



**CAPACITOR  
COMPETENCE**  
*since 1958*

ALUMINUM ELECTROLYTIC CAPACITORS

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ALUMINUM ELECTROLYTIC CAPACITORS · SNAP-IN TYPE

# CD 293 BZ SERIES

**JIANGHAI EUROPE**  
Electronic Components GmbH

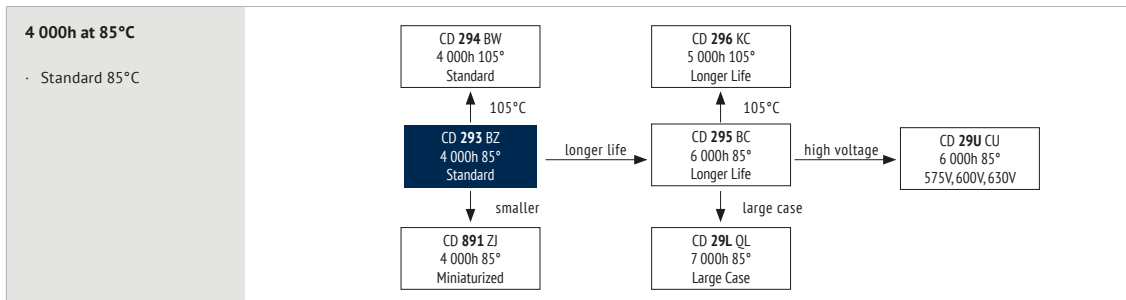


ENGINEERED SOLUTIONS

v2019.1

# SERIES CD 293 BZ

## ALUMINUM ELECTROLYTIC CAPACITORS · SNAP-IN TYPE



### ITEM CHARACTERISTICS

|                                     |             |           |
|-------------------------------------|-------------|-----------|
| Operating Temperature Range (°C)    | -40 ~ +85   | -25 ~ +85 |
| Voltage Range (V)                   | 10 ~ 400    | 420 ~ 500 |
| Capacitance Range (µF)              | 68 ~ 82 000 |           |
| Capacitance Tolerance (20°C, 120Hz) | ± 20%       |           |

**!** The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Leakage Current: After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

| Stability at Low Temperature (Impedance Ratio at 120Hz) | Rated Voltage (V)       | 10 | 16-35 | 50-100 | 160-200 | 250-400 | 420-500 |
|---|-------------------------|----|-------|--------|---------|---------|---------|
|   | $Z_{-25°C} / Z_{+20°C}$ |    | 5     | 4      | 3       |         | 4       |
| $Z_{-40°C} / Z_{+20°C}$                                 |                         | 18 | 15    | 10     | 6       | 8       | -       |

Fast Charge-Discharge: **!** Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptations, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

### ITEM USEFUL LIFE LOAD LIFE ENDURANCE TEST SHELF LIFE

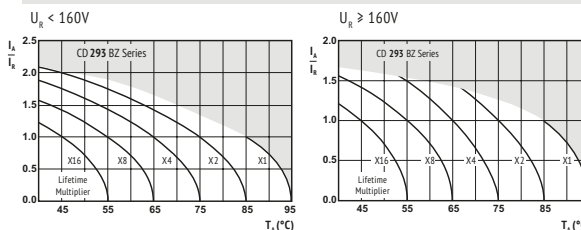
|   |                                       |                                   |                                       |   |  |
|---|---------------------------------------|-----------------------------------|---------------------------------------|---|--|
| Lifetime  | 4 000h                                | > 65 000h                         | 2 000h                                | 3 000h                                  | 1 000h   |
| Leakage Current   | Not more than specified value         |                                   | Not more than specified value         | Not more than specified value           | Not more than specified value  |
| Capacitance Change  | Within ± 30% of initial value         |                                   | Within ± 15% of initial value         | Within ± 20% of initial value           | Within ± 15% of initial value  |
| Dissipation Factor  | Not more than 300% of specified value |                                   | Not more than 150% of specified value | Not more than 200% of specified value   | Not more than 150% of specified value  |
| Condition:<br>Applied Voltage<br>Applied Current<br>Applied Temperature | $U_R$<br>$I_R$<br>85°C                | $U_R$<br>$1,2 \times I_R$<br>40°C | $U_R$<br>$I_R$<br>85°C                | $U_R$<br>$I_R = 0$<br>85°C<br>IEC 60384 | $U_R = 0$<br>$I_R = 0$<br>85°C<br>After test:<br>$U_R$ to be applied for 30 min > 24h before measurement |

### MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

| Rated Voltage (V) \ Frequency | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz | 100kHz |
|-------------------------------|------|-------|-------|------|-------|--------|
| ≤ 50                          | 0,88 | 1,00  | 1,07  | 1,15 | 1,15  | 1,15   |
| 63 - 100                      | 0,80 | 1,00  | 1,17  | 1,32 | 1,45  | 1,50   |
| ≥ 160                         | 0,80 | 1,00  | 1,16  | 1,30 | 1,41  | 1,43   |

Multipliers for typical operating conditions.

### MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



$I_A$  = actual ripple current at 120Hz,  
 $I_R$  = rated ripple current at 120Hz, 85°C  
Multiplier of Useful Life as a function of ambient temperature & ripple current load

$I_A$  = actual ripple current at 120Hz,  
 $I_R$  = rated ripple current at 120Hz, 85°C  
Multiplier of Useful Life as a function of ambient temperature & ripple current load

### ENVIRONMENTAL

The products are RoHS, WEEE and REACH compliant. The detailed version please see separate "Environmental Certificates" document or [www.jianghai-europe.com](http://www.jianghai-europe.com)

### ! SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

## JIANGHAI EUROPE

Electronic Components GmbH



ENGINEERED SOLUTIONS

Customer specific adaptations needed? Please contact Jianghai Europe GmbH:  
TELEFON: +49 (0) 2151 652088-72 | E-MAIL: [INFO@JIANGHAI-EUROPE.COM](mailto:INFO@JIANGHAI-EUROPE.COM)

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub>                            |   | tan $\delta$ | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current | Size<br>a $\times$ L<br>(mm)          | ORDER CODE                            |
|---|-------------------------------------|---|---|--------------|--------------------------------------|--|---------------------------------------|---------------------------------------|
|   |                                     | Equivalent Series Resistance<br>20°C<br>120Hz | Equivalent Series Resistance<br>20°C<br>120Hz |              |                                      |  |                                       |                                       |
| 10<br>(13)<br>1A                            | 10000                               | 54  | 43  | 0,40         | 1,0                                  | 2,5                                      | 22 x 25                               | ECS1ABZ103M $\Delta\Delta\Delta$ 2225 |
|   | 12000                               | 45  | 36  | 0,40         | 1,2                                  | 2,9                                      | 22 x 25                               | ECS1ABZ123M $\Delta\Delta\Delta$ 2225 |
|   | 15000                               | 36  | 29  | 0,40         | 1,5                                  | 3,2                                      | 22 x 30                               | ECS1ABZ153M $\Delta\Delta\Delta$ 2230 |
|   |                                     | 36  | 29  | 0,40         | 1,5                                  | 3,1                                      | 25 x 25                               | ECS1ABZ153M $\Delta\Delta\Delta$ 2525 |
|   | 18000                               | 30  | 24  | 0,40         | 1,5                                  | 3,6                                      | 22 x 35                               | ECS1ABZ183M $\Delta\Delta\Delta$ 2235 |
|   |                                     | 30  | 24  | 0,40         | 1,5                                  | 3,6                                      | 25 x 30                               | ECS1ABZ183M $\Delta\Delta\Delta$ 2530 |
|   | 22000                               | 25  | 20  | 0,40         | 1,5                                  | 4,0                                      | 22 x 40                               | ECS1ABZ223M $\Delta\Delta\Delta$ 2240 |
|   |                                     | 25  | 20  | 0,40         | 1,5                                  | 4,1                                      | 25 x 35                               | ECS1ABZ223M $\Delta\Delta\Delta$ 2535 |
|   | 33000                               | 25  | 20  | 0,40         | 1,5                                  | 4,1                                      | 30 x 25                               | ECS1ABZ223M $\Delta\Delta\Delta$ 3025 |
|   |                                     | 17  | 13  | 0,40         | 1,5                                  | 4,6                                      | 25 x 40                               | ECS1ABZ333M $\Delta\Delta\Delta$ 2540 |
|   | 39000                               | 17  | 13  | 0,40         | 1,5                                  | 4,8                                      | 30 x 30                               | ECS1ABZ333M $\Delta\Delta\Delta$ 3030 |
|   |                                     | 17  | 13  | 0,40         | 1,5                                  | 4,8                                      | 35 x 25                               | ECS1ABZ333M $\Delta\Delta\Delta$ 3525 |
|   |                                     | 14  | 10,9  | 0,40         | 1,5                                  | 5,2                                      | 25 x 45                               | ECS1ABZ393M $\Delta\Delta\Delta$ 2545 |
|   | 47000                               | 14  | 10,9  | 0,40         | 1,5                                  | 5,3                                      | 30 x 35                               | ECS1ABZ393M $\Delta\Delta\Delta$ 3035 |
|   |                                     | 12  | 9,1   | 0,40         | 1,5                                  | 5,8                                      | 25 x 50                               | ECS1ABZ473M $\Delta\Delta\Delta$ 2550 |
|   |                                     | 12  | 9,1   | 0,40         | 1,5                                  | 6,0                                      | 30 x 40                               | ECS1ABZ473M $\Delta\Delta\Delta$ 3040 |
| 56000                                       | 12                                  | 9,1   | 0,40  | 1,5          | 6,0                                  | 35 x 30                                  | ECS1ABZ473M $\Delta\Delta\Delta$ 3530 |                                       |
|   | 9,5                                 | 7,6   | 0,40  | 1,5          | 6,7                                  | 30 x 45                                  | ECS1ABZ563M $\Delta\Delta\Delta$ 3045 |                                       |
| 68000                                       | 9,5                                 | 7,6   | 0,40  | 1,5          | 6,8                                  | 35 x 35                                  | ECS1ABZ563M $\Delta\Delta\Delta$ 3535 |                                       |
|   | 7,9                                 | 6,3   | 0,40  | 1,5          | 7,5                                  | 30 x 50                                  | ECS1ABZ683M $\Delta\Delta\Delta$ 3050 |                                       |
| 82000                                       | 7,9                                 | 6,3   | 0,40  | 1,5          | 7,7                                  | 35 x 40                                  | ECS1ABZ683M $\Delta\Delta\Delta$ 3540 |                                       |
| 82000                                       | 6,5                                 | 5,2   | 0,40  | 1,5          | 8,7                                  | 35 x 45                                  | ECS1ABZ823M $\Delta\Delta\Delta$ 3545 |                                       |

