



## Aluminum Capacitors +85 °C, Miniature, Axial Lead



### FEATURES

- High CV per case size
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS  
COMPLIANT

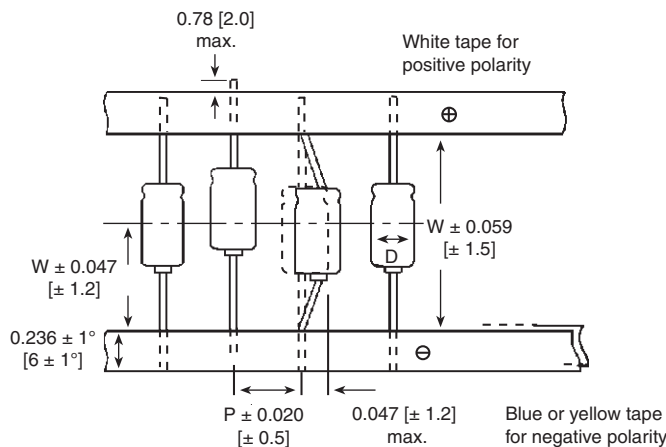
| QUICK REFERENCE DATA                    |   |
|---|---|
| DESCRIPTION                             | VALUE   |
| Nominal case size<br>Ø D x L in mm      | 0.197" x 0.472" [5.0 x 12.0]<br>to 0.709" x 1.614" [18.0 x 41.0]  |
| Operating temperature                   | -40 °C to +85 °C<br>(-25 °C to +85 °C for<br>315 WV <sub>DC</sub> to 450 WV <sub>DC</sub> units)  |
| Rated capacitance range, C <sub>R</sub> | 0.47 µF to 10 000 µF  |
| Tolerance on C <sub>R</sub>             | ± 20 %  |
| Rated voltage range, U <sub>R</sub>     | 6.3 WV <sub>DC</sub> to 450 WV <sub>DC</sub>  |
| Termination                             | 2 axial leads   |
| Life validation test at 85 °C           | 2000 h: ΔCAP ≤ 20 % from<br>initial measurement.<br>ΔDF x 2 initial specified limit.<br>ΔDCL ≤ initial specified limit.   |
| Shelf life at 85 °C                     | 1000 h: ΔCAP ± 20 % from<br>initial measurement.<br>ΔDF 2 x initial specified limit.<br>ΔDCL ≤ the initial specified limit.   |
| DC leakage current                      | Rated voltage for 1 min for<br>6.3 WV <sub>DC</sub> to 100 WV <sub>DC</sub> units<br>I < 0.03 CV or 4 µA<br>(whichever is greater)<br>Rated voltage for 2 min for<br>6.3 WV <sub>DC</sub> to 100 WV <sub>DC</sub> units<br>I < 0.01 CV or 3 µA<br>(whichever is greater)<br>Rated voltage for 1 min for<br>160 WV <sub>DC</sub> to 450 WV <sub>DC</sub> units<br>I < 0.1 CV + 40 µA and CV ≤ 1000<br>I < 0.04 CV + 100 µA and CV > 1000 |

| RIPPLE CURRENT MULTIPLIERS        |                   |             |               |               |       |          |
|-----------------------------------|-------------------|-------------|---------------|---------------|-------|----------|
| TEMPERATURE                       |                   |             |               |               |       |          |
| AMBIENT TEMPERATURE               |                   |             | MULTIPLIERS   |               |       |          |
| ≤ +70 °C                          |                   |             | 1.27          |               |       |          |
| +85 °C                            |                   |             | 1.0           |               |       |          |
| FREQUENCY (Hz) / CAPACITANCE (µF) |                   |             |               |               |       |          |
| WV <sub>DC</sub>                  | CAP. (µF)         | 50 TO<br>60 | 100 TO<br>120 | 300 TO<br>400 | 1 kHz | ≥ 10 kHz |
| 6.3 to<br>100                     | 0 to 47           | 0.75        | 1             | 1.35          | 1.57  | 2.00     |
|                                   | 100 to 470        | 0.80        | 1             | 1.23          | 1.34  | 1.50     |
|                                   | 1000 to<br>10 000 | 0.85        | 1             | 1.10          | 1.13  | 1.15     |
| 160 to<br>450                     | 1 to 100          | 0.80        | 1             | 1.25          | 1.40  | 1.60     |

