

## Overview

NeoCapacitor® provides excellent performance for various applications due to high conductivity of the conductive polymer.

TOKIN's devices are classified into the following three quality grades, in accordance with their application: Standard, Special, and Specific. The quality grade of all devices in this document is "standard" and cannot be used for "special" or "specific" quality grade applications. Customers who intend to use the products in this document for applications other than "standard" quality grade must contact KEMET sales representative in advance.

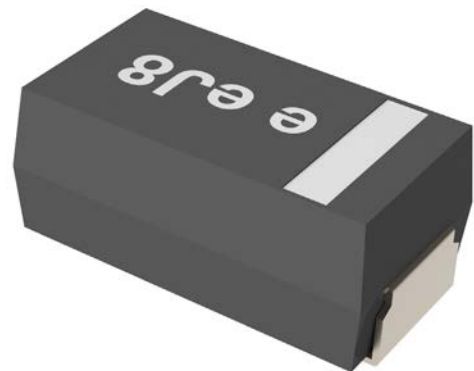
**Standard:** This quality grade is intended for applications in which failure or malfunction of the device is highly unlikely to cause harm to persons or damage to property, or be the source of any negative effects or problems in the wider community.

**Special:** This quality grade is intended for special applications that have common requirements, such specific industrial fields. Devices with a "special" quality grade are designed, manufactured, and tested using more a stringent quality assurance program than what is used for "standard" grade devices. There is a high possibility that failure or malfunction of the device when being used for applications in this category will cause harm to persons or damage to property, or bring negative effects or problems in the wider community.

**Specific:** Devices in this quality grade are designed, manufactured, and tested using a quality assurance program that is designated by the customer or that is created in accordance with the customer's specifications. There is an extremely high possibility that failure or malfunction of the device when being used for applications in this category will cause harm to persons or damage to property, or bring serious problems in the wider community. Customers who use KEMET's products for these "specific" applications must conclude an individual quality agreement and/or development agreement with KEMET. A quality assurance program designated by the customer must also be determined in advance.

## Benefits

- Excellent noise absorption performance
- Higher ripple current
- Miniaturized, thinner, higher capacitance and lower ESR
- Lead free (JEITA PHASE3), RoHS2 directive (2011/65/EU + 2015/863/EU) and halogen-free.
- Antimony-free and Red phosphorous-free materials for mold resin.



## Applications

Typical applications include voltage smoothing, noise absorption in high speed operation circuit, multi media instruments, PC (voltage smoothing and noise absorption of CPU, memory and various LSI), Smartphone, mobile phone (stabilization of battery voltage, stabilization for display), LCD TV (stabilization of LCD driver and timing controller) and others (tablet, PC, portable audio player, DSC, DVC, HDD, SSD, communication card, portable gaming devices, head-mounted displays, drones, IoT devices).

## K-SIM

For a detailed analysis of specific part numbers, please visit [ksim.kemet.com](http://ksim.kemet.com) to access KEMET's K-SIM software. KEMET K-SIM is designed to simulate behavior of components with respect to frequency, ambient temperature, and DC bias levels.

## Ordering Information

| TE            | PSL                              | B2   | 1A   | 107  | M                     | (45)  | 8R  |
|---------------|----------------------------------|--|--|--|-----------------------|---|---|
| Tape & Reel   | Series                           | Case Code  | DC Rated Voltage in Volts  | Capacitance (pF)   | Capacitance Tolerance | ESR Spec  | Packing Orientation   |
| φ 180 mm reel | Standard product of NeoCapacitor | A (3216-18)<br>B3 (3528-12)<br>B15 (3528-15)<br>B2 (3528-21) | 0E = 2.5 V<br>0G = 4 V<br>0J = 6.3 V<br>1A = 10 V<br>1C = 16 V<br>1D = 20 V<br>1E = 25 V | First two digits represents the cap code.<br>Third digit specifies number of zeros to follow | M = ±20%              | For example: (45) shows 45 mΩ<br>Blank = Refer to PN in Table 1 for specification | 8 = Tape width (8 mm)<br>R = Packaging orientation (Cathode on sprocket hole) |