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub>                            |   | tan $\delta$ | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current | Size<br>a $\times$ L<br>(mm)          | ORDER CODE                            |
|---|-------------------------------------|---|---|--------------|--------------------------------------|--|---------------------------------------|---------------------------------------|
|   |                                     | Equivalent Series Resistance<br>20°C<br>120Hz | Equivalent Series Resistance<br>20°C<br>120Hz |              |                                      |  |                                       |                                       |
| 35<br>(44)<br>1V                            | 3300                                | 101   | 81  | 0,25         | 1,2                                  | 1,8                                      | 22 x 25                               | ECS1VBZ332M $\Delta\Delta\Delta$ 2225 |
|   | 3900                                | 86  | 69  | 0,25         | 1,4                                  | 2,1                                      | 22 x 30                               | ECS1VBZ392M $\Delta\Delta\Delta$ 2230 |
|   | 4700                                | 71  | 57  | 0,25         | 1,5                                  | 2,2                                      | 25 x 25                               | ECS1VBZ472M $\Delta\Delta\Delta$ 2525 |
|   |                                     | 72  | 57  | 0,30         | 1,5                                  | 2,3                                      | 22 x 35                               | ECS1VBZ562M $\Delta\Delta\Delta$ 2235 |
|   | 5600                                | 72  | 57  | 0,30         | 1,5                                  | 2,3                                      | 25 x 30                               | ECS1VBZ562M $\Delta\Delta\Delta$ 2530 |
|   |                                     | 59  | 47  | 0,30         | 1,5                                  | 2,9                                      | 22 x 40                               | ECS1VBZ682M $\Delta\Delta\Delta$ 2240 |
|   |                                     | 59  | 47  | 0,30         | 1,5                                  | 2,6                                      | 25 x 35                               | ECS1VBZ682M $\Delta\Delta\Delta$ 2535 |
|   | 6800                                | 59  | 47  | 0,30         | 1,5                                  | 2,7                                      | 30 x 25                               | ECS1VBZ682M $\Delta\Delta\Delta$ 3025 |
|   |                                     | 57  | 46  | 0,35         | 1,5                                  | 2,8                                      | 22 x 50                               | ECS1VBZ822M $\Delta\Delta\Delta$ 2250 |
|   |                                     | 57  | 46  | 0,35         | 1,5                                  | 2,8                                      | 25 x 40                               | ECS1VBZ822M $\Delta\Delta\Delta$ 2540 |
|   | 8200                                | 57  | 46  | 0,35         | 1,5                                  | 2,8                                      | 30 x 30                               | ECS1VBZ822M $\Delta\Delta\Delta$ 3030 |
|   |                                     | 57  | 46  | 0,35         | 1,5                                  | 2,9                                      | 35 x 25                               | ECS1VBZ822M $\Delta\Delta\Delta$ 3525 |
|   |                                     | 47  | 38  | 0,35         | 1,5                                  | 3,1                                      | 25 x 45                               | ECS1VBZ103M $\Delta\Delta\Delta$ 2545 |
|   | 10000                               | 47  | 38  | 0,35         | 1,5                                  | 3,2                                      | 30 x 35                               | ECS1VBZ103M $\Delta\Delta\Delta$ 3035 |
|   |                                     | 39  | 31  | 0,35         | 1,5                                  | 3,5                                      | 25 x 50                               | ECS1VBZ123M $\Delta\Delta\Delta$ 2550 |
|   | 12000                               | 39  | 31  | 0,35         | 1,5                                  | 3,5                                      | 30 x 40                               | ECS1VBZ123M $\Delta\Delta\Delta$ 3040 |
| 39  |                                     | 31  | 0,35  | 1,5          | 3,6                                  | 35 x 30                                  | ECS1VBZ123M $\Delta\Delta\Delta$ 3530 |                                       |
| 15000                                       | 31                                  | 25  | 0,35  | 1,5          | 4,1                                  | 30 x 45                                  | ECS1VBZ153M $\Delta\Delta\Delta$ 3045 |                                       |
|   | 31                                  | 25  | 0,35  | 1,5          | 4,1                                  | 35 x 35                                  | ECS1VBZ153M $\Delta\Delta\Delta$ 3535 |                                       |
| 18000                                       | 26                                  | 21  | 0,35  | 1,5          | 4,6                                  | 30 x 50                                  | ECS1VBZ183M $\Delta\Delta\Delta$ 3050 |                                       |
|   | 26                                  | 21  | 0,35  | 1,5          | 4,7                                  | 35 x 40                                  | ECS1VBZ183M $\Delta\Delta\Delta$ 3540 |                                       |
| 22000                                       | 22                                  | 17  | 0,35  | 1,5          | 5,3                                  | 35 x 45                                  | ECS1VBZ223M $\Delta\Delta\Delta$ 3545 |                                       |
| 27000                                       | 18                                  | 14  | 0,35  | 1,5          | 7,0                                  | 35 x 50                                  | ECS1VBZ273M $\Delta\Delta\Delta$ 3550 |                                       |

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub>                            |   | tan $\delta$ | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current | Size<br>a $\times$ L<br>(mm)          | ORDER CODE                            |
|---|-------------------------------------|---|---|--------------|--------------------------------------|--|---------------------------------------|---------------------------------------|
|   |                                     | Equivalent Series Resistance<br>20°C<br>120Hz | Equivalent Series Resistance<br>20°C<br>120Hz |              |                                      |  |                                       |                                       |
| 16<br>(20)<br>1C                            | 8200                                | 65  | 52  | 0,40         | 1,3                                  | 2,2                                      | 22 x 25                               | ECS1CBZ822M $\Delta\Delta\Delta$ 2225 |
|   | 10000                               | 54  | 43  | 0,40         | 1,5                                  | 2,6                                      | 22 x 30                               | ECS1CBZ103M $\Delta\Delta\Delta$ 2230 |
|   |                                     | 54  | 43  | 0,40         | 1,5                                  | 2,6                                      | 25 x 25                               | ECS1CBZ103M $\Delta\Delta\Delta$ 2525 |
|   | 12000                               | 45  | 36  | 0,40         | 1,5                                  | 2,9                                      | 22 x 35                               | ECS1CBZ123M $\Delta\Delta\Delta$ 2235 |
|   |                                     | 36  | 29  | 0,40         | 1,5                                  | 3,3                                      | 22 x 40                               | ECS1CBZ153M $\Delta\Delta\Delta$ 2240 |
|   | 15000                               | 36  | 29  | 0,40         | 1,5                                  | 3,3                                      | 25 x 30                               | ECS1CBZ153M $\Delta\Delta\Delta$ 2530 |
|   |                                     | 36  | 29  | 0,40         | 1,5                                  | 3,4                                      | 30 x 25                               | ECS1CBZ153M $\Delta\Delta\Delta$ 3025 |
|   | 18000                               | 30  | 24  | 0,40         | 1,5                                  | 3,8                                      | 22 x 45                               | ECS1CBZ183M $\Delta\Delta\Delta$ 2245 |
|   |                                     | 30  | 24  | 0,40         | 1,5                                  | 3,7                                      | 25 x 35                               | ECS1CBZ183M $\Delta\Delta\Delta$ 2535 |
|   | 22000                               | 25  | 20  | 0,40         | 1,5                                  | 4,2                                      | 22 x 50                               | ECS1CBZ223M $\Delta\Delta\Delta$ 2250 |
|   |                                     | 25  | 20  | 0,40         | 1,5                                  | 4,2                                      | 25 x 40                               | ECS1CBZ223M $\Delta\Delta\Delta$ 2540 |
|   |                                     | 25  | 20  | 0,40         | 1,5                                  | 4,2                                      | 30 x 30                               | ECS1CBZ223M $\Delta\Delta\Delta$ 3030 |
|   | 27000                               | 25  | 20  | 0,40         | 1,5                                  | 4,2                                      | 35 x 25                               | ECS1CBZ223M $\Delta\Delta\Delta$ 3525 |
|   |                                     | 20  | 16  | 0,40         | 1,5                                  | 5,0                                      | 25 x 45                               | ECS1CBZ273M $\Delta\Delta\Delta$ 2545 |
|   |                                     | 20  | 16  | 0,40         | 1,5                                  | 5,0                                      | 30 x 35                               | ECS1CBZ273M $\Delta\Delta\Delta$ 3035 |
|   | 33000                               | 17  | 13  | 0,40         | 1,5                                  | 5,6                                      | 30 x 40                               | ECS1CBZ333M $\Delta\Delta\Delta$ 3040 |
| 17  |                                     | 13  | 0,40  | 1,5          | 5,6                                  | 35 x 30                                  | ECS1CBZ333M $\Delta\Delta\Delta$ 3530 |                                       |
| 14  |                                     | 11  | 0,40  | 1,5          | 6,2                                  | 30 x 45                                  | ECS1CBZ393M $\Delta\Delta\Delta$ 3045 |                                       |
| 39000                                       | 14                                  | 11  | 0,40  | 1,5          | 6,3                                  | 35 x 35                                  | ECS1CBZ393M $\Delta\Delta\Delta$ 3535 |                                       |
|   | 12                                  | 9,1   | 0,40  | 1,5          | 7,0                                  | 30 x 50                                  | ECS1CBZ473M $\Delta\Delta\Delta$ 3050 |                                       |
| 47000                                       | 12                                  | 9,1   | 0,40  | 1,5          | 7,2                                  | 35 x 40                                  | ECS1CBZ473M $\Delta\Delta\Delta$ 3540 |                                       |
|   | 56000                               | 9,5   | 7,6   | 0,40         | 1,5                                  | 8,0                                      | 35 x 45                               | ECS1CBZ563M $\Delta\Delta\Delta$ 3545 |