| LOW TEMPERATURE PERFORMANCE  |                       |                       |
|--|-----------------------|-----------------------|
| MAXIMUM IMPEDANCE RATIO Z <sup>(T)</sup> / Z <sup>(+20 °C)</sup> MAXIMUM AT 120 Hz |                       |                       |
| RATED VOLTAGE<br>(WV <sub>DC</sub> )   | Z - 25 °C / Z + 20 °C | Z - 40 °C / Z + 20 °C |
| 6.3  | 4.0                   | 10.0                  |
| 10.0   | 3.0                   | 8.0                   |
| 16.0   | 2.0                   | 6.0                   |
| 25.0   | 2.0                   | 4.0                   |
| 35.0 to 100.0  | 2.0                   | 3.0                   |
| 160.0 to 250.0   | 4.0                   | 12.0                  |
| 315.0 to 350.0   | 6.0                   | -                     |
| 400.0 to 450.0   | 15.0                  | -                     |

| DIMENSIONS in inches [millimeters] |                             |               |                       |           |                             |               |                       |
|------------------------------------|-----------------------------|---------------|-----------------------|-----------|-----------------------------|---------------|-----------------------|
| CASE CODE                          | NOMINAL CASE SIZE<br>D x L  | LEAD DIAMETER | TYPICAL WEIGHT<br>(g) | CASE CODE | NOMINAL CASE SIZE<br>D x L  | LEAD DIAMETER | TYPICAL WEIGHT<br>(g) |
| JL                                 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]   | 0.56                  | NR        | 0.394 x 1.023 [10.0 x 26.0] | 0.024 [0.6]   | 3.10                  |
| LL                                 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]   | 0.90                  | PR        | 0.512 x 1.023 [13.0 x 26.0] | 0.024 [0.6]   | 4.63                  |
| LM                                 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]   | 1.07                  | PS        | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]   | 5.47                  |
| MM                                 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]   | 1.45                  | QS        | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]   | 8.26                  |
| MN                                 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]   | 1.70                  | QT        | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]   | 10.42                 |
| NP                                 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]   | 2.32                  | RT        | 0.709 x 1.614 [18.0 x 41.0] | 0.031 [0.8]   | 12.42                 |

**DIMENSIONS** in inches [millimeters]



| DIMENSIONS in inches [millimeters] AND PACKAGING QUANTITIES |             |                                |                                     |                   |
|---|-------------|--------------------------------|-------------------------------------|-------------------|
| CASE CODE   | TAPING CODE | SPECIFICATIONS                 |                                     |                   |
|   |             | TAPE WIDTH $W \pm 0.059$ [1.5] | COMPONENT PITCH $P \pm 0.020$ [0.5] | QUANTITY PER REEL |
| JL  | B           | 2.063 [52.4]                   | 0.394 [10.0]                        | 1600              |
| LL  | B           | 2.063 [52.4]                   | 0.394 [10.0]                        | 1300              |
| LM  | B           | 2.063 [52.4]                   | 0.394 [10.0]                        | 1300              |
| MM  | B           | 2.063 [52.4]                   | 0.394 [10.0]                        | 1000              |
| MN  | B           | 2.500 [63.5]                   | 0.394 [10.0]                        | 1000              |
| NP  | B           | 2.500 [63.5]                   | 0.591 [15.0]                        | 500               |
| NP  | C           | 2.874 [73.0]                   | 0.591 [15.0]                        | 500               |
| NR  | B           | 2.500 [63.5]                   | 0.591 [15.0]                        | 500               |
| NR  | C           | 2.874 [73.0]                   | 0.591 [15.0]                        | 500               |
| PR  | B           | 2.500 [63.5]                   | 0.591 [15.0]                        | 350               |
| PR  | C           | 2.874 [73.0]                   | 0.591 [15.0]                        | 350               |
| PS  | B           | 2.874 [73.0]                   | 0.591 [15.0]                        | 350               |