## Performance Characteristics

| Item   | Performance Characteristics   |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
|--|---|---------------|-------|------|-------|------|------|------|------|---------------|-------|-------|-----|------|------|------|------|
| Operating Temperature                            | -55°C to +105°C   |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
| Rated Voltage Range (V)                          | 2.5 – 25  |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
| Surge Voltage (V)                                | <table border="1"> <tr> <td>Rated Voltage</td> <td>2.5 V</td> <td>4 V</td> <td>6.3 V</td> <td>10 V</td> <td>16 V</td> <td>20 V</td> <td>25 V</td> </tr> <tr> <td>Surge Voltage</td> <td>3.3 V</td> <td>5.2 V</td> <td>8 V</td> <td>13 V</td> <td>20 V</td> <td>23 V</td> <td>29 V</td> </tr> </table> | Rated Voltage | 2.5 V | 4 V  | 6.3 V | 10 V | 16 V | 20 V | 25 V | Surge Voltage | 3.3 V | 5.2 V | 8 V | 13 V | 20 V | 23 V | 29 V |
| Rated Voltage                                    | 2.5 V   | 4 V           | 6.3 V | 10 V | 16 V  | 20 V | 25 V |      |      |               |       |       |     |      |      |      |      |
| Surge Voltage                                    | 3.3 V   | 5.2 V         | 8 V   | 13 V | 20 V  | 23 V | 29 V |      |      |               |       |       |     |      |      |      |      |
| Nominal Capacitance (120 Hz)                     | 3.3 μF ~ 470 μF*  |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
| Dissipation Factor (tan δ, 120 Hz)               | Refer to Standard Ratings*  |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
| Leakage Current (LC, V <sub>R</sub> , 5 minutes) | Refer to Standard Ratings   |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
| Equivalent Series Resistance (ESR, 100 kHz**)    | Refer to Standard Ratings   |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |
| Permissible Ripple Current (100 kHz**)           | Refer to Standard Ratings   |               |       |      |       |      |      |      |      |               |       |       |     |      |      |      |      |

\* For these measurements apply 1.5 VDC

\*\* Partially ESR measurements should be taken at 300 k to 500 kHz

## Qualification

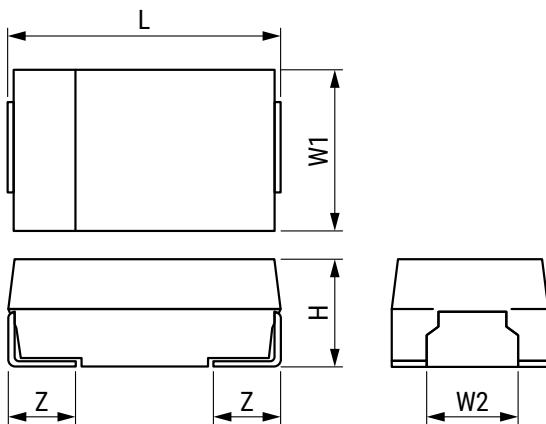
| Test                  | Condition  | Characteristics |                                  |                              |                              |
|-----------------------|--|-----------------|----------------------------------|------------------------------|------------------------------|
| Surge Voltage         | Temperature: 105°C, Surge Voltage apply, 1,000 Ω series resistance, 1,000 cycles | Δ C/C           | +20% ~ -20% of the initial value |                              |                              |
|                       |  | tan δ           | Within IL                        |                              |                              |
|                       |  | LC              | Within IL                        |                              |                              |
| Temperature Stability | Temperature exposure at +25°C, -55°C, +105°C                                     |                 | +25°C                            | -55°C                        | +105°C                       |
|                       |  | Δ C/C           | -                                | 0% ~ -20% compare with +25°C | +50% ~ 0% compare with +25°C |
|                       |  | tan δ           | Within IL                        | Within IL                    | Within 1.5 × IL              |
|                       |  | LC              | Within IL                        | -                            | Within 10 × IL               |
| Endurance             | Temperature: 105°C, Rated voltage apply, 2,000 hours*                            | Δ C/C           | +20% ~ -20% of the initial value |                              |                              |
|                       |  | tan δ           | Within 1.5 × IL                  |                              |                              |
|                       |  | LC              | Within IL                        |                              |                              |
| Humidity              | Temperature: 60°C, Humidity: 90 ~ 95% R.H., 500 hours                            | Δ C/C           | +30% ~ -20% of the initial value |                              |                              |
|                       |  | tan δ           | Within 1.5 × IL                  |                              |                              |
|                       |  | LC              | Within IL                        |                              |                              |

IL = Initial limit

\* 85°C, Rated voltage apply, 1,000 hours for TEPSLB20E477M(14)8R.