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub>                            |   | tan $\delta$ | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current | Size<br>a $\times$ L<br>(mm)          | ORDER CODE                            |
|---|-------------------------------------|---|---|--------------|--------------------------------------|--|---------------------------------------|---------------------------------------|
|   |                                     | Equivalent Series Resistance<br>20°C<br>120Hz | Equivalent Series Resistance<br>20°C<br>120Hz |              |                                      |  |                                       |                                       |
| 50<br>(63)<br>1H                            | 2200                                | 120   | 97  | 0,20         | 1,1                                  | 1,7                                      | 22 x 25                               | ECS1HBZ222M $\Delta\Delta\Delta$ 2225 |
|   | 2700                                | 99  | 79  | 0,20         | 1,4                                  | 1,9                                      | 22 x 30                               | ECS1HBZ272M $\Delta\Delta\Delta$ 2230 |
|   |                                     | 99  | 79  | 0,20         | 1,4                                  | 1,9                                      | 25 x 25                               | ECS1HBZ272M $\Delta\Delta\Delta$ 2525 |
|   | 3300                                | 100   | 81  | 0,25         | 1,5                                  | 2,0                                      | 22 x 35                               | ECS1HBZ332M $\Delta\Delta\Delta$ 2235 |
|   |                                     | 86  | 69  | 0,25         | 1,5                                  | 2,1                                      | 22 x 35                               | ECS1HBZ392M $\Delta\Delta\Delta$ 2235 |
|   | 3900                                | 86  | 69  | 0,25         | 1,5                                  | 2,1                                      | 25 x 30                               | ECS1HBZ392M $\Delta\Delta\Delta$ 2530 |
|   |                                     | 86  | 69  | 0,25         | 1,5                                  | 2,4                                      | 30 x 25                               | ECS1HBZ392M $\Delta\Delta\Delta$ 3025 |
|   |                                     | 71  | 57  | 0,25         | 1,5                                  | 2,4                                      | 22 x 40                               | ECS1HBZ472M $\Delta\Delta\Delta$ 2240 |
|   | 4700                                | 71  | 57  | 0,25         | 1,5                                  | 2,4                                      | 25 x 35                               | ECS1HBZ472M $\Delta\Delta\Delta$ 2535 |
|   |                                     | 71  | 57  | 0,25         | 1,5                                  | 2,4                                      | 30 x 30                               | ECS1HBZ472M $\Delta\Delta\Delta$ 3030 |
|   |                                     | 72  | 57  | 0,30         | 1,5                                  | 2,5                                      | 22 x 50                               | ECS1HBZ562M $\Delta\Delta\Delta$ 2250 |
|   | 5600                                | 72  | 57  | 0,30         | 1,5                                  | 2,5                                      | 25 x 40                               | ECS1HBZ562M $\Delta\Delta\Delta$ 2540 |
|   |                                     | 72  | 57  | 0,30         | 1,5                                  | 2,5                                      | 30 x 30                               | ECS1HBZ562M $\Delta\Delta\Delta$ 3030 |
|   |                                     | 72  | 57  | 0,30         | 1,5                                  | 2,6                                      | 35 x 25                               | ECS1HBZ562M $\Delta\Delta\Delta$ 3525 |
|   | 6800                                | 59  | 47  | 0,30         | 1,5                                  | 2,8                                      | 25 x 45                               | ECS1HBZ682M $\Delta\Delta\Delta$ 2545 |
|   |                                     | 59  | 47  | 0,30         | 1,5                                  | 2,8                                      | 30 x 35                               | ECS1HBZ682M $\Delta\Delta\Delta$ 3035 |
| 57  |                                     | 46  | 0,35  | 1,5          | 3,2                                  | 25 x 50                                  | ECS1HBZ822M $\Delta\Delta\Delta$ 2550 |                                       |
| 8200  | 57                                  | 46  | 0,35  | 1,5          | 3,0                                  | 30 x 40                                  | ECS1HBZ822M $\Delta\Delta\Delta$ 3040 |                                       |
|   | 57                                  | 46  | 0,35  | 1,5          | 3,0                                  | 35 x 30                                  | ECS1HBZ822M $\Delta\Delta\Delta$ 3530 |                                       |
| 10000                                       | 47                                  | 38  | 0,35  | 1,5          | 3,4                                  | 30 x 45                                  | ECS1HBZ103M $\Delta\Delta\Delta$ 3045 |                                       |
|   | 47                                  | 38  | 0,35  | 1,5          | 3,4                                  | 35 x 35                                  | ECS1HBZ103M $\Delta\Delta\Delta$ 3535 |                                       |
| 12000                                       | 39                                  | 31  | 0,35  | 1,5          | 3,8                                  | 30 x 50                                  | ECS1HBZ123M $\Delta\Delta\Delta$ 3050 |                                       |
|   | 39                                  | 31  | 0,35  | 1,5          | 3,8                                  | 35 x 40                                  | ECS1HBZ123M $\Delta\Delta\Delta$ 3540 |                                       |
| 15000                                       | 31                                  | 25  | 0,35  | 1,5          | 4,5                                  | 35 x 50                                  | ECS1HBZ153M $\Delta\Delta\Delta$ 3550 |                                       |

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub>                            |   | tan $\delta$ | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current | Size<br>a $\times$ L<br>(mm)          | ORDER CODE                            |
|---|-------------------------------------|---|---|--------------|--------------------------------------|--|---------------------------------------|---------------------------------------|
|   |                                     | Equivalent Series Resistance<br>20°C<br>120Hz | Equivalent Series Resistance<br>20°C<br>120Hz |              |                                      |  |                                       |                                       |
| 25<br>(32)<br>1E                            | 5600                                | 83  | 67  | 0,35         | 1,4                                  | 2,0                                      | 22 x 25                               | ECS1EBZ562M $\Delta\Delta\Delta$ 2225 |
|   | 6800                                | 69  | 55  | 0,35         | 1,5                                  | 2,3                                      | 22 x 30                               | ECS1EBZ682M $\Delta\Delta\Delta$ 2230 |
|   |                                     | 69  | 55  | 0,35         | 1,5                                  | 2,3                                      | 25 x 25                               | ECS1EBZ682M $\Delta\Delta\Delta$ 2525 |
|   | 8200                                | 57  | 46  | 0,35         | 1,5                                  | 2,6                                      | 22 x 35                               | ECS1EBZ822M $\Delta\Delta\Delta$ 2235 |
|   |                                     | 47  | 38  | 0,35         | 1,5                                  | 2,9                                      | 22 x 40                               | ECS1EBZ103M $\Delta\Delta\Delta$ 2240 |
|   | 10000                               | 47  | 38  | 0,35         | 1,5                                  | 2,8                                      | 25 x 30                               | ECS1EBZ103M $\Delta\Delta\Delta$ 2530 |
|   |                                     | 47  | 38  | 0,35         | 1,5                                  | 3,0                                      | 30 x 25                               | ECS1EBZ103M $\Delta\Delta\Delta$ 3025 |
|   |                                     | 39  | 31  | 0,35         | 1,5                                  | 3,2                                      | 22 x 45                               | ECS1EBZ123M $\Delta\Delta\Delta$ 2245 |
|   | 12000                               | 39  | 31  | 0,35         | 1,5                                  | 3,2                                      | 25 x 35                               | ECS1EBZ123M $\Delta\Delta\Delta$ 2535 |
|   |                                     | 39  | 31  | 0,35         | 1,5                                  | 3,4                                      | 30 x 30                               | ECS1EBZ123M $\Delta\Delta\Delta$ 3030 |
|   |                                     | 31  | 25  | 0,35         | 1,5                                  | 3,7                                      | 25 x 40                               | ECS1EBZ153M $\Delta\Delta\Delta$ 2540 |
|   | 15000                               | 31  | 25  | 0,35         | 1,5                                  | 3,9                                      | 35 x 25                               | ECS1EBZ153M $\Delta\Delta\Delta$ 3525 |
|   |                                     | 26  | 21  | 0,35         | 1,5                                  | 4,3                                      | 25 x 50                               | ECS1EBZ183M $\Delta\Delta\Delta$ 2550 |
|   |                                     | 26  | 21  | 0,35         | 1,5                                  | 4,2                                      | 30 x 35                               | ECS1EBZ183M $\Delta\Delta\Delta$ 3035 |
|   | 18000                               | 26  | 21  | 0,35         | 1,5                                  | 4,4                                      | 35 x 30                               | ECS1EBZ183M $\Delta\Delta\Delta$ 3530 |
|   |                                     | 22  | 17  | 0,35         | 1,5                                  | 4,8                                      | 30 x 40                               | ECS1EBZ223M $\Delta\Delta\Delta$ 3040 |
| 22  |                                     | 17  | 0,35  | 1,5          | 5,0                                  | 35 x 35                                  | ECS1EBZ223M $\Delta\Delta\Delta$ 3535 |                                       |
| 33000                                       | 15                                  | 12  | 0,35  | 1,5          | 6,5                                  | 35 x 40                                  | E                                     |                                       |

