

## H5 series

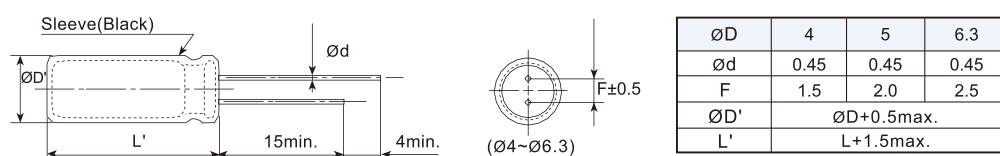
- Low profile with 5mm height
- Wide temperature range of -40 °C to +105°C
- Endurance: +105°C 1,000 hours
- RoHS Compliant



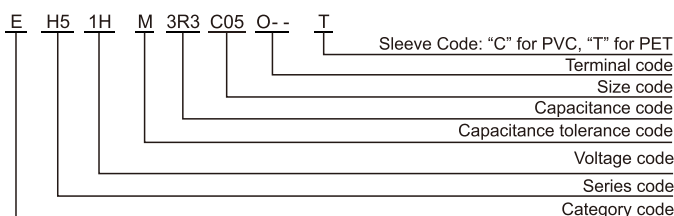
### SPECIFICATIONS

| Items                                                     | Characteristics                                                                                                                                                  |                                      |      |      |      |      |      |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------|------|------|------|------|
| Category Temperature Range                                | -40~+105°C                                                                                                                                                       |                                      |      |      |      |      |      |
| Rated Voltage Range                                       | 6.3~50 V <sub>dc</sub>                                                                                                                                           |                                      |      |      |      |      |      |
| Capacitance Tolerance                                     | ±20%(M) <div>(at 20°C, 120Hz)</div>                                                                                                                              |                                      |      |      |      |      |      |
| Leakage Current                                           | I≤0.01CV or 3μA, whichever is greater.<br>Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V) <div>(at 20°C after 2 minutes)</div> |                                      |      |      |      |      |      |
| Dissipation Factor (tanδ)                                 | Rated Voltage(V <sub>dc</sub> )                                                                                                                                  | 6.3                                  | 10   | 16   | 25   | 35   | 50   |
|                                                           | tanδ (max.)                                                                                                                                                      | 0.28                                 | 0.24 | 0.20 | 0.14 | 0.12 | 0.10 |
| Low Temperature Characteristics<br>(Max. Impedance Ratio) | Rated Voltage(V <sub>dc</sub> )                                                                                                                                  | 6.3                                  | 10   | 16   | 25   | 35   | 50   |
|                                                           | Z(-25°C)/Z(+20°C)                                                                                                                                                | 3                                    |      | 2    |      |      |      |
|                                                           | Z(-40°C)/Z(+20°C)                                                                                                                                                | 8                                    | 5    | 4    | 3    |      |      |
| Endurance                                                 | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 105°C.            |                                      |      |      |      |      |      |
|                                                           | Capacitance Change                                                                                                                                               | ≤±20% of the initial value           |      |      |      |      |      |
|                                                           | D. F. (tanδ)                                                                                                                                                     | ≤200% of the initial specified value |      |      |      |      |      |
|                                                           | Leakage Current                                                                                                                                                  | ≤The initial specified value         |      |      |      |      |      |
| Shelf Life                                                | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 105°C without voltage applied.     |                                      |      |      |      |      |      |
|                                                           | Capacitance Change                                                                                                                                               | ≤±20% of the initial value           |      |      |      |      |      |
|                                                           | D. F. (tanδ)                                                                                                                                                     | ≤200% of the initial specified value |      |      |      |      |      |
|                                                           | Leakage Current                                                                                                                                                  | ≤200% of the initial specified value |      |      |      |      |      |