## Dimensions – Millimeters

Metric will govern



| Case Size |         | Component Dimensions |         |         |           |        |
|-----------|---------|----------------------|---------|---------|-----------|--------|
| KEMET     | EIA     | L ±0.2               | W1 ±0.2 | W2 ±0.1 | H         | Z ±0.2 |
| A         | 3216-18 | 3.2                  | 1.6     | 1.2     | 1.6 ± 0.2 | 0.8    |
| B3        | 3528-12 | 3.5                  | 2.8     | 2.2     | 1.1 ± 0.1 | 0.8    |
| B15       | 3528-15 | 3.5                  | 2.8     | 2.2     | 1.4 ± 0.1 | 0.8    |
| B2        | 3528-21 | 3.5                  | 2.8     | 2.2     | 1.9 ± 0.1 | 0.8    |

**Table 1 – Ratings & Part Number Reference**

| Rated Voltage | Rated Capacitance | Case Code/<br>Case Size | KEMET Part Number   | Leakage Current     | tan δ                    | ESR                        | Permissible Ripple Current                   | Rated and Maximum Operating Temperature |
|---------------|-------------------|-------------------------|---------------------|---------------------|--------------------------|----------------------------|--|---|
| V             | µF                | KEMET/EIA               |                     | µA at +25°C Maximum | % at 25°C 120 Hz Maximum | mΩ at 25°C 100 kHz Maximum | (mA <sub>rms</sub> , +25°C, 100 kHz) Maximum | °C                                      |
| 2.5           | 47                | A/3216-18               | TEPSLA0E476M8R      | 11.7                | 6                        | 180                        | 645  | 105                                     |
| 2.5           | 100               | A/3216-18               | TEPSLA0E107M8R      | 25                  | 8                        | 100                        | 866  | 105                                     |
| 2.5           | 100               | A/3216-18               | TEPSLA0E107M(45)8R  | 25                  | 8                        | 45                         | 1291   | 105                                     |
| 2.5           | 100               | A/3216-18               | TEPSLA0E107M(35)8R  | 25                  | 8                        | 35                         | 1464   | 105                                     |
| 2.5           | 100               | B3/3528-12              | TEPSLB30E107M8R     | 25                  | 8                        | 70                         | 1035   | 105                                     |
| 2.5           | 220               | A/3216-18               | TEPSLA0E227M(70)8R  | 55                  | 8                        | 70                         | 1035   | 105                                     |
| 2.5           | 220               | A/3216-18               | TEPSLA0E227M(45)8R  | 55                  | 8                        | 45 *                       | 1291 *                                       | 105                                     |
| 2.5           | 220               | A/3216-18               | TEPSLA0E227M(35)8R  | 55                  | 8                        | 35 *                       | 1464 *                                       | 105                                     |
| 2.5           | 220               | A/3216-18               | TEPSLA0E227M(25)8R  | 55                  | 8                        | 25 *                       | 1732 *                                       | 105                                     |
| 2.5           | 220               | B2/3528-21              | TEPSLB20E227M8R     | 55                  | 8                        | 45                         | 1374   | 105                                     |
| 2.5           | 220               | B2/3528-21              | TEPSLB20E227M(35)8R | 55                  | 8                        | 35                         | 1558   | 105                                     |
| 2.5           | 220               | B2/3528-21              | TEPSLB20E227M(25)8R | 55                  | 8                        | 25                         | 1844   | 105                                     |
| 2.5           | 220               | B2/3528-21              | TEPSLB20E227M(21)8R | 55                  | 8                        | 21                         | 2012   | 105                                     |
| 2.5           | 220               | B2/3528-21              | TEPSLB20E227M(15)8R | 55                  | 8                        | 15 *                       | 2380 *                                       | 105                                     |
| 2.5           | 220               | B3/3528-12              | TEPSLB30E227M8R     | 55                  | 8                        | 70                         | 1035   | 105                                     |
| 2.5           | 220               | B3/3528-12              | TEPSLB30E227M(35)8R | 55                  | 8                        | 35                         | 1464   | 105                                     |