**SERIES CD 293 BZ**

ALUMINUM ELECTROLYTIC CAPACITORS · SNAP-IN TYPE

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance 20°C 120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance 20°C 120Hz | tan $\delta$<br>Dissipation Factor 20°C 120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current 85°C 120Hz | Size<br>$\varnothing$ D x L | ORDER CODE<br>♦♦ = pin style & length<br>ΔΔ = pin number<br>Details: Page 6 |                     |
|---|-------------------------------------|---|---|---|--------------------------------------|---|-----------------------------|---|---------------------|
| (V)   | (μF)                                | (mΩ)  | (mΩ)  |   | (mA)                                 | (Arms)  | (mm)                        |   |                     |
| 63<br>(79)<br>1J                            | 6800                                | 40  | 32  | 0,20  | 1,5                                  | 3,6   | 30 x 40                     | ECS1JBZ682M♦♦ΔΔ3040   |                     |
|   |                                     | 40  | 32  | 0,20  | 1,5                                  | 3,7   | 35 x 35                     | ECS1JBZ682M♦♦ΔΔ3535   |                     |
|   | 8200                                | 41  | 33  | 0,25  | 1,5                                  | 3,7   | 30 x 50                     | ECS1JBZ822M♦♦ΔΔ3050   |                     |
|   |                                     | 41  | 33  | 0,25  | 1,5                                  | 3,8   | 35 x 40                     | ECS1JBZ822M♦♦ΔΔ3540   |                     |
|   | 10000                               | 34  | 27  | 0,25  | 1,5                                  | 4,3   | 35 x 45                     | ECS1JBZ103M♦♦ΔΔ3545   |                     |
| 12000                                       | 28                                  | 23  | 0,25  | 1,5   | 4,8                                  | 35 x 50   | ECS1JBZ123M♦♦ΔΔ3550         |   |                     |
| 80<br>(100)<br>1K                           | 1000                                | 199   | 160   | 0,15  | 0,8                                  | 1,3   | 22 x 25                     | ECS1KBZ102M♦♦ΔΔ2225   |                     |
|   | 1200                                | 166   | 133   | 0,15  | 1,0                                  | 1,5   | 22 x 30                     | ECS1KBZ122M♦♦ΔΔ2230   |                     |
|   | 1500                                | 133   | 107   | 0,15  | 1,2                                  | 1,7   | 25 x 25                     | ECS1KBZ152M♦♦ΔΔ2525   |                     |
|   | 1800                                | 111   | 89  | 0,15  | 1,4                                  | 1,9   | 22 x 35                     | ECS1KBZ182M♦♦ΔΔ2235   |                     |
|   |                                     | 111   | 89  | 0,15  | 1,4                                  | 1,9   | 25 x 30                     | ECS1KBZ182M♦♦ΔΔ2530   |                     |
|   | 2200                                | 91  | 73  | 0,15  | 1,5                                  | 2,1   | 22 x 40                     | ECS1KBZ222M♦♦ΔΔ2240   |                     |
|   |                                     | 91  | 73  | 0,15  | 1,5                                  | 2,2   | 25 x 35                     | ECS1KBZ222M♦♦ΔΔ2535   |                     |
|   | 2700                                | 91  | 73  | 0,15  | 1,5                                  | 2,2   | 30 x 25                     | ECS1KBZ222M♦♦ΔΔ3025   |                     |
|   |                                     | 74  | 59  | 0,15  | 1,5                                  | 2,5   | 22 x 50                     | ECS1KBZ272M♦♦ΔΔ2250   |                     |
|   | 2700                                | 74  | 59  | 0,15  | 1,5                                  | 2,5   | 25 x 40                     | ECS1KBZ272M♦♦ΔΔ2540   |                     |
|   |                                     | 74  | 59  | 0,15  | 1,5                                  | 2,5   | 30 x 30                     | ECS1KBZ272M♦♦ΔΔ3030   |                     |
|   | 3300                                | 74  | 59  | 0,15  | 1,5                                  | 2,5   | 35 x 25                     | ECS1KBZ272M♦♦ΔΔ3525   |                     |
|   |                                     | 61  | 49  | 0,15  | 1,5                                  | 2,8   | 25 x 45                     | ECS1KBZ332M♦♦ΔΔ2545   |                     |
|   |                                     | 61  | 49  | 0,15  | 1,5                                  | 2,8   | 30 x 35                     | ECS1KBZ332M♦♦ΔΔ3035   |                     |
|   | 3900                                | 52  | 41  | 0,15  | 1,5                                  | 3,1   | 25 x 50                     | ECS1KBZ392M♦♦ΔΔ2550   |                     |
|   |                                     | 52  | 41  | 0,15  | 1,5                                  | 3,2   | 30 x 40                     | ECS1KBZ392M♦♦ΔΔ3040   |                     |
|   | 4700                                | 52  | 41  | 0,15  | 1,5                                  | 3,2   | 35 x 30                     | ECS1KBZ392M♦♦ΔΔ3530   |                     |
|   |                                     | 43  | 34  | 0,15  | 1,5                                  | 3,6   | 30 x 45                     | ECS1KBZ472M♦♦ΔΔ3045   |                     |
|   | 4700                                | 43  | 34  | 0,15  | 1,5                                  | 3,6   | 35 x 35                     | ECS1KBZ472M♦♦ΔΔ3535   |                     |
|   |                                     | 48  | 38  | 0,20  | 1,5                                  | 4,1   | 30 x 50                     | ECS1KBZ562M♦♦ΔΔ3050   |                     |
|   | 5600                                | 48  | 38  | 0,20  | 1,5                                  | 4,1   | 35 x 40                     | ECS1KBZ562M♦♦ΔΔ3540   |                     |
|   |                                     | 40  | 32  | 0,20  | 1,5                                  | 4,1   | 35 x 45                     | ECS1KBZ682M♦♦ΔΔ3545   |                     |
|   | 8200                                | 41  | 33  | 0,20  | 1,5                                  | 4,7   | 35 x 50                     | ECS1KBZ822M♦♦ΔΔ3550   |                     |
|   | 10000                               | 34  | 27  | 0,25  | 1,5                                  | 5,2   | 35 x 50                     | ECS1KBZ103M♦♦ΔΔ3550   |                     |
| 12000                                       | 28                                  | 23  | 0,25  | 1,5   | 5,8                                  | 35 x 55   | ECS1KBZ123M♦♦ΔΔ3555         |   |                     |
| 100<br>(125)<br>2A                          | 680                                 | 293   | 235   | 0,15  | 0,7                                  | 1,1   | 22 x 25                     | ECS2ABZ681M♦♦ΔΔ2225   |                     |
|   | 820                                 | 243   | 195   | 0,15  | 0,8                                  | 1,2   | 22 x 30                     | ECS2ABZ821M♦♦ΔΔ2230   |                     |
|   | 1000                                | 200   | 160   | 0,15  | 1,0                                  | 1,4   | 25 x 25                     | ECS2ABZ102M♦♦ΔΔ2525   |                     |
|   | 1200                                | 166   | 133   | 0,15  | 1,2                                  | 1,6   | 22 x 35                     | ECS2ABZ122M♦♦ΔΔ2235   |                     |
|   |                                     | 166   | 133   | 0,15  | 1,2                                  | 1,6   | 25 x 30                     | ECS2ABZ122M♦♦ΔΔ2530   |                     |
|   | 1500                                | 133   | 107   | 0,15  | 1,5                                  | 1,8   | 22 x 40                     | ECS2ABZ152M♦♦ΔΔ2240   |                     |
|   |                                     | 133   | 107   | 0,15  | 1,5                                  | 1,7   | 25 x 35                     | ECS2ABZ152M♦♦ΔΔ2535   |                     |
|   | 1800                                | 133   | 107   | 0,15  | 1,5                                  | 1,8   | 30 x 25                     | ECS2ABZ152M♦♦ΔΔ3025   |                     |
|   |                                     | 111   | 89  | 0,15  | 1,5                                  | 2,1   | 22 x 50                     | ECS2ABZ182M♦♦ΔΔ2250   |                     |
|   | 1800                                | 111   | 89  | 0,15  | 1,5                                  | 2,0   | 25 x 40                     | ECS2ABZ182M♦♦ΔΔ2540   |                     |
|   |                                     | 111   | 89  | 0,15  | 1,5                                  | 2,1   | 30 x 30                     | ECS2ABZ182M♦♦ΔΔ3030   |                     |
|   | 2200                                | 111   | 89  | 0,15  | 1,5                                  | 2,2   | 35 x 25                     | ECS2ABZ182M♦♦ΔΔ3525   |                     |
|   |                                     | 91  | 73  | 0,15  | 1,5                                  | 2,2   | 25 x 45                     | ECS2ABZ222M♦♦ΔΔ2545   |                     |
|   | 2200                                | 91  | 73  | 0,15  | 1,5                                  | 2,3   | 30 x 35                     | ECS2ABZ222M♦♦ΔΔ3035   |                     |
|   |                                     | 91  | 73  | 0,15  | 1,5                                  | 2,5   | 35 x 30                     | ECS2ABZ222M♦♦ΔΔ3530   |                     |
|   | 2700                                | 74  | 59  | 0,15  | 1,5                                  | 2,6   | 25 x 50                     | ECS2ABZ272M♦♦ΔΔ2550   |                     |
|   |                                     | 74  | 59  | 0,15  | 1,5                                  | 2,7   | 30 x 40                     | ECS2ABZ272M♦♦ΔΔ3040   |                     |
|   | 3300                                | 61  | 49  | 0,15  | 1,5                                  | 3,0   | 30 x 45                     | ECS2ABZ332M♦♦ΔΔ3045   |                     |
|   |                                     | 61  | 49  | 0,15  | 1,5                                  | 3,1   | 35 x 35                     | ECS2ABZ332M♦♦ΔΔ3535   |                     |
|   | 3900                                | 52  | 41  | 0,15  | 1,5                                  | 3,4   | 30 x 50                     | ECS2ABZ392M♦♦ΔΔ3050   |                     |
|   |                                     | 52  | 41  | 0,15  | 1,5                                  | 3,4   | 35 x 40                     | ECS2ABZ392M♦♦ΔΔ3540   |                     |
|   | 4700                                | 43  | 34  | 0,15  | 1,5                                  | 4,0   | 35 x 50                     | ECS2ABZ472M♦♦ΔΔ3550   |                     |
|   | 160<br>(200)<br>2C                  | 220   | 603   | 483   | 0,10                                 | 0,4   | 1,1                         | 22 x 25   | ECS2CBZ221M♦♦ΔΔ2225 |
|   |                                     | 270   | 492   | 393   | 0,10                                 | 0,4   | 1,2                         | 22 x 25   | ECS2CBZ271M♦♦ΔΔ2225 |