### DIMENSIONS[mm]



### PART NUMBERING SYSTEM



### RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

| WV(V <sub>dc</sub> ) \ Freq.(Hz) | 50/60 | 120  | 1k   | 10k-100k |
|----------------------------------|-------|------|------|----------|
| 6.3 to 16                        | 0.80  | 1.00 | 1.30 | 1.50     |
| 25 to 35                         | 0.80  | 1.00 | 1.20 | 1.20     |
| 50                               | 0.80  | 1.00 | 1.15 | 1.20     |

The endurance of capacitors is shortened with internal heating produced by ripple current at the rate of halving the lifetime with every 5 °C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

# H5 series

■ STANDARD RATINGS

| WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Size<br>ΦD×L(mm) | tanδ | Rated ripple current<br>(mA <sub>rms</sub> /105°C,120Hz) | Part Number    |
|--------------------------|-------------|------------------|------|----------------------------------------------------------|----------------|
| 6.3(0J)                  | 22          | 4×5              | 0.28 | 23                                                       | EH50JM220C05OT |
|                          | 33          | 5×5              | 0.28 | 30                                                       | EH50JM330D05OT |
|                          | 47          | 5×5              | 0.28 | 37                                                       | EH50JM470D05OT |
|                          | 100         | 6.3×5            | 0.28 | 57                                                       | EH50JM101E05OT |
| 10(1A)                   | 10          | 4×5              | 0.24 | 20                                                       | EH51AM100C05OT |
|                          | 22          | 5×5              | 0.24 | 28                                                       | EH51AM220D05OT |
|                          | 33          | 5×5              | 0.24 | 34                                                       | EH51AM330D05OT |
|                          | 47          | 6.3×5            | 0.24 | 52                                                       | EH51AM470E05OT |
| 16(1C)                   | 4.7         | 4×5              | 0.20 | 15                                                       | EH51CM4R7C05OT |
|                          | 10          | 4×5              | 0.20 | 23                                                       | EH51CM100C05OT |
|                          | 22          | 5×5              | 0.20 | 31                                                       | EH51CM220D05OT |
|                          | 33          | 6.3×5            | 0.20 | 48                                                       | EH51CM330E05OT |
|                          | 47          | 6.3×5            | 0.20 | 56                                                       | EH51CM470E05OT |
| 25(1E)                   | 4.7         | 4×5              | 0.14 | 15                                                       | EH51EM4R7C05OT |
|                          | 10          | 5×5              | 0.14 | 22                                                       | EH51EM100D05OT |
|                          | 22          | 6.3×5            | 0.14 | 44                                                       | EH51EM220E05OT |
|                          | 33          | 6.3×5            | 0.14 | 48                                                       | EH51EM330E05OT |
| 35(1V)                   | 3.3         | 4×5              | 0.12 | 13                                                       | EH51VM3R3C05OT |
|                          | 4.7         | 4×5              | 0.12 | 17                                                       | EH51VM4R7C05OT |
|                          | 10          | 5×5              | 0.12 | 24                                                       | EH51VM100D05OT |
|                          | 22          | 6.3×5            | 0.12 | 48                                                       | EH51VM220E05OT |
| 50(1H)                   | 0.1         | 4×5              | 0.10 | 1                                                        | EH51HMR10C05OT |
|                          | 0.22        | 4×5              | 0.10 | 2                                                        | EH51HMR22C05OT |
|                          | 0.33        | 4×5              | 0.10 | 3                                                        | EH51HMR33C05OT |
|                          | 0.47        | 4×5              | 0.10 | 4                                                        | EH51HMR47C05OT |
|                          | 1           | 4×5              | 0.10 | 8                                                        | EH51HM010C05OT |
|                          | 2.2         | 4×5              | 0.10 | 13                                                       | EH51HM2R2C05OT |
|                          | 3.3         | 4×5              | 0.10 | 14                                                       | EH51HM3R3C05OT |
|                          | 4.7         | 5×5              | 0.10 | 18                                                       | EH51HM4R7D05OT |
|                          | 10          | 6.3×5            | 0.10 | 28                                                       | EH51HM100E05OT |