

## Metallized Polyester Film Capacitor

Type: **ECQUG[Class X1]**

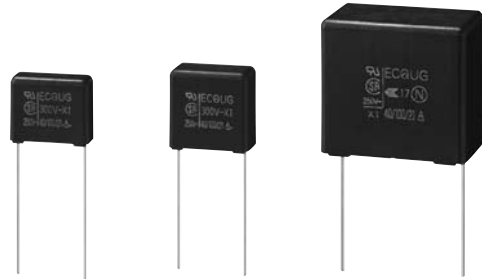
In accordance with UL/CSA and European safety regulation class X1

### ■ Features

- Equipped with a safety mechanism
- Flame-retardant plastic case and non combustible resin
- RoHS directive compliant

### ■ Recommended Applications

- Interference suppressors



### ■ Explanation of Part Numbers

|              |   |                           |   |            |   |             |   |   |           |        |          |
|--------------|---|---------------------------|---|------------|---|-------------|---|---|-----------|--------|----------|
| 1            | 2 | 3                         | 4 | 5          | 6 | 7           | 8 | 9 | 10        | 11     | 12       |
| E            | C | Q                         | U | 3          | A |             |   |   | M         | G      | A        |
| Product code |   | Dielectric & construction |   | Rated vol. |   | Capacitance |   |   | Cap. Tol. | Suffix | Cut lead |
|              |   |                           |   |            |   |             |   |   | M ±20 %   |        |          |

### ■ Applicable Standard

|       |                   |                                                                            |
|-------|-------------------|----------------------------------------------------------------------------|
| UL    | UL 1414           | Across-The-Line Capacitors<br>Antenna-Coupling and Line-By-Pass Components |
| CSA   | CAN/CSA E60384-14 | Class X1                                                                   |
| ENEC  | IEC 60384-14      | Class X1                                                                   |
| NEMKO | EN 60384-14       |                                                                            |

\*When applying this capacitor to European and American safety standards, please use type designation and rating such as ECQUG, 0.1  $\mu$ F.

\*Approval number (File No.) of safety regulations are subject to revision without notice. Ask factory for a copy of the latest file No..

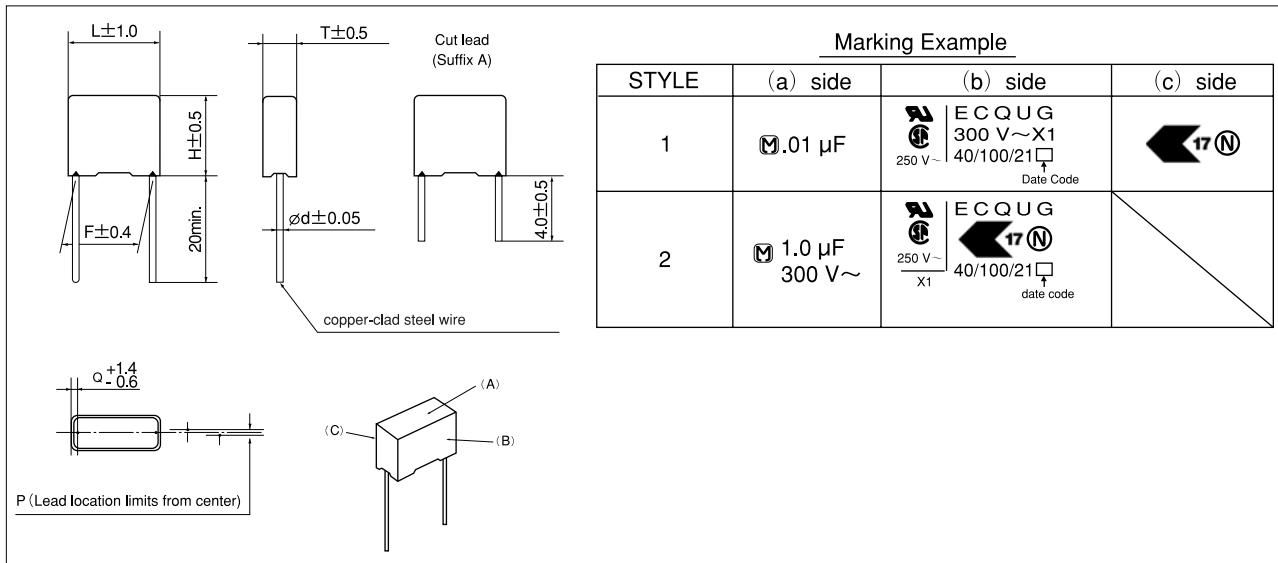
\*European standards marking are ENEC and NEMKO only. But, there are no problem using this capacitor in a device which will get approvals from certification bodies in Europe, VDE, FIMKO, SEMKO, DEMKO, and SEV etc. except VDE and FIMKO.

