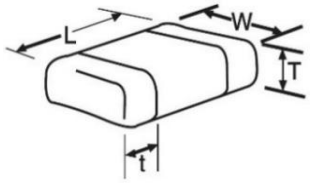
# 06031C103MAT2A Datasheet

## (0603 100V X7R 10nF ±20%)

To download data and simulation models visit: SpiCAT ONLINE TOOL

KYOCERA AVX

## Dimensions



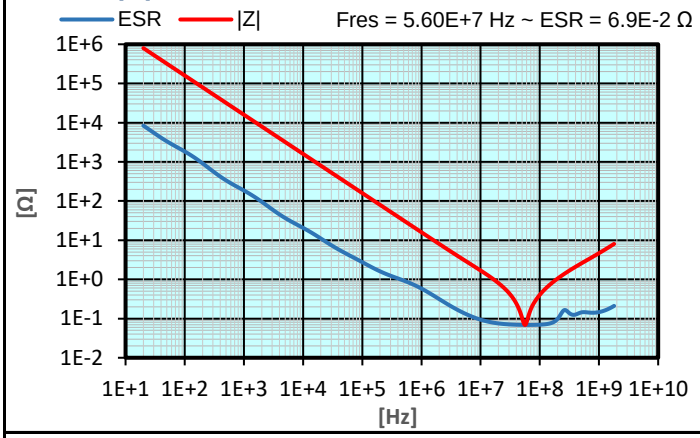

| | *millimetres* | *inches* |
|---|---|---|
| **L** | 1.6 ± 0.15 | 0.063 ± 0.006 |
| **W** | 0.81 ± 0.15 | 0.032 ± 0.006 |
| **T max.** | 0.9 | 0.035 |
| **t** | 0.35 ± 0.15 | 0.014 ± 0.006 |

## Basic Specifications

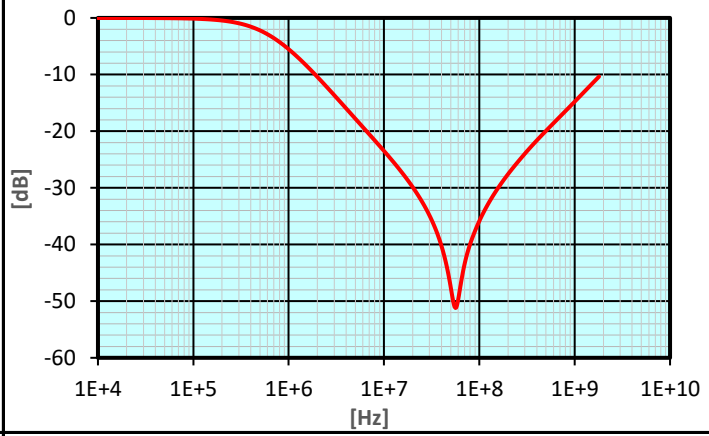
| *Item* | *Unit* | *Spec.* | *Conditions* |
|---|---|---|---|
| **Capacitance** | nF | 8 to 12 | @ 1 kHz, 1 Vrms |
| **DF** | % | 10 max