**ORDERING EXAMPLE**

Electrolytic capacitor 516D series: 516D 107 M 6R3 JL 6 A E3

| DESCRIPTION |                                       |
|-------------|---------------------------------------|
| CODE        | EXPLANATION                           |
| 516D        | Product type                          |
| 107         | Capacitance value (100 $\mu$ F)       |
| M           | Tolerance (M = $\pm 20$ %)            |
| 6R3         | Voltage rating at 85 °C (6R3 = 6.3 V) |
| JL          | Can size (see Dimensions table)       |
| 6           | Packaging (bulk)                      |
| A           | Lead style (uncut)                    |
| E3          | RoHS compliant indicator              |

**PACKING AND LEAD STYLES**

- 6A Bulk, uncut leads.
- 7B Tape and reel. For case codes JL, LL, LM, MM, MN, NP, NR, PR and PS only.
- 7C Tape and reel with 2.874" [73.0] mm tape width. For case codes NP, NR and PR only.

\* Suffix E3 denotes lead (Pb)-free / RoHS-compliant products



| <b>ELECTRICAL DATA AND ORDERING INFORMATION</b>   |                    |                                    |                          |   |  |
|---|--------------------|------------------------------------|--------------------------|---|--|
| <b>CAPACITANCE<br/>(<math>\mu</math>F)</b>        | <b>PART NUMBER</b> | <b>NOMINAL CASE SIZE<br/>D x L</b> | <b>LEAD<br/>DIAMETER</b> | <b>MAX. DF<br/>AT +20 °C<br/>120 Hz</b> | <b>MAX. RIPPLE<br/>AT +85 °C / 120 Hz<br/>(mA<sub>RMS</sub>)</b> |
| <b>6.3 WV<sub>DC</sub> AT +85 °C, SURGE = 8 V</b> |                    |                                    |                          |   |  |
| 100   | 516D107M6R3JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.24                                    | 110  |
| 220   | 516D227M6R3LM6AE3  | 0.248 x 0.630 [6.3 x 16.0]         | 0.024 [0.6]              | 0.24                                    | 200  |
| 330   | 516D337M6R3LM6AE3  | 0.248 x 0.630 [6.3 x 16.0]         | 0.024 [0.6]              | 0.24                                    | 250  |
| 470   | 516D477M6R3MM6AE3  | 0.315 x 0.630 [8.0 x 16.0]         | 0.024 [0.6]              | 0.24                                    | 330  |
| 1000  | 516D108M6R3NP6AE3  | 0.394 x 0.827 [10.0 x 21.0]        | 0.024 [0.6]              | 0.24                                    | 600  |
| 2200  | 516D228M6R3PR6AE3  | 0.512 x 1.024 [13.0 x 26.0]        | 0.024 [0.6]              | 0.24                                    | 1020   |
| 3300  | 516D338M6R3PR6AE3  | 0.512 x 1.024 [13.0 x 26.0]        | 0.024 [0.6]              | 0.24                                    | 1200   |
| 4700  | 516D478M6R3QS6AE3  | 0.630 x 1.240 [16.0 x 31.5]        | 0.024 [0.6]              | 0.24                                    | 1500   |
| 6800  | 516D688M6R3QS6AE3  | 0.630 x 1.240 [16.0 x 31.5]        | 0.031 [0.8]              | 0.24                                    | 1840   |
| 10 000  | 516D109M6R3QT6AE3  | 0.630 x 1.633 [16.0 x 41.5]        | 0.031 [0.8]              | 0.24                                    | 2260   |
| <b>10 WV<sub>DC</sub> AT +85 °C, SURGE = 13 V</b> |                    |                                    |                          |   |  |
| 33  | 516D336M010JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.2                                     | 65   |
| 47  | 516D476M010JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.2                                     | 80   |
| 100   | 516D107M010LL6AE3  | 0.248 x 0.472 [6.3 x 12.0]         | 0.024 [0.6]              | 0.2                                     | 130  |
| 220   | 516D227M010LM6AE3  | 0.248 x 0.630 [6.3 x 16.0]         | 0.024 [0.6]              | 0.2                                     | 210  |
| 330   | 516D337M010MM6AE3  | 0.315 x 0.630 [8.0 x 16.0]         | 0.024 [0.6]              | 0.2                                     | 300  |
| 470   | 516D477M010MM6AE3  | 0.315 x 0.630 [8.0 x 16.0]         | 0.024 [0.6]              | 0.2                                     | 350  |