| 2.5           | 330               | B2/3528-21              | TEPSLB20E337M(45)8R | 82.5                | 8                        | 45                         | 1374   | 105                                     |
| 2.5           | 330               | B2/3528-21              | TEPSLB20E337M(35)8R | 82.5                | 8                        | 35                         | 1558   | 105                                     |
| 2.5           | 330               | B2/3528-21              | TEPSLB20E337M(21)8R | 82.5                | 8                        | 21                         | 2012   | 105                                     |
| 2.5           | 330               | B2/3528-21              | TEPSLB20E337M(15)8R | 82.5                | 8                        | 15 *                       | 2380 *                                       | 105                                     |
| 2.5           | 470               | B2/3528-21              | TEPSLB20E477M(14)8R | 188                 | 8                        | 14 *                       | 2464 *                                       | 85                                      |
| 4             | 47                | A/3216-18               | TEPSLA0G476M8R      | 18.8                | 6                        | 180                        | 645  | 105                                     |
| 4             | 47                | A/3216-18               | TEPSLA0G476M(70)8R  | 18.8                | 6                        | 70                         | 1035   | 105                                     |
| 4             | 68                | A/3216-18               | TEPSLA0G686M8R      | 27.2                | 6                        | 180                        | 645  | 105                                     |
| 4             | 100               | A/3216-18               | TEPSLA0G107M8R      | 40                  | 8                        | 100                        | 866  | 105                                     |
| 4             | 100               | A/3216-18               | TEPSLA0G107M(45)8R  | 40                  | 8                        | 45                         | 1291   | 105                                     |
| 4             | 100               | A/3216-18               | TEPSLA0G107M(35)8R  | 40                  | 8                        | 35                         | 1464   | 105                                     |
| 4             | 100               | A/3216-18               | TEPSLA0G107M(25)8R  | 40                  | 8                        | 25                         | 1732   | 105                                     |
| 4             | 100               | B2/3528-21              | TEPSLB20G107M8R     | 40                  | 8                        | 70                         | 1102   | 105                                     |
| 4             | 100               | B2/3528-21              | TEPSLB20G107M(45)8R | 40                  | 8                        | 45                         | 1374   | 105                                     |
| 4             | 100               | B2/3528-21              | TEPSLB20G107M(35)8R | 40                  | 8                        | 35                         | 1558   | 105                                     |
| 4             | 100               | B3/3528-12              | TEPSLB30G107M8R     | 40                  | 8                        | 70                         | 1035   | 105                                     |
| 4             | 150               | B2/3528-21              | TEPSLB20G157M8R     | 60                  | 8                        | 45                         | 1374   | 105                                     |
| 4             | 150               | B2/3528-21              | TEPSLB20G157M(35)8R | 60                  | 8                        | 35                         | 1558   | 105                                     |
| 4             | 150               | B2/3528-21              | TEPSLB20G157M(30)8R | 60                  | 8                        | 30                         | 1683   | 105                                     |
| 4             | 150               | B2/3528-21              | TEPSLB20G157M(25)8R | 60                  | 8                        | 25                         | 1844   | 105                                     |
| 4             | 220               | B2/3528-21              | TEPSLB20G227M8R     | 88                  | 8                        | 45                         | 1374   | 105                                     |
| V             | µF                | KEMET/EIA               |                     | µA at +25°C Maximum | % at 25°C 120 Hz Maximum | mΩ at 25°C 100 kHz Maximum | (mA <sub>rms</sub> , +25°C, 100 kHz) Maximum | °C                                      |
| Rated Voltage | Rated Capacitance | Case Code/<br>Case Size | KEMET Part Number   | Leakage Current     | tan δ                    | ESR                        | Permissible Ripple Current                   | Rated and Maximum Operating Temperature |