### ■ Specifications

|                                    |                                                                                                                                                                                            |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category temp. range               | -40 °C to +100 °C (85 °C max. on UL spec.)                                                                                                                                                 |
| Rated voltage                      | 300 VAC (IEC60384-14, CAN/CSA E60384-14), 250 VAC (UL)                                                                                                                                     |
| Capacitance range                  | 0.010 $\mu$ F to 1.0 $\mu$ F (E6)                                                                                                                                                          |
| Capacitance tolerance              | ±20 % (M)                                                                                                                                                                                  |
| Dissipation factor (tan $\delta$ ) | tan $\delta$ ≤ 1.0 % (20 °C, 1 kHz)                                                                                                                                                        |
| Withstand voltage                  | Between terminals : 575 VAC, 1768 VDC, 60 s<br>Between terminals to enclosure : 2100 VAC, 60 s                                                                                             |
| Insulation resistance (IR)         | C ≤ 0.33 $\mu$ F : IR ≥ 15000 M $\Omega$ (20 °C, 100 VDC, 60 s)<br>C > 0.33 $\mu$ F : IR ≥ 5000 M $\Omega$ · $\mu$ F (20 °C, 100 VDC, 60 s)<br>IR ≥ 2000 M $\Omega$ (20 °C, 500 VDC, 60 s) |

\* Use of this capacitor is limited to AC voltage (50 Hz or 60 Hz sine wave).

## ■Dimensions in mm (not to scale)



## ■Rating & Dimensions

### ● Capacitance tolerance : ±20 %(M)

| Part No.    | Cap.<br>(µF) | Dimensions (mm) |      |      |      |      |        |     |
|-------------|--------------|-----------------|------|------|------|------|--------|-----|
|             |              | L               | T    | H    | F    | φd   | P      | Q   |
| ECQU3A103MG | 0.010        | 15.0            | 5.0  | 11.5 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A153MG | 0.015        | 15.0            | 5.0  | 11.5 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A223MG | 0.022        | 15.0            | 5.0  | 11.5 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A333MG | 0.033        | 15.0            | 6.0  | 13.0 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A473MG | 0.047        | 15.0            | 6.0  | 13.0 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A683MG | 0.068        | 15.0            | 8.0  | 15.0 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A104MG | 0.10         | 15.0            | 8.0  | 15.0 | 12.5 | 0.60 | 0±0.5  | 1.3 |
| ECQU3A154MG | 0.15         | 18.0            | 8.0  | 16.5 | 15.0 | 0.80 | 0±0.5  | 1.3 |
| ECQU3A224MG | 0.22         | 18.0            | 9.0  | 17.5 | 15.0 | 0.80 | 0±0.5  | 1.3 |
| ECQU3A334MG | 0.33         | 26.0            | 9.0  | 18.5 | 22.5 | 0.80 | 0±0.5  | 1.5 |
| ECQU3A474MG | 0.47         | 26.0            | 10.5 | 20.0 | 22.5 | 0.80 | 0±0.75 | 1.5 |
| ECQU3A684MG | 0.68         | 26.0            | 12.5 | 22.0 | 22.5 | 0.80 | 0±0.75 | 1.5 |
| ECQU3A105MG | 1.0          | 27.0            | 16.5 | 25.5 | 22.5 | 0.80 | 0±0.75 | 2.2 |

Cap.tol.code