| 1000  | 516D108M010NP6AE3  | 0.394 x 0.827 [10.0 x 21.0]        | 0.024 [0.6]              | 0.2                                     | 640  |
| 2200  | 516D228M010PR6AE3  | 0.512 x 1.024 [13.0 x 26.0]        | 0.024 [0.6]              | 0.2                                     | 1090   |
| 3300  | 516D338M010PS6AE3  | 0.512 x 1.240 [13.0 x 31.5]        | 0.024 [0.6]              | 0.2                                     | 1390   |
| 4700  | 516D478M010QS6AE3  | 0.630 x 1.240 [16.0 x 31.5]        | 0.031 [0.8]              | 0.2                                     | 1730   |
| 6800  | 516D688M010QT6AE3  | 0.630 x 1.633 [16.0 x 41.5]        | 0.031 [0.8]              | 0.2                                     | 1930   |
| 10 000  | 516D109M010RT6AE3  | 0.709 x 1.614 [18.0 x 41.0]        | 0.031 [0.8]              | 0.2                                     | 2350   |
| <b>16 WV<sub>DC</sub> AT +85 °C, SURGE = 20 V</b> |                    |                                    |                          |   |  |
| 22  | 516D226M016JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.16                                    | 60   |
| 33  | 516D336M016JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.16                                    | 70   |
| 47  | 516D476M016JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.16                                    | 85   |
| 100   | 516D107M016LM6AE3  | 0.248 x 0.630 [6.3 x 16.0]         | 0.024 [0.6]              | 0.16                                    | 160  |
| 220   | 516D227M016MM6AE3  | 0.315 x 0.630 [8.0 x 16.0]         | 0.024 [0.6]              | 0.16                                    | 260  |
| 330   | 516D337M016MM6AE3  | 0.315 x 0.630 [8.0 x 16.0]         | 0.024 [0.6]              | 0.16                                    | 320  |
| 470   | 516D477M016MN6AE3  | 0.315 x 0.787 [8.0 x 20.0]         | 0.024 [0.6]              | 0.16                                    | 430  |
| 1000  | 516D108M016NR6AE3  | 0.394 x 1.024 [10.0 x 26.0]        | 0.024 [0.6]              | 0.16                                    | 770  |
| 2200  | 516D228M016PS6AE3  | 0.512 x 1.240 [13.0 x 31.5]        | 0.024 [0.6]              | 0.16                                    | 1180   |
| 3300  | 516D338M016QS6AE3  | 0.630 x 1.240 [16.0 x 31.5]        | 0.031 [0.8]              | 0.16                                    | 1620   |
| 4700  | 516D478M016QT6AE3  | 0.630 x 1.633 [16.0 x 41.5]        | 0.031 [0.8]              | 0.16                                    | 1840   |
| 6800  | 516D688M016RT6AE3  | 0.709 x 1.614 [18.0 x 41.0]        | 0.031 [0.8]              | 0.16                                    | 2310   |
| <b>25 WV<sub>DC</sub> AT +85 °C, SURGE = 32 V</b> |                    |                                    |                          |   |  |
| 10  | 516D106M025JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.14                                    | 40   |
| 22  | 516D226M025JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.14                                    | 65   |
| 33  | 516D336M025JL6AE3  | 0.197 x 0.472 [5.0 x 12.0]         | 0.024 [0.6]              | 0.14                                    | 80   |
| 47  | 516D476M025LL6AE3  | 0.248 x 0.472 [6.3 x 12.0]         | 0.024 [0.6]              | 0.14                                    | 100  |
| 100   | 516D107M025LM6AE3  | 0.248 x 0.630 [6.3 x 16.0]         | 0.024 [0.6]              | 0.14                                    | 170  |
| 220   | 516D227M025MM6AE3  | 0.315 x 0.630 [8.0 x 16.0]         | 0.024 [0.6]              | 0.14                                    | 280  |
| 330   | 516D337M025MN6AE3  | 0.315 x 0.787 [8.0 x 20.0]         | 0.024 [0.6]              | 0.14                                    | 380  |
| 470   | 516D477M025NR6AE3  | 0.394 x 1.024 [10.0 x 26.0]        | 0.024 [0.6]              | 0.14                                    | 510  |
| 1000  | 516D108M025PR6AE3  | 0.512 x 1.024 [13.0 x 26.0]        | 0.024 [0.6]              | 0.14                                    | 900  |