\* ESR and Ripple measurement condition is 300 to 500kHz

∅ Ripple current condition is at 105°C, 100kHz

**Table 1 – Ratings & Part Number Reference cont.**

| Rated Voltage | Rated Capacitance | Case Code/<br>Case Size | KEMET Part Number    | Leakage Current     | tan δ                    | ESR                        | Permissible Ripple Current                   | Rated and Maximum Operating Temperature |
|---------------|-------------------|-------------------------|----------------------|---------------------|--------------------------|----------------------------|--|---|
| V             | μF                | KEMET/EIA               |                      | μA at +25°C Maximum | % at 25°C 120 Hz Maximum | mΩ at 25°C 100 kHz Maximum | (mA <sub>rms</sub> , +25°C, 100 kHz) Maximum | °C                                      |
| 4             | 220               | B2/3528-21              | TEPSLB20G227M(35)8R  | 88                  | 8                        | 35                         | 1558   | 105                                     |
| 4             | 220               | B2/3528-21              | TEPSLB20G227M(15)8R  | 88                  | 8                        | 15                         | 2380   | 105                                     |
| 6.3           | 6.8               | A/3216-18               | TEPSLA0J685M8R       | 4.2                 | 6                        | 300                        | 500  | 105                                     |
| 6.3           | 10                | A/3216-18               | TEPSLA0J106M8R       | 6.3                 | 6                        | 200                        | 612  | 105                                     |
| 6.3           | 15                | A/3216-18               | TEPSLA0J156M8R       | 9.4                 | 6                        | 200                        | 612  | 105                                     |
| 6.3           | 22                | A/3216-18               | TEPSLA0J226M8R       | 13.8                | 6                        | 180                        | 645  | 105                                     |
| 6.3           | 22                | B2/3528-21              | TEPSLB20J226M8R      | 13.8                | 8                        | 150                        | 753  | 105                                     |
| 6.3           | 22                | B3/3528-12              | TEPSLB30J226M8R      | 13.8                | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 33                | A/3216-18               | TEPSLA0J336M8R       | 20.7                | 6                        | 180                        | 645  | 105                                     |
| 6.3           | 33                | B2/3528-21              | TEPSLB20J336M8R      | 20.7                | 8                        | 150                        | 753  | 105                                     |
| 6.3           | 33                | B3/3528-12              | TEPSLB30J336M8R      | 20.7                | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 47                | A/3216-18               | TEPSLA0J476M8R       | 29.6                | 6                        | 150                        | 645  | 105                                     |
| 6.3           | 47                | A/3216-18               | TEPSLA0J476M(70)8R   | 29.6                | 6                        | 70                         | 1035   | 105                                     |
| 6.3           | 47                | B2/3528-21              | TEPSLB20J476M8R      | 29.6                | 8                        | 150                        | 753  | 105                                     |
| 6.3           | 47                | B2/3528-21              | TEPSLB20J476M(70)8R  | 29.6                | 8                        | 70                         | 1102   | 105                                     |
| 6.3           | 47                | B3/3528-12              | TEPSLB30J476M8R      | 29.6                | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 47                | B3/3528-12              | TEPSLB30J476M(55)8R  | 29.6                | 8                        | 55                         | 1168   | 105                                     |
| 6.3           | 68                | A/3216-18               | TEPSLA0J686M(70)8R   | 43                  | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 68                | B2/3528-21              | TEPSLB20J686M8R      | 42.8                | 8                        | 70                         | 1102   | 105                                     |
| 6.3           | 68                | B2/3528-21              | TEPSLB20J686M(55)8R  | 42.8                | 8                        | 55                         | 1243   | 105                                     |
| 6.3           | 68                | B3/3528-12              | TEPSLB30J686M8R      | 42.8                | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 100               | A/3216-18               | TEPSLA0J107M8R       | 63                  | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 100               | A/3216-18               | TEPSLA0J107M(45)8R   | 63                  | 8                        | 45                         | 1291   | 105                                     |
| 6.3           | 100               | A/3216-18               | TEPSLA0J107M(35)8R   | 63                  | 8                        | 35                         | 1464   | 105                                     |
| 6.3           | 100               | A/3216-18               | TEPSLA0J107M(25)8R   | 63                  | 8                        | 25                         | 1735   | 105                                     |
| 6.3           | 100               | B2/3528-21              | TEPSLB20J107M8R      | 63                  | 8                        | 70                         | 1102   | 105                                     |
| 6.3           | 100               | B2/3528-21              | TEPSLB20J107M(45)8R  | 63                  | 8                        | 45                         | 1374   | 105                                     |
| 6.3           | 100               | B2/3528-21              | TEPSLB20J107M(35)8R  | 63                  | 8                        | 35                         | 1558   | 105                                     |
| 6.3           | 100               | B2/3528-21              | TEPSLB20J107M(25)8R  | 63                  | 8                        | 25                         | 1844   | 105                                     |
| 6.3           | 100               | B3/3528-12              | TEPSLB30J107M8R      | 63                  | 8                        | 70                         | 1035   | 105                                     |
| 6.3           | 100               | B3/3528-12              | TEPSLB30J107M(45)8R  | 63                  | 8                        | 45                         | 1291   | 105                                     |
| 6.3           | 150               | B15/3528-15             | TEPSLB150J157M(70)8R | 94.5                | 10                       | 70                         | 1069   | 105                                     |
| 6.3           | 150               | B15/3528-15             | TEPSLB150J157M(35)8R | 94.5                | 10                       | 35                         | 1512   | 105                                     |
| 6.3           | 150               | B2/3528-21              | TEPSLB20J157M(45)8R  | 94.5                | 8                        | 45                         | 1374   | 105                                     |
| 6.3           | 150               | B2/3528-21              | TEPSLB20J157M(35)8R  | 94.5                | 8                        | 35                         | 1558   | 105                                     |
| 6.3           | 150               | B2/3528-21              | TEPSLB20J157M(25)8R  | 94.5                | 8                        | 25                         | 1844   | 105                                     |
| 6.3           | 150               | B3/3528-12              | TEPSLB30J157M(35)8R  | 94.5                | 8                        | 35                         | 1464   | 105                                     |
| 6.3           | 220               | B15/3528-15             | TEPSLB150J227M(35)8R | 138.6               | 10                       | 35                         | 1512   | 105                                     |
| V             | μF                | KEMET/EIA               |                      | μA at +25°C Maximum | % at 25°C 120 Hz Maximum | mΩ at 25°C 100 kHz Maximum | (mA <sub>rms</sub> , +25°C, 100 kHz) Maximum | °C                                      |
| Rated Voltage | Rated Capacitance | Case Code/<br>Case Size | KEMET Part Number    | Leakage Current     | tan δ                    | ESR                        | Permissible Ripple Current                   | Rated and Maximum Operating Temperature |

