, B, S, Z                   |
| 3.3  | C         | T83C335(1)035(2)(6)(4)(5) | 1.2                      | 6                             | 2.100                                    | 0.700                                   | A, B, C, S, Z                |
| 4.7  | C         | T83C475(1)035(2)(6)(4)(5) | 1.6                      | 6                             | 1.900                                    | 0.600                                   | A, B, C, S, Z                |
| 4.7  | D         | T83D475(1)035(2)(3)(4)(5) | 1.6                      | 6                             | 1.300                                    | 0.600                                   | A, B, S, Z                   |
| 6.8  | C         | T83C685(1)035(2)(3)(4)(5) | 2.4                      | 6                             | 1.800                                    | 0.900                                   | A, B, S, Z                   |
| 6.8  | D         | T83D685(1)035(2)(6)(4)(5) | 2.4                      | 6                             | 1.100                                    | 0.300                                   | A, B, C, S, Z                |
| 10   | C         | T83C106(1)035(2)(3)(4)(5) | 3.5                      | 6                             | 1.600                                    | 0.450                                   | A, B, S, Z                   |
| 10   | D         | T83D106(1)035(2)(3)(4)(5) | 3.5                      | 6                             | 0.800                                    | 0.250                                   | A, B, C, S, Z                |
| 15   | D         | T83D156(1)035(2)(3)(4)(5) | 5.3                      | 6                             | 0.700                                    | 0.300                                   | A, B, S, Z                   |
| 22   | D         | T83D226(1)035(2)(3)(4)(5) | 7.7                      | 6                             | 0.600                                    | 0.400                                   | A, B, S, Z                   |
| 22   | E         | T83E226(1)035(2)(3)(4)(5) | 7.7                      | 6                             | 0.600                                    | 0.300                                   | A, B, S, Z                   |
| <b>50 V<sub>DC</sub> AT + 85 °C; 33 V<sub>DC</sub> AT + 125 °C</b>   |           |                           |                          |                               |  |   |                              |
| 0.10   | A         | T83A104(1)050(2)(6)(4)(5) | 0.50                     | 4                             | 19.000                                   | 10.000                                  | A, B, C, S, Z                |
| 0.15   | A         | T83A154(1)050(2)(3)(4)(5) | 0.50                     | 4                             | 17.000                                   | 10.000                                  | A, B, S, Z                   |
| 0.15   | B         | T83B154(1)050(2)(3)(4)(5) | 0.50                     | 4                             | 14.000                                   | 9.000                                   | A, B, S, Z                   |
| 0.22   | B         | T83B224(1)050(2)(6)(4)(5) | 0.50                     | 4                             | 12.000                                   | 8.500                                   | A, B, C, S, Z                |
| 0.33   | B         | T83B334(1)050(2)(6)(4)(5) | 0.50                     | 4                             | 10.000                                   | 4.500                                   | A, B, C, S, Z                |
| 0.47   | B         | T83B474(1)050(2)(3)(4)(5) | 0.50                     | 4                             | 8.400                                    | 4.000                                   | A, B, S, Z                   |
| 0.47   | C         | T83C474(1)050(2)(3)(4)(5) | 0.50                     | 4                             | 6.700                                    | 1.800                                   | A, B, S, Z                   |
| 0.68   | C         | T83C684(1)050(2)(6)(4)(5) | 0.50                     | 4                             | 5.900                                    | 1.600                                   | A, B, C, S, Z                |
| 1.0  | B         | T83B105(1)050(2)(3)(4)(5) | 0.50                     | 4                             | 6.700                                    | 2.000                                   | A, B, S, Z                   |
| 1.0  | C         | T83C105(1)050(2)(6)(4)(5) | 0.50                     | 4                             | 4.600                                    | 1.600                                   | A, B, C, S, Z                |
| 1.5  | C         | T83C155(1)050(2)(3)(4)(5) | 0.80                     | 6                             | 3.400                                    | 1.500                                   | A, B, S, Z                   |
| 1.5  | D         | T83D155(1)050(2)(6)(4)(5) | 0.80                     | 6                             | 2.900                                    | 1.000                                   | A, B, C, S, Z                |
| 2.2  | C         | T83C225(1)050(2)(3)(4)(5) | 1.1                      | 6                             | 2.900                                    | 1.500                                   | A, B, S, Z                   |
| 2.2  | D         | T83D225(1)050(2)(6)(4)(5) | 1.1                      | 6                             | 2.100                                    | 0.800                                   | A, B, C, S, Z                |
| 3.3  | D         | T83D335(1)050(2)(6)(4)(5) | 1.7                      | 6                             | 1.700                                    | 0.800                                   | A, B, C, S, Z                |
| 4.7  | D         | T83D475(1)050(2)(6)(4)(5) | 2.4                      | 6                             | 1.200                                    | 0.300                                   | A, B, C, S, Z                |
| 6.8  | E         | T83E685(1)050(2)(3)(4)(5) | 3.4                      | 6                             | 0.900                                    | 0.540                                   | A, B, S, Z                   |
| 10   | E         | T83E106(1)050(2)(3)(4)(5) | 5.0                      | 6                             | 0.800                                    | 0.550                                   | A, B, S, Z                   |
| 15   | E         | T83E156(1)050(2)(3)(4)(5) | 7.5                      | 6                             | 0.800                                    | 0.350                                   | A, B, C, S, Z                |
| <b>63 V<sub>DC</sub> AT + 85 °C; 41.6 V<sub>DC</sub> AT + 125 °C</b> |           |                           |                          |                               |  |   |                              |
| 4.7  | D         | T83D475(1)063(2)(7)(4)(5) | 3.0                      | 6                             | 1.100                                    | 0.700                                   | A, S, Z                      |
| 10   | E         | T83E106(1)063(2)(7)(4)(5) | 6.3                      | 6                             | 1.000                                    | 0.600                                   | A, S, Z                      |