| ELECTRICAL DATA AND ORDERING INFORMATION          |                   |                             |                  |                                |   |
|---|-------------------|-----------------------------|------------------|--------------------------------|---|
| CAPACITANCE<br>( $\mu$ F)                         | PART NUMBER       | NOMINAL CASE SIZE<br>D x L  | LEAD<br>DIAMETER | MAX. DF<br>AT +20 °C<br>120 Hz | MAX. RIPPLE<br>AT +85 °C / 120 Hz<br>(mA <sub>RMS</sub> ) |
| <b>25 WV<sub>DC</sub> AT +85 °C, SURGE = 32 V</b> |                   |                             |                  |                                |   |
| 2200  | 516D228M025QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.14                           | 1480  |
| 3300  | 516D338M025QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.14                           | 1710  |
| 4700  | 516D478M025RT6AE3 | 0.709 x 1.614 [18.0 x 41.0] | 0.031 [0.8]      | 0.14                           | 2170  |
| <b>35 WV<sub>DC</sub> AT +85 °C, SURGE = 44 V</b> |                   |                             |                  |                                |   |
| 10  | 516D106M035JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.12                           | 45  |
| 22  | 516D226M035JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.12                           | 70  |
| 33  | 516D336M035LL6AE3 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]      | 0.12                           | 90  |
| 47  | 516D476M035LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.12                           | 120   |
| 100   | 516D107M035MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.12                           | 210   |
| 220   | 516D227M035MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.12                           | 340   |
| 330   | 516D337M035NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.12                           | 460   |
| 470   | 516D477M035NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.12                           | 610   |
| 1000  | 516D108M035PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.12                           | 1060  |
| 2200  | 516D228M035QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.12                           | 1580  |
| 3300  | 516D338M035QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.12                           | 2050  |
| <b>50 WV<sub>DC</sub> AT +85 °C, SURGE = 63 V</b> |                   |                             |                  |                                |   |
| 0.47  | 516D474M050JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.1                            | 5   |
| 1.0   | 516D105M050JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.1                            | 10  |
| 2.2   | 516D225M050JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.1                            | 23  |
| 3.3   | 516D335M050JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.1                            | 28  |
| 4.7   | 516D475M050JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.1                            | 34  |
| 10  | 516D106M050JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.1                            | 50  |
| 22  | 516D226M050LL6AE3 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]      | 0.1                            | 85  |
| 33  | 516D336M050LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.1                            | 110   |
| 47  | 516D476M050LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.1                            | 130   |
| 100   | 516D107M050MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.1                            | 220   |
| 220   | 516D227M050NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.1                            | 410   |
| 330   | 516D337M050NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.1                            | 560   |
| 470   | 516D477M050PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.8]      | 0.1                            | 730   |
| 1000  | 516D108M050QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.1                            | 1260  |
| 2200  | 516D228M050RT6AE3 | 0.709 x 1.614 [18.0 x 41.0] | 0.031 [0.8]      | 0.1                            | 1920  |
| <b>63 WV<sub>DC</sub> AT +85 °C, SURGE = 79 V</b> |                   |                             |                  |                                |   |
| 3.3   | 516D335M063JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 31  |
| 4.7   | 516D475M063JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 37  |
| 10  | 516D106M063JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 55  |
| 22  | 516D226M063LL6AE3 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]      | 0.08                           | 90  |
| 33  | 516D336M063LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.08                           | 120   |
| 47  | 516D476M063MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.08                           | 160   |
| 100   | 516D107M063MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.08                           | 260   |
| 220   | 516D227M063NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.08                           | 480   |
| 330   | 516D337M063PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.08                           | 650   |
| 470   | 516D477M063PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.08                           | 840   |
| 1000  | 516D108M063QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.08                           | 1330  |