\* ESR and Ripple measurement condition is 300 to 500kHz

∅ Ripple current condition is at 105°C, 100kHz

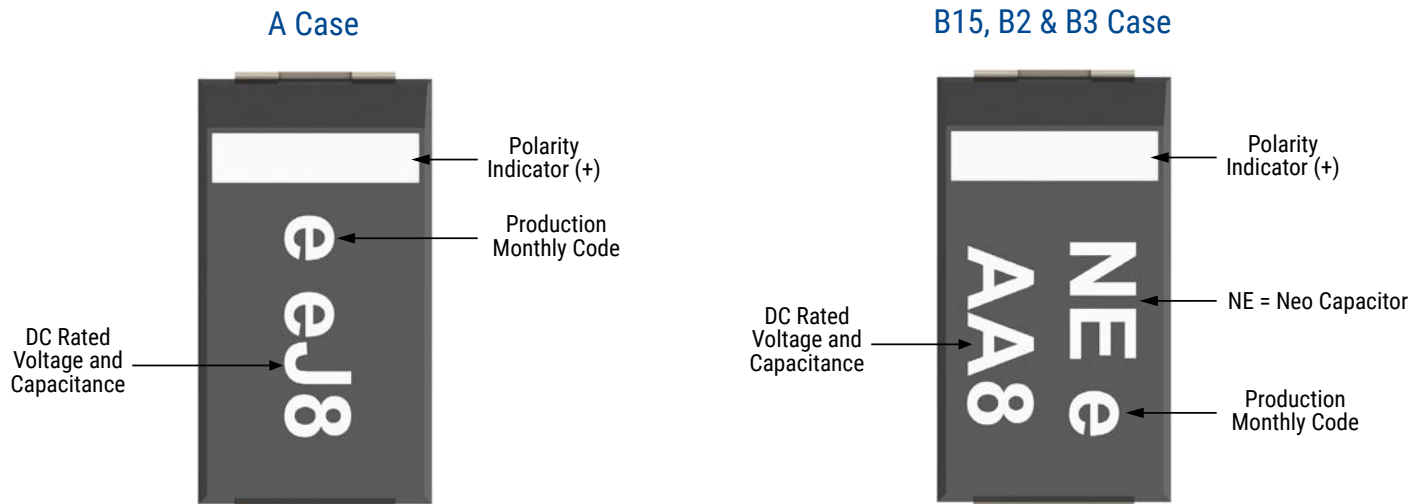
**Table 1 – Ratings & Part Number Reference cont.**