| 330   |                                     | 402   | 322   | 0,10  | 0,5                                  | 1,3   | 22 x 25                     | ECS2CBZ331M♦♦ΔΔ2225   |                     |
| 390   |                                     | 341   | 273   | 0,10  | 0,6                                  | 1,5   | 22 x 30                     | ECS2CBZ391M♦♦ΔΔ2230   |                     |
|   |                                     | 341   | 273   | 0,10  | 0,6                                  | 1,5   | 25 x 25                     | ECS2CBZ391M♦♦ΔΔ2525   |                     |
| 470   |                                     | 283   | 226   | 0,10  | 0,8                                  | 1,6   | 25 x 30                     | ECS2CBZ471M♦♦ΔΔ2530   |                     |
|   |                                     | 237   | 190   | 0,10  | 0,9                                  | 1,9   | 22 x 35                     | ECS2CBZ561M♦♦ΔΔ2235   |                     |
| 560   |                                     | 237   | 190   | 0,10  | 0,9                                  | 1,9   | 25 x 30                     | ECS2CBZ561M♦♦ΔΔ2530   |                     |
|   |                                     | 237   | 190   | 0,10  | 0,9                                  | 2,0   | 30 x 25                     | ECS2CBZ561M♦♦ΔΔ3025   |                     |
| 680   |                                     | 196   | 157   | 0,10  | 1,1                                  | 2,1   | 22 x 40                     | ECS2CBZ681M♦♦ΔΔ2240   |                     |
|   |                                     | 196   | 157   | 0,10  | 1,1                                  | 2,2   | 25 x 35                     | ECS2CBZ681M♦♦ΔΔ2535   |                     |
| 200<br>(250)<br>2D                          |                                     | 220   | 603   | 483   | 0,10                                 | 0,4   | 1,1                         | 22 x 25   | ECS2DBZ221M♦♦ΔΔ2225 |
|   |                                     | 270   | 492   | 393   | 0,10                                 | 0,5   | 1,2                         | 22 x 50   | ECS2DBZ271M♦♦ΔΔ2230 |
|   |                                     | 330   | 402   | 322   | 0,10                                 | 0,7   | 1,4                         | 22 x 50   | ECS2DBZ331M♦♦ΔΔ2230 |
|   |                                     |   | 402   | 322   | 0,10                                 | 0,7   | 1,4                         | 25 x 25   | ECS2DBZ331M♦♦ΔΔ2525 |
|   | 390                                 | 341   | 273   | 0,10  | 0,8                                  | 1,6   | 22 x 35                     | ECS2DBZ391M♦♦ΔΔ2235   |                     |
|   |                                     | 341   | 273   | 0,10  | 0,8                                  | 1,6   | 25 x 30                     | ECS2DBZ391M♦♦ΔΔ2530   |                     |
|   | 470                                 | 283   | 226   | 0,10  | 0,9                                  | 1,8   | 22 x 40                     | ECS2DBZ471M♦♦ΔΔ2240   |                     |
|   |                                     | 283   | 226   | 0,10  | 0,9                                  | 1,9   | 30 x 25                     | ECS2DBZ471M♦♦ΔΔ3025   |                     |
|   | 560                                 | 237   | 190   | 0,10  | 1,1                                  | 2,0   | 22 x 45                     | ECS2DBZ561M♦♦ΔΔ2245   |                     |
|   |                                     | 237   | 190   | 0,10  | 1,1                                  | 2,0   | 25 x 35                     | ECS2DBZ561M♦♦ΔΔ2535   |                     |
|   | 680                                 | 237   | 190   | 0,10  | 1,1                                  | 2,1   | 30 x 30                     | ECS2DBZ561M♦♦ΔΔ3030   |                     |
|   |                                     | 285   | 228   | 0,12  | 1,1                                  | 2,0   | 35 x 25                     | ECS2DBZ561M♦♦ΔΔ3525   |                     |
| 820   | 196                                 | 157   | 0,10  | 1,4   | 2,3                                  | 25 x 40   | ECS2DBZ681M♦♦ΔΔ2540         |   |                     |
|   | 196                                 | 157   | 0,10  | 1,4   | 2,4                                  | 30 x 35   | ECS2DBZ681M♦♦ΔΔ3035         |   |                     |
| 1000  | 162                                 | 130   | 0,10  | 1,5   | 2,6                                  | 25 x 50   | ECS2DBZ821M♦♦ΔΔ2550         |   |                     |
|   | 162                                 | 130   | 0,10  | 1,5   | 2,7                                  | 30 x 40   | ECS2DBZ821M♦♦ΔΔ3040         |   |                     |
| 1200  | 195                                 | 156   | 0,12  | 1,5   | 2,5                                  | 35 x 30   | ECS2DBZ821M♦♦ΔΔ3530         |   |                     |
|   | 133                                 | 107   | 0,12  | 1,5   | 3,1                                  | 30 x 45   | ECS2DBZ102M♦♦ΔΔ3045         |   |                     |
| 1500  | 160                                 | 128   | 0,12  | 1,5   | 2,8                                  | 35 x 35   | ECS2DBZ102M♦♦ΔΔ3535         |   |                     |
| 250<br>(300)<br>2E                          | 100                                 | 1990  | 1592  | 0,15  | 0,3                                  | 0,68  | 22 x 25                     | ECS2EBZ101M♦♦ΔΔ2225   |                     |
|   | 180                                 | 1106  | 885   | 0,15  | 0,5                                  | 0,94  | 22 x 25                     | ECS2EBZ181M♦♦ΔΔ2225   |                     |
|   |                                     | 905   | 724   | 0,15  | 0,6                                  | 1,1   | 22 x 30                     | ECS2EBZ221M♦♦ΔΔ2230   |                     |
|   | 220                                 | 905   | 724   | 0,15  | 0,6                                  | 1,1   | 25 x 25                     | ECS2EBZ221M♦♦ΔΔ2525   |                     |
|   |                                     | 737   | 590   | 0,15  | 0,7                                  | 1,2   | 22 x 35                     | ECS2EBZ271M♦♦ΔΔ2235   |                     |
|   | 330                                 | 603   | 483   | 0,15  | 0,8                                  | 1,4   | 22 x 40                     | ECS2EBZ331M♦♦ΔΔ2240   |                     |
|   |                                     | 603   | 483   | 0,15  | 0,8                                  | 1,4   | 25 x 30                     | ECS2EBZ331M♦♦ΔΔ2530   |                     |
|   | 390                                 | 603   | 483   | 0,15  | 0,8                                  | 1,5   | 30 x 25                     | ECS2EBZ331M♦♦ΔΔ3025   |                     |
|   |                                     | 511   | 409   | 0,15  | 1,0                                  | 1,6   | 22 x 45                     | ECS2EBZ391M♦♦ΔΔ2245   |                     |
|   | 470                                 | 511   | 409   | 0,15  | 1,0                                  | 1,6   | 25 x 35                     | ECS2EBZ391M♦♦ΔΔ2535   |                     |
|   |                                     | 424   | 339   | 0,15  | 1,2                                  | 1,8   | 22 x 50                     | ECS2EBZ471M♦♦ΔΔ2250   |                     |
|   | 560                                 | 424   | 339   | 0,15  | 1,2                                  | 1,8   | 25 x 40                     | ECS2EBZ471M♦♦ΔΔ2540   |                     |
| 424   |                                     | 339   | 0,15  | 1,2   | 1,8                                  | 30 x 30   | ECS2EBZ471M♦♦ΔΔ3030         |   |                     |
| 680   | 424                                 | 339   | 0,15  | 1,2   | 2,4                                  | 35 x 25   | ECS2EBZ471M♦♦ΔΔ3525         |   |                     |
|   | 356                                 | 285   | 0,15  | 1,4   | 2,0                                  | 25 x 45   | ECS2EBZ561M♦♦ΔΔ2545         |   |                     |
| 820   | 356                                 | 285   | 0,15  | 1,4   | 2,0                                  | 30 x 35   | ECS2EBZ561M♦♦ΔΔ3035         |   |                     |
|   | 293                                 | 235   | 0,15  | 1,5   | 2,3                                  | 30 x 40   | ECS2EBZ681M♦♦ΔΔ3040         |   |                     |
| 1000  | 293                                 | 235   | 0,15  | 1,5   | 2,6                                  | 35 x 30   | ECS2EBZ681M♦♦ΔΔ3530         |   |                     |
|   | 243                                 | 195   | 0,15  | 1,5   | 2,6                                  | 30 x 45   | ECS2EBZ821M♦♦ΔΔ3045         |   |                     |
| 1200  | 243                                 | 195   | 0,15  | 1,5   | 2,6                                  | 35 x 35   | ECS2EBZ821M♦♦ΔΔ3535         |   |                     |
|   | 199                                 | 160   | 0,15  | 1,5   | 3,0                                  | 35 x 40   | ECS2EBZ102M♦♦ΔΔ3540         |   |                     |
| 1600  | 166                                 | 133   | 0,15  | 1,5   | 3,4                                  | 35 x 45   | ECS2EBZ122M♦♦ΔΔ3545         |   |                     |
| 315<br>(365)<br>2F                          | 100                                 | 1990  | 1592  | 0,15  | 0,3                                  | 0,67  | 22 x 25                     | ECS2FBZ101M♦♦ΔΔ2225   |                     |
|   | 150                                 | 1327  | 1062  | 0,15  | 0,5                                  | 0,85  | 22 x 30                     | ECS2FBZ151M♦♦ΔΔ2230   |                     |
|   |                                     | 1327  | 1062  | 0,15  | 0,5                                  | 0,85  | 25 x 25                     | ECS2FBZ151M♦♦ΔΔ2525   |                     |
|   | 180                                 | 1106  | 885   | 0,15  | 0,6                                  | 0,96  | 22 x 35                     | ECS2FBZ181M♦♦ΔΔ2235   |                     |
|   |                                     | 1106  | 885   | 0,15  | 0,6                                  | 0,96  | 25 x 30                     | ECS2FBZ181M♦♦ΔΔ2530   |                     |
|   | 220                                 | 905   | 724   | 0,15  | 0,7                                  | 1,1   | 22 x 40                     | ECS2FBZ221M♦♦ΔΔ2240   |                     |
|   |                                     | 905   | 724   | 0,15  | 0,7                                  | 1,1   | 25 x 35                     | ECS2FBZ221M♦♦ΔΔ2535   |                     |
|   | 300                                 | 905   | 724   | 0,15  | 0,7                                  | 1,1   | 30 x 25                     | ECS2FBZ221M♦♦ΔΔ3025   |                     |
|   |                                     | 905   | 724   | 0,15  | 0,7                                  | 1,1   | 30 x 25                     | ECS2FBZ221M♦♦ΔΔ3025   |                     |