| ELECTRICAL DATA AND ORDERING INFORMATION            |                   |                             |                  |                                |  |
|---|-------------------|-----------------------------|------------------|--------------------------------|--|
| CAPACITANCE<br>( $\mu$ F)                           | PART NUMBER       | NOMINAL CASE SIZE<br>D x L  | LEAD<br>DIAMETER | MAX. DF<br>AT +20 °C<br>120 Hz | MAX. RIPPLE<br>AT +85 °C / 120 Hz<br>(mArms) |
| <b>100 WV<sub>DC</sub> AT +85 °C, SURGE = 125 V</b> |                   |                             |                  |                                |  |
| 0.47  | 516D474M100JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 10   |
| 1.0   | 516D105M100JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 18   |
| 2.2   | 516D225M100JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 28   |
| 3.3   | 516D335M100JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 34   |
| 4.7   | 516D475M100JL6AE3 | 0.197 x 0.472 [5.0 x 12.0]  | 0.024 [0.6]      | 0.08                           | 40   |
| 10  | 516D106M100LL6AE3 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]      | 0.08                           | 60   |
| 22  | 516D226M100MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.08                           | 120  |
| 33  | 516D336M100MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.08                           | 150  |
| 47  | 516D476M100MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.08                           | 190  |
| 100   | 516D107M100NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.08                           | 340  |
| 220   | 516D227M100PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.08                           | 560  |
| 330   | 516D337M100PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.08                           | 750  |
| 470   | 516D477M100QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.08                           | 970  |
| <b>160 WV<sub>DC</sub> AT +85 °C, SURGE = 200 V</b> |                   |                             |                  |                                |  |
| 1.0   | 516D105M160LL6AE3 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]      | 0.2                            | 13   |
| 2.2   | 516D225M160LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.2                            | 23   |
| 3.3   | 516D335M160MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 33   |
| 4.7   | 516D475M160MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 39   |
| 10  | 516D106M160MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.2                            | 60   |
| 22  | 516D226M160NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.2                            | 120  |
| 33  | 516D336M160PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.2                            | 170  |
| 47  | 516D476M160PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.2                            | 230  |
| 100   | 516D107M160QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.2                            | 430  |
| <b>200 WV<sub>DC</sub> AT +85 °C, SURGE = 250 V</b> |                   |                             |                  |                                |  |
| 1.0   | 516D105M200LL6AE3 | 0.248 x 0.472 [6.3 x 12.0]  | 0.024 [0.6]      | 0.2                            | 13   |
| 2.2   | 516D225M200LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.2                            | 23   |
| 3.3   | 516D335M200MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 33   |
| 4.7   | 516D475M200MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 39   |
| 10  | 516D106M200NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.2                            | 70   |
| 22  | 516D226M200PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.2                            | 140  |
| 33  | 516D336M200PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.2                            | 170  |
| 47  | 516D476M200PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.2                            | 230  |
| 100   | 516D107M200QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.2                            | 430  |
| <b>250 WV<sub>DC</sub> AT +85 °C, SURGE = 300 V</b> |                   |                             |                  |                                |  |
| 1.0   | 516D105M250LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.2                            | 14   |
| 2.2   | 516D225M250MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 27   |
| 3.3   | 516D335M250MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 33   |
| 4.7   | 516D475M250MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.2                            | 45   |
| 10  | 516D106M250NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.2                            | 70   |
| 22  | 516D226M250PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.2                            | 140  |
| 33  | 516D336M250PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.2                            | 190  |
| 47  | 516D476M250QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.2                            | 260  |
| 100   | 516D107M250QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.2                            | 430  |