| Rated Voltage | Rated Capacitance | Case Code/<br>Case Size | KEMET Part Number   | Leakage Current     | tan δ                    | ESR                        | Permissible Ripple Current                   | Rated and Maximum Operating Temperature |
|---------------|-------------------|-------------------------|---------------------|---------------------|--------------------------|----------------------------|--|---|
| V             | µF                | KEMET/EIA               |                     | µA at +25°C Maximum | % at 25°C 120 Hz Maximum | mΩ at 25°C 100 kHz Maximum | (mA <sub>rms</sub> , +25°C, 100 kHz) Maximum | °C                                      |
| 6.3           | 220               | B2/3528-21              | TEPSLB20J227M(45)8R | 138.6               | 8                        | 45                         | 1374   | 105                                     |
| 6.3           | 220               | B2/3528-21              | TEPSLB20J227M(35)8R | 138.6               | 8                        | 35                         | 1558   | 105                                     |
| 6.3           | 220               | B2/3528-21              | TEPSLB20J227M(25)8R | 138.6               | 8                        | 25                         | 1844   | 105                                     |
| 6.3           | 220               | B2/3528-21              | TEPSLB20J227M(18)8R | 138.6               | 8                        | 18                         | 2173   | 105                                     |
| 6.3           | 220               | B2/3528-21              | TEPSLB20J227M(15)8R | 138.6               | 8                        | 15                         | 2380   | 105                                     |
| 6.3           | 330               | B2/3528-21              | TEPSLB20J337M(45)8R | 415.8               | 10                       | 45                         | 1374   | 105                                     |
| 10            | 4.7               | A/3216-18               | TEPSLA1A475M8R      | 4.7                 | 6                        | 300                        | 500  | 105                                     |
| 10            | 6.8               | A/3216-18               | TEPSLA1A685M8R      | 6.8                 | 6                        | 300                        | 500  | 105                                     |
| 10            | 10                | A/3216-18               | TEPSLA1A106M8R      | 10                  | 6                        | 200                        | 612  | 105                                     |
| 10            | 10                | B2/3528-21              | TEPSLB21A106M8R     | 10                  | 8                        | 200                        | 652  | 105                                     |
| 10            | 15                | A/3216-18               | TEPSLA1A156M8R      | 15                  | 6                        | 180                        | 645  | 105                                     |
| 10            | 15                | B2/3528-21              | TEPSLB21A156M8R     | 15                  | 8                        | 150                        | 753  | 105                                     |
| 10            | 22                | A/3216-18               | TEPSLA1A226M8R      | 22                  | 6                        | 180                        | 645  | 105                                     |
| 10            | 22                | B2/3528-21              | TEPSLB21A226M8R     | 22                  | 8                        | 150                        | 753  | 105                                     |
| 10            | 22                | B3/3528-12              | TEPSLB31A226M8R     | 22                  | 8                        | 70                         | 1035   | 105                                     |
| 10            | 33                | A/3216-18               | TEPSLA1A336M8R      | 33                  | 8                        | 200                        | 612  | 105                                     |
| 10            | 33                | B2/3528-21              | TEPSLB21A336M8R     | 33                  | 8                        | 150                        | 753  | 105                                     |
| 10            | 33                | B3/3528-12              | TEPSLB31A336M8R     | 33                  | 8                        | 70                         | 1035   | 105                                     |
| 10            | 47                | A/3216-18               | TEPSLA1A476M(180)8R | 47                  | 8                        | 180                        | 645  | 105                                     |
| 10            | 47                | A/3216-18               | TEPSLA1A476M(45)8R  | 47                  | 8                        | 45                         | 1291   | 105                                     |
| 10            | 47                | B2/3528-21              | TEPSLB21A476M8R     | 47                  | 8                        | 70                         | 1102   | 105                                     |
| 10            | 47                | B2/3528-21              | TEPSLB21A476M(35)8R | 47                  | 8                        | 35                         | 1558   | 105                                     |
| 10            | 47                | B3/3528-12              | TEPSLB31A476M8R     | 47                  | 8                        | 70                         | 1035   | 105                                     |
| 10            | 47                | B3/3528-12              | TEPSLB31A476M(45)8R | 47                  | 8                        | 45                         | 1291   | 105                                     |
| 10            | 100               | B2/3528-21              | TEPSLB21A107M(45)8R | 100                 | 10                       | 45                         | 1374   | 105                                     |
| 16            | 3.3               | A/3216-18               | TEPSLA1C335M8R      | 5.2                 | 6                        | 800                        | 306 ∅  | 105                                     |
| 16            | 4.7               | B2/3528-21              | TEPSLB21C475M8R     | 7.5                 | 8                        | 200                        | 652 ∅  | 105                                     |
| 16            | 6.8               | B2/3528-21              | TEPSLB21C685M8R     | 10.8                | 8                        | 200                        | 652 ∅  | 105                                     |
| 16            | 10                | B2/3528-21              | TEPSLB21C106M8R     | 16                  | 8                        | 100                        | 922 ∅  | 105                                     |
| 16            | 15                | B2/3528-21              | TEPSLB21C156M(90)8R | 16                  | 10                       | 90                         | 972 ∅  | 105                                     |
| 16            | 33                | B2/3528-21              | TEPSLB21C336M8R     | 52.8                | 8                        | 70                         | 1102 ∅                                       | 105                                     |
| 16            | 33                | B3/3528-12              | TEPSLB31C336M8R     | 105.6               | 8                        | 70                         | 1035 ∅                                       | 105                                     |
| 16            | 33                | B3/3528-12              | TEPSLB31C336M(55)8R | 105.6               | 8                        | 55                         | 1168 ∅                                       | 105                                     |
| 16            | 33                | B3/3528-12              | TEPSLB31C336M(45)8R | 105.6               | 8                        | 45                         | 1291 ∅                                       | 105                                     |
| 20            | 33                | B2/3528-21              | TEPSLB21D336M8R     | 132                 | 10                       | 90                         | 972 ∅  | 105                                     |
| 25            | 6.8               | B2/3528-21              | TEPSLB21E685M8R     | 17                  | 8                        | 100                        | 922 ∅  | 105                                     |
| 25            | 6.8               | B3/3528-12              | TEPSLB31E685M8R     | 34                  | 8                        | 100                        | 866 ∅  | 105                                     |
| 25            | 10                | B15/3528-15             | TEPSLB151E106M8R    | 50                  | 10                       | 100                        | 894 ∅  | 105                                     |
| 25            | 15                | B2/3528-21              | TEPSLB21E156M8R     | 75                  | 10                       | 100                        | 922 ∅  | 105                                     |
| 25            | 22                | B2/3528-21              | TEPSLB21E226M8R     | 55                  | 10                       | 90                         | 972 ∅  | 105                                     |
| V             | µF                | KEMET/EIA               |                     | µA at +25°C Maximum | % at 25°C 120 Hz Maximum | mΩ at 25°C 100 kHz Maximum | (mA <sub>rms</sub> , +25°C, 100 kHz) Maximum | °C                                      |
| Rated Voltage | Rated Capacitance | Case Code/<br>Case Size | KEMET Part Number   | Leakage Current     | tan δ                    | ESR                        | Permissible Ripple Current                   | Rated and Maximum Operating Temperature |