| U <sub>RBC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance 20°C 120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance 20°C 120Hz | tan $\delta$<br>Dissipation Factor 20°C 120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current 85°C 120Hz | Size<br>$\varnothing$ D x L | ORDER CODE<br>♦♦ = pin style & length<br>ΔΔ = pin number<br>Details: Page 6 |                     |
|---|-------------------------------------|---|---|---|--------------------------------------|---|-----------------------------|---|---------------------|
| (V)   | (μF)                                | (mΩ)  | (mΩ)  |   | (mA)                                 | (Arms)  | (mm)                        |   |                     |
| 160<br>(200)<br>2C                          | 820                                 | 162   | 130   | 0,10  | 1,3                                  | 2,5   | 22 x 50                     | ECS2CBZ821M♦♦ΔΔ2250   |                     |
|   |                                     | 162   | 130   | 0,10  | 1,3                                  | 2,4   | 25 x 40                     | ECS2CBZ821M♦♦ΔΔ2540   |                     |
|   |                                     | 162   | 130   | 0,10  | 1,3                                  | 2,5   | 30 x 30                     | ECS2CBZ821M♦♦ΔΔ3030   |                     |
|   |                                     | 162   | 130   | 0,12  | 1,3                                  | 2,4   | 35 x 25                     | ECS2CBZ821M♦♦ΔΔ3525   |                     |
|   |                                     | 153   | 107   | 0,10  | 1,5                                  | 2,7   | 25 x 45                     | ECS2CBZ102M♦♦ΔΔ2545   |                     |
|   | 1000                                | 133   | 107   | 0,10  | 1,5                                  | 2,8   | 30 x 35                     | ECS2CBZ102M♦♦ΔΔ3035   |                     |
|   |                                     | 160   | 128   | 0,12  | 1,5                                  | 2,7   | 35 x 30                     | ECS2CBZ102M♦♦ΔΔ3530   |                     |
|   |                                     | 111   | 89  | 0,10  | 1,5                                  | 3,1   | 25 x 50                     | ECS2CBZ122M♦♦ΔΔ2550   |                     |
|   |                                     | 111   | 89  | 0,10  | 1,5                                  | 3,2   | 30 x 40                     | ECS2CBZ122M♦♦ΔΔ3040   |                     |
|   |                                     | 133   | 107   | 0,12  | 1,5                                  | 3,0   | 35 x 35                     | ECS2CBZ122M♦♦ΔΔ3535   |                     |
|   | 1500                                | 89  | 71  | 0,10  | 1,5                                  | 3,7   | 30 x 45                     | ECS2CBZ152M♦♦ΔΔ3045   |                     |
|   |                                     | 107   | 85  | 0,12  | 1,5                                  | 3,5   | 35 x 40                     | ECS2CBZ152M♦♦ΔΔ3540   |                     |
|   |                                     | 1800  | 89  | 71  | 0,12                                 | 1,5   | 3,9                         | 35 x 45   | ECS2CBZ182M♦♦ΔΔ3545 |
|   |                                     | 2200  | 73  | 58  | 0,12                                 | 1,5   | 4,5                         | 35 x 50   | ECS2CBZ222M♦♦ΔΔ3550 |
|   |                                     | 200<br>(250)<br>2D  | 220   | 603   | 483                                  | 0,10  | 0,4                         | 1,1   | 22 x 25             |
| 270   | 492                                 |   |   | 393   | 0,10                                 | 0,5   | 1,2                         | 22 x 50   | ECS2DBZ271M♦♦ΔΔ2230 |
| 330   | 402                                 |   | 322   | 0,10  | 0,7                                  | 1,4   | 22 x 50                     | ECS2DBZ331M♦♦ΔΔ2230   |                     |
|   | 402                                 |   | 322   | 0,10  | 0,7                                  | 1,4   | 25 x 25                     | ECS2DBZ331M♦♦ΔΔ2525   |                     |
| 390   | 341                                 |   | 273   | 0,10  | 0,8                                  | 1,6   | 22 x 35                     | ECS2DBZ391M♦♦ΔΔ2235   |                     |
|   | 341                                 |   | 273   | 0,10  | 0,8                                  | 1,6   | 25 x 30                     | ECS2DBZ391M♦♦ΔΔ2530   |                     |
| 470   | 283                                 |   | 226   | 0,10  | 0,9                                  | 1,  |                             |   |                     |