| ELECTRICAL DATA AND ORDERING INFORMATION            |                   |                             |                  |                                |   |
|---|-------------------|-----------------------------|------------------|--------------------------------|---|
| CAPACITANCE<br>( $\mu$ F)                           | PART NUMBER       | NOMINAL CASE SIZE<br>D x L  | LEAD<br>DIAMETER | MAX. DF<br>AT +20 °C<br>120 Hz | MAX. RIPPLE<br>AT +85 °C / 120 Hz<br>(mA <sub>RMS</sub> ) |
| <b>315 WV<sub>DC</sub> AT +85 °C, SURGE = 365 V</b> |                   |                             |                  |                                |   |
| 1.0   | 516D105M315LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.2                            | 14  |
| 2.2   | 516D225M315MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.2                            | 27  |
| 3.3   | 516D335M315MN6AE3 | 0.315 x .0787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.2                            | 36  |
| 4.7   | 516D475M315MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.2                            | 45  |
| 10  | 516D106M315NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.2                            | 80  |
| 22  | 516D226M315PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.2                            | 150   |
| 33  | 516D336M315QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.2                            | 210   |
| 47  | 516D476M315QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.2                            | 260   |
| <b>350 WV<sub>DC</sub> AT +85 °C, SURGE = 400 V</b> |                   |                             |                  |                                |   |
| 1.0   | 516D105M350LM6AE3 | 0.248 x 0.630 [6.3 x 16.0]  | 0.024 [0.6]      | 0.25                           | 12  |
| 2.2   | 516D225M350MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.25                           | 24  |
| 3.3   | 516D335M350MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.25                           | 32  |
| 4.7   | 516D475M350NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.25                           | 46  |
| 10  | 516D106M350PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.25                           | 85  |
| 22  | 516D226M350PS6AE3 | 0.512 x 1.240 [13.0 x 31.5] | 0.024 [0.6]      | 0.25                           | 140   |
| 33  | 516D336M350QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.25                           | 190   |
| 47  | 516D476M350QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.25                           | 260   |
| <b>400 WV<sub>DC</sub> AT +85 °C, SURGE = 450 V</b> |                   |                             |                  |                                |   |
| 1.0   | 516D105M400MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.25                           | 14  |
| 2.2   | 516D225M400MN6AE3 | 0.315 x 0.787 [8.0 x 20.0]  | 0.024 [0.6]      | 0.25                           | 28  |
| 3.3   | 516D335M400NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.25                           | 38  |
| 4.7   | 516D475M400NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.25                           | 46  |
| 10  | 516D106M400PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.25                           | 85  |
| 22  | 516D226M400QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.25                           | 150   |
| 33  | 516D336M400QT6AE3 | 0.630 x 1.633 [16.0 x 41.5] | 0.031 [0.8]      | 0.25                           | 210   |
| 47  | 516D476M400RT6AE3 | 0.709 x 1.614 [18.0 x 41.0] | 0.031 [0.8]      | 0.25                           | 290   |
| <b>450 WV<sub>DC</sub> AT +85 °C, SURGE = 500 V</b> |                   |                             |                  |                                |   |
| 1.0   | 516D105M450MM6AE3 | 0.315 x 0.630 [8.0 x 16.0]  | 0.024 [0.6]      | 0.25                           | 14  |
| 2.2   | 516D225M450NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.25                           | 31  |
| 3.3   | 516D335M450NP6AE3 | 0.394 x 0.827 [10.0 x 21.0] | 0.024 [0.6]      | 0.25                           | 38  |
| 4.7   | 516D475M450NR6AE3 | 0.394 x 1.024 [10.0 x 26.0] | 0.024 [0.6]      | 0.25                           | 50  |
| 10  | 516D106M450PR6AE3 | 0.512 x 1.024 [13.0 x 26.0] | 0.024 [0.6]      | 0.25                           | 85  |
| 22  | 516D226M450QS6AE3 | 0.630 x 1.240 [16.0 x 31.5] | 0.031 [0.8]      | 0.25                           | 150   |
| 33  | 516D336M450RT6AE3 | 0.709 x 1.614 [18.0 x 41.0] | 0.031 [0.8]      | 0.25                           | 230   |

Statements about product lifetime are based on calculations and internal testing. They should only be interpreted as estimations. Also due to external factors, the lifetime in the field application may deviate from the calculated lifetime. In general, nothing stated herein shall be construed as a guarantee of durability.



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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 in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

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



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- 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.