Note

- Part number definitions:
  - Capacitance tolerance: K, M
  - Termination and packaging: C, E, K, H, L, M, U, R, N
  - Reliability level: A, B, S, Z
  - Surge current: A, B, C, Z, S
  - ESR: L, S
  - Reliability level: A, B, C, S, Z
  - Reliability level: A, S, Z



| <b>RECOMMENDED VOLTAGE DERATING GUIDELINES</b> (for temperatures below + 85 °C) |                   |
|---|-------------------|
| <b>STANDARD CONDITIONS. FOR EXAMPLE: OUTPUT FILTERS</b>                         |                   |
| Capacitor Voltage Rating  | Operating Voltage |
| 4.0   | 2.5               |
| 6.3   | 3.3               |
| 10  | 5.0               |
| 16  | 8.0               |
| 20  | 10                |
| 25  | 12                |
| 35  | 15                |
| 50  | 24                |
| 63  | 32                |
| <b>SEVERE CONDITIONS. FOR EXAMPLE: INPUT FILTERS</b>                            |                   |
| Capacitor Voltage Rating  | Operating Voltage |
| 4.0   | 2.5               |
| 6.3   | 3.6               |
| 10  | 6.0               |
| 16  | 10                |
| 20  | 12                |
| 25  | 15                |
| 35  | 24                |
| 50  | 28                |
| 63  | 38                |

| <b>POWER DISSIPATION</b> |  |
|--------------------------|--|
| CASE CODE                | MAXIMUM PERMISSIBLE POWER DISSIPATION AT + 25 °C (W) IN FREE AIR |
| A                        | 0.075  |
| B                        | 0.085  |
| C                        | 0.110  |
| D                        | 0.150  |
| E                        | 0.165  |

| <b>STANDARD PACKAGING QUANTITY</b> |                |              |                 |
|------------------------------------|----------------|--------------|-----------------|
| CASE CODE                          | UNITS PER REEL |              |                 |
|                                    | 7" FULL REEL   | 7" HALF REEL | 7" PARTIAL REEL |
| A                                  | 2000           | 1000         | 100             |
| B                                  | 2000           | 1000         | 100             |
| C                                  | 500            | 250          | 100             |
| D                                  | 500            | 250          | 100             |
| E                                  | 400            | 200          | 100             |

| <b>PRODUCT INFORMATION</b>         |  |
|------------------------------------|--|
| COTS Guide for Tantalum Capacitors | <a href="http://www.vishay.com/doc?40083">www.vishay.com/doc?40083</a> |
| Pad Dimensions                     |  |
| Packaging Dimensions               |  |
| Moisture Sensitivity               | <a href="http://www.vishay.com/doc?40135">www.vishay.com/doc?40135</a> |
| <b>SELECTOR GUIDES</b>             |  |
| Solid Tantalum Selector Guide      | <a href="http://www.vishay.com/doc?49053">www.vishay.com/doc?49053</a> |
| <b>FAQ</b>                         |  |
| Frequently Asked Questions         | <a href="http://www.vishay.com/doc?40110">www.vishay.com/doc?40110</a> |





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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**



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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.