# SERIES CD 293 BZ

# ALUMINUM ELECTROLYTIC CAPACITORS · SNAP-IN TYPE

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 315<br>(365)<br>2F                          | 270                                 | 737   | 590   | 0,15  | 0,9                                  | 1,2   | 22 x 45                | ECS2FB2271M00ΔΔ2245   |
|   |                                     | 737   | 590   | 0,15  | 0,9                                  | 1,3   | 25 x 40                | ECS2FB2271M00ΔΔ2540   |
|   |                                     | 737   | 590   | 0,15  | 0,9                                  | 1,3   | 30 x 30                | ECS2FB2271M00ΔΔ3030   |
|   |                                     | 737   | 590   | 0,15  | 0,9                                  | 1,3   | 35 x 25                | ECS2FB2271M00ΔΔ3525   |
|   | 330                                 | 603   | 483   | 0,15  | 1,0                                  | 1,4   | 25 x 45                | ECS2FB2331M00ΔΔ2545   |
|   |                                     | 603   | 483   | 0,15  | 1,0                                  | 1,4   | 30 x 35                | ECS2FB2331M00ΔΔ3035   |
|   | 390                                 | 511   | 409   | 0,15  | 1,2                                  | 1,6   | 25 x 50                | ECS2FB2391M00ΔΔ2550   |
|   |                                     | 511   | 409   | 0,15  | 1,2                                  | 1,6   | 30 x 40                | ECS2FB2391M00ΔΔ3040   |
|   |                                     | 511   | 409   | 0,15  | 1,2                                  | 1,6   | 35 x 30                | ECS2FB2391M00ΔΔ3530   |
|   | 470                                 | 424   | 339   | 0,15  | 1,5                                  | 1,8   | 30 x 45                | ECS2FB2471M00ΔΔ3045   |
|   |                                     | 424   | 339   | 0,15  | 1,5                                  | 1,8   | 35 x 35                | ECS2FB2471M00ΔΔ3535   |
|   | 560                                 | 356   | 285   | 0,15  | 1,5                                  | 2,0   | 30 x 50                | ECS2FB2561M00ΔΔ3050   |
|   |                                     | 356   | 285   | 0,15  | 1,5                                  | 2,0   | 35 x 40                | ECS2FB2561M00ΔΔ3540   |
|   | 680                                 | 293   | 135   | 0,15  | 1,5                                  | 2,3   | 35 x 45                | ECS2FB2681M00ΔΔ3545   |

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 350<br>(400)<br>2V                          | 82                                  | 2 427   | 1 941   | 0,15  | 0,3                                  | 0,60  | 22 x 25                | ECS2VB2820M00ΔΔ2225   |
|   | 100                                 | 1 990   | 1 592   | 0,15  | 0,4                                  | 0,80  | 22 x 25                | ECS2VB2101M00ΔΔ2225   |
|   | 120                                 | 1 658   | 1 327   | 0,15  | 0,4                                  | 0,82  | 22 x 30                | ECS2VB2121M00ΔΔ2230   |
|   |                                     | 1 658   | 1 327   | 0,15  | 0,4                                  | 0,81  | 25 x 25                | ECS2VB2121M00ΔΔ2525   |
|   | 150                                 | 1 327   | 1 062   | 0,15  | 0,5                                  | 0,94  | 22 x 35                | ECS2VB2151M00ΔΔ2235   |
|   |                                     | 1 327   | 1 062   | 0,15  | 0,5                                  | 0,94  | 25 x 30                | ECS2VB2151M00ΔΔ2530   |
|   | 180                                 | 1 106   | 885   | 0,15  | 0,6                                  | 1,1   | 22 x 40                | ECS2VB2181M00ΔΔ2240   |
|   |                                     | 1 106   | 885   | 0,15  | 0,6                                  | 1,1   | 30 x 25                | ECS2VB2181M00ΔΔ3025   |
|   |                                     | 905   | 724   | 0,15  | 0,8                                  | 1,2   | 22 x 45                | ECS2VB2221M00ΔΔ2245   |
|   | 220                                 | 905   | 724   | 0,15  | 0,8                                  | 1,2   | 25 x 35                | ECS2VB2221M00ΔΔ2535   |
|   |                                     | 905   | 724   | 0,15  | 0,8                                  | 1,2   | 30 x 30                | ECS2VB2221M00ΔΔ3030   |
|   |                                     | 905   | 724   | 0,15  | 0,8                                  | 1,3   | 35 x 25                | ECS2VB2221M00ΔΔ3525   |
|   | 270                                 | 737   | 590   | 0,15  | 0,9                                  | 1,4   | 25 x 45                | ECS2VB2271M00ΔΔ2545   |
|   |                                     | 737   | 590   | 0,15  | 0,9                                  | 1,4   | 30 x 35                | ECS2VB2271M00ΔΔ3035   |
|   | 330                                 | 603   | 483   | 0,15  | 1,2                                  | 1,6   | 25 x 50                | ECS2VB2331M00ΔΔ2550   |
|   |                                     | 603   | 483   | 0,15  | 1,2                                  | 1,6   | 35 x 30                | ECS2VB2331M00ΔΔ3530   |
|   |                                     | 511   | 409   | 0,15  | 1,4                                  | 1,7   | 30 x 40                | ECS2VB2391M00ΔΔ3040   |
|   | 390                                 | 511   | 409   | 0,15  | 1,4                                  | 1,8   | 35 x 35                | ECS2VB2391M00ΔΔ3535   |
|   |                                     | 424   | 339   | 0,15  | 1,5                                  | 2,0   | 30 x 45                | ECS2VB2471M00ΔΔ3045   |
|   | 470                                 | 424   | 339   | 0,15  | 1,5                                  | 2,0   | 35 x 40                | ECS2VB2471M00ΔΔ3540   |
|   |                                     | 356   | 285   | 0,15  | 1,5                                  | 2,3   | 35 x 45                | ECS2VB2561M00ΔΔ3545   |
|   | 680                                 | 293   | 535   | 0,15  | 1,5                                  | 2,6   | 35 x 50                | ECS2VB2681M00ΔΔ3550   |
|   | 820                                 | 243   | 195   | 0,15  | 1,5                                  | 2,8   | 35 x 60                | ECS2VB2821M00ΔΔ3560   |

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 400<br>(450)<br>2G                          | 68                                  | 2 926   | 2 341   | 0,15  | 0,3                                  | 0,55  | 22 x 25                | ECS2GB2680M00ΔΔ2225   |
|   | 82                                  | 2 427   | 1 941   | 0,15  | 0,3                                  | 0,65  | 22 x 25                | ECS2GB2820M00ΔΔ2225   |
|   | 100                                 | 1 990   | 1 592   | 0,15  | 0,4                                  | 0,70  | 22 x 30                | ECS2GB2101M00ΔΔ2230   |
|   | 120                                 | 1 990   | 1 592   | 0,15  | 0,4                                  | 0,70  | 25 x 25                | ECS2GB2101M00ΔΔ2525   |
|   |                                     | 1 658   | 1 327   | 0,15  | 0,5                                  | 0,79  | 22 x 35                | ECS2GB2121M00ΔΔ2235   |
|   | 150                                 | 1 327   | 1 062   | 0,15  | 0,6                                  | 0,90  | 22 x 35                | ECS2GB2151M00ΔΔ2235   |
|   |                                     | 1 327   | 1 062   | 0,15  | 0,6                                  | 0,89  | 25 x 30                | ECS2GB2151M00ΔΔ2530   |
|   | 180                                 | 1 106   | 885   | 0,15  | 0,7                                  | 1,0   | 22 x 40                | ECS2GB2181M00ΔΔ2240   |
|   |                                     | 1 106   | 885   | 0,15  | 0,7                                  | 1,0   | 25 x 30                | ECS2GB2181M00ΔΔ2530   |
|   |                                     | 905   | 724   | 0,15  | 0,9                                  | 1,1   | 22 x 50                | ECS2GB2221M00ΔΔ2250   |
|   | 220                                 | 905   | 724   | 0,15  | 0,9                                  | 1,2   | 25 x 40                | ECS2GB2221M00ΔΔ2540   |
|   |                                     | 737   | 590   | 0,15  | 1,1                                  | 1,3   | 25 x 45                | ECS2GB2271M00ΔΔ2545   |
|   | 270                                 | 737   | 590   | 0,15  | 1,1                                  | 1,3   | 30 x 30                | ECS2GB2271M00ΔΔ3030   |
|   |                                     | 603   | 483   | 0,15  | 1,3                                  | 1,6   | 25 x 45                | ECS2GB2331M00ΔΔ2545   |
|   | 330                                 | 603   | 483   | 0,15  | 1,3                                  | 1,7   | 30 x 35                | ECS2GB2331M00ΔΔ3035   |
|   |                                     | 511   | 409   | 0,15  | 1,5                                  | 1,9   | 30 x 40                | ECS2GB2391M00ΔΔ3040   |
|   | 390                                 | 511   | 409   | 0,15  | 1,5                                  | 1,8   | 35 x 30                | ECS2GB2391M00ΔΔ3530   |
|   |                                     | 424   | 339   | 0,15  | 1,5                                  | 2,1   | 35 x 35                | ECS2GB2471M00ΔΔ3535   |
|   | 560                                 | 356   | 285   | 0,15  | 1,5                                  | 2,3   | 35 x 40                | ECS2GB2561M00ΔΔ3540   |
|   | 680                                 | 293   | 235   | 0,15  | 1,5                                  | 2,7   | 35 x 45                | ECS2GB2681M00ΔΔ3545   |
|   | 820                                 | 243   | 194   | 0,15  | 1,5                                  | 3,1   | 35 x 50                | ECS2GB2821M00ΔΔ3550   |
|   | 1000                                | 133   | 107   | 0,15  | 1,5                                  | 3,7   | 35 x 60                | ECS2GB2102M00ΔΔ3560   |