\* ESR and Ripple measurement condition is 300 to 500kHz

∅ Ripple current condition is at 105°C, 100kHz

## Capacitor Marking



### DC Rated Voltage and Capacitance Code

| Capacitance<br>( $\mu$ F) |    | Voltage  |        |          |         |         |         |         |
|---------------------------|----|----------|--------|----------|---------|---------|---------|---------|
|                           |    | 2.5<br>e | 4<br>g | 6.3<br>j | 10<br>A | 16<br>C | 20<br>D | 25<br>E |
| 3.3                       | N6 |          |        |          |         | CN6     |         |         |
| 4.7                       | S6 |          |        |          | AS6     | CS6     |         |         |
| 6.8                       | W6 |          |        | jW6      | AW6     | CW6     |         | EW6     |
| 10                        | A7 |          |        | jA7      | AA7     | CA7     |         | EA7     |
| 15                        | E7 |          |        | jE7      | AE7     | CE7     |         | EE7     |
| 22                        | J7 |          |        | jJ7      | AJ7     |         |         | EJ7     |
| 33                        | N7 |          |        | jN7      | AN7     | CN7     | DN7     |         |
| 47                        | S7 | eS7      | gS7    | jS7      | AS7     |         |         |         |
| 68                        | W7 |          | gW7    | jW7      |         |         |         |         |
| 100                       | A8 | eA8      | gA8    | jA8      | AA8     |         |         |         |
| 150                       | E8 |          | gE8    | jE8      |         |         |         |         |
| 220                       | J8 | eJ8      | gJ8    | jJ8      |         |         |         |         |
| 330                       | N8 | eN8      |        | jN8      |         |         |         |         |
| 470                       | S8 | eS8      |        |          |         |         |         |         |

### Production Monthly Code

| Year | Month |     |     |     |     |     |     |     |     |     |     |     |
|------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|      | Jan   | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 2021 | A     | B   | C   | D   | E   | F   | G   | H   | J   | K   | L   | M   |
| 2022 | N     | P   | Q   | R   | S   | T   | U   | V   | W   | X   | Y   | Z   |
| 2023 | a     | b   | c   | d   | e   | f   | g   | h   | j   | k   | l   | m   |
| 2024 | n     | p   | q   | r   | s   | t   | u   | v   | w   | x   | y   | z   |

Production monthly code will resume beginning in 2025.

## KEMET Electronics Corporation Sales Offices

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