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 420<br>(470)<br>2X                          | 100                                 | 1 990   | 1 592   | 0,15  | 0,4                                  | 0,71  | 22 x 30                | ECS2XB2101M00ΔΔ2230   |
|   |                                     | 1 990   | 1 592   | 0,15  | 0,4                                  | 0,72  | 25 x 25                | ECS2XB2101M00ΔΔ2525   |
|   | 120                                 | 1 658   | 1 327   | 0,15  | 0,5                                  | 0,81  | 22 x 35                | ECS2XB2121M00ΔΔ2235   |
|   |                                     | 1 658   | 1 327   | 0,15  | 0,5                                  | 0,82  | 25 x 30                | ECS2XB2121M00ΔΔ2530   |
|   |                                     | 1 327   | 1 062   | 0,15  | 0,6                                  | 0,96  | 25 x 30                | ECS2XB2151M00ΔΔ2530   |

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 420<br>(470)<br>2X                          | 180                                 | 1 106   | 885   | 0,15  | 0,8                                  | 1,1   | 25 x 35                | ECS2XB2181M00ΔΔ2535   |
|   |                                     | 1 106   | 885   | 0,15  | 0,8                                  | 1,2   | 30 x 30                | ECS2XB2181M00ΔΔ3030   |
|   |                                     | 905   | 724   | 0,15  | 0,9                                  | 1,2   | 25 x 40                | ECS2XB221M00ΔΔ2540  |
|   | 220                                 | 905   | 724   | 0,15  | 0,9                                  | 1,3   | 30 x 30                | ECS2XB221M00ΔΔ3030  |
|   |                                     | 737   | 590   | 0,15  | 1,1                                  | 1,3   | 25 x 45                | ECS2XB2271M00ΔΔ2545   |
|   | 270                                 | 737   | 590   | 0,15  | 1,1                                  | 1,4   | 30 x 35                | ECS2XB2271M00ΔΔ3035   |
|   |                                     | 603   | 483   | 0,15  | 1,4                                  | 1,7   | 30 x 40                | ECS2XB2331M00ΔΔ3040   |
|   | 390                                 | 511   | 409   | 0,15  | 1,5                                  | 1,8   | 30 x 45                | ECS2XB2391M00ΔΔ3045   |
|   |                                     | 511   | 409   | 0,15  | 1,5                                  | 1,9   | 35 x 35                | ECS2XB2391M00ΔΔ3535   |
|   | 470                                 | 424   | 339   | 0,15  | 1,5                                  | 2,1   | 30 x 50                | ECS2XB2471M00ΔΔ3050   |
|   |                                     | 424   | 339   | 0,15  | 1,5                                  | 2,2   | 35 x 40                | ECS2XB2471M00ΔΔ3540   |
|   | 560                                 | 356   | 285   | 0,15  | 1,5                                  | 2,4   | 35 x 45                | ECS2XB2561M00ΔΔ3545   |
|   | 680                                 | 293   | 235   | 0,15  | 1,5                                  | 2,8   | 35 x 50                | ECS2XB2681M00ΔΔ3550   |
|   | 820                                 | 243   | 194   | 0,15  | 1,5                                  | 3,2   | 35 x 60                | ECS2XB2821M00ΔΔ3560   |
|   | 1000                                | 199   | 107   | 0,15  | 1,5                                  | 4,0   | 40 x 60                | ECS2XB2102M00ΔΔ4060   |

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 450<br>(500)<br>2W                          | 68                                  | 2 926   | 2 341   | 0,15  | 0,3                                  | 0,57  | 22 x 25                | ECS2WB2680M00ΔΔ2225   |
|   | 82                                  | 2 427   | 1 941   | 0,15  | 0,4                                  | 0,68  | 22 x 30                | ECS2WB2820M00ΔΔ2230   |
|   | 100                                 | 1 990   | 1 592   | 0,15  | 0,5                                  | 0,73  | 25 x 25                | ECS2WB2101M00ΔΔ2525   |
|   | 120                                 | 1 658   | 1 327   | 0,15  | 0,5                                  | 0,80  | 22 x 35                | ECS2WB2121M00ΔΔ2235   |
|   |                                     | 1 658   | 1 327   | 0,15  | 0,5                                  | 0,83  | 25 x 30                | ECS2WB2121M00ΔΔ2530   |
|   | 150                                 | 1 327   | 1 062   | 0,15  | 0,7                                  | 0,95  | 22 x 45                | ECS2WB2151M00ΔΔ2245   |
|   |                                     | 1 327   | 1 062   | 0,15  | 0,7                                  | 0,95  | 25 x 35                | ECS2WB2151M00ΔΔ2535   |
|   |                                     | 1 106   | 885   | 0,15  | 0,8                                  | 1,1   | 25 x 40                | ECS2WB2181M00ΔΔ2540   |
|   | 180                                 | 1 106   | 885   | 0,15  | 0,8                                  | 1,1   | 30 x 30                | ECS2WB2181M00ΔΔ3030   |
|   |                                     | 905   | 724   | 0,15  | 1,0                                  | 1,2   | 25 x 45                | ECS2WB2221M00ΔΔ2545   |
|   | 220                                 | 905   | 724   | 0,15  | 1,0                                  | 1,3   | 30 x 35                | ECS2WB2221M00ΔΔ3035   |
|   |                                     | 737   | 590   | 0,15  | 1,2                                  | 1,5   | 30 x 40                | ECS2WB2271M00ΔΔ3040   |
|   | 330                                 | 603   | 480   | 0,15  | 1,5                                  | 1,7   | 30 x 45                | ECS2WB2331M00ΔΔ3045   |
|   |                                     | 390   | 511   | 409   | 0,15                                 | 1,5   | 1,9                    | 35 x 40   |
|   | 470                                 | 424   | 339   | 0,15  | 1,5                                  | 2,2   | 30 x 50                | ECS2WB2471M00ΔΔ3050   |
|   |                                     | 560   | 356   | 285   | 0,15                                 | 1,5   | 2,4                    | 35 x 50   |
|   | 680                                 | 293   | 235   | 0,15  | 1,5                                  | 2,8   | 35 x 55                | ECS2WB2681M00ΔΔ3555   |
|   | 820                                 | 243   | 194   | 0,15  | 1,5                                  | 3,2   | 35 x 60                | ECS2WB2821M00ΔΔ3560   |
|   | 1000                                | 133   | 107   | 0,15  | 1,5                                  | 4,2   | 35 x 70                | ECS2WB2102M00ΔΔ3570   |

| U <sub>RDC</sub><br>(Surge Voltage)<br>Code | C <sub>R</sub><br>Rated Capacitance | ESR <sub>max</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | ESR <sub>typ</sub><br>Equivalent Series Resistance<br>20°C<br>120Hz | tanδ<br>Dissipation Factor<br>20°C<br>120Hz | I <sub>leak</sub><br>Leakage Current | I <sub>RAC</sub><br>Rated Ripple Current<br>85°C<br>120Hz | Size<br>øD x L<br>(mm) | ORDER CODE<br>Ø = pin style & length<br>Δ = pin number<br>Details: Page 6 |
|---|-------------------------------------|---|---|---|--------------------------------------|---|------------------------|---|
| 500<br>(550)<br>2H                          | 100                                 | 1 990   | 1 592   | 0,15  | 0,5                                  | 0,90  | 25 x 30                | ECS2HBZ101M00ΔΔ2530   |
|   | 120                                 | 1 658   | 1 327   | 0,15  | 0,6                                  | 1,0   | 25 x 35                | ECS2HBZ121M00ΔΔ2535   |
|   | 150                                 | 1 327   | 1 062   | 0,15  | 0,8                                  | 1,2   | 30 x 30                | ECS2HBZ151M00ΔΔ3030   |
|   | 180                                 | 1 106   | 885   | 0,15  | 0,9                                  | 1,4   | 25 x 45                | ECS2HBZ181M00ΔΔ2545   |
|   |                                     | 1 106   | 885   | 0,15  | 0,9                                  | 1,4   | 30 x 35                | ECS2HBZ181M00ΔΔ3035   |
|   | 220                                 | 905   | 724   | 0,15  | 1,1                                  | 1,6   | 25 x 50                | ECS2HBZ221M00ΔΔ2550   |
|   |                                     | 905   | 724   | 0,15  | 1,1                                  | 1,6   | 30 x 40                | ECS2HBZ221M00ΔΔ3040   |
|   | 270                                 | 737   | 590   | 0,15  | 1,4                                  | 1,8   | 30 x 45                | ECS2HBZ271M00ΔΔ3045   |
|   | 330                                 | 603   | 483   | 0,15  | 1,5                                  | 2,0   | 35 x 35                | ECS2HBZ331M00ΔΔ3535   |
|   |                                     | 390   | 511   | 409   | 0,15                                 | 1,5   | 2,3                    | 35 x 40   |
|   | 470                                 | 424   | 339   | 0,15  | 1,5                                  | 2,6   | 35 x 50                | ECS2HBZ471M00ΔΔ3550   |
|   |                                     | 560   | 356   | 285   | 0,15                                 | 1,5   | 2,9                    | 35 x 55   |
|   | 680                                 | 293   | 235   | 0,15  | 1,5                                  | 3,2   | 35 x 65                | ECS2HBZ681M00ΔΔ3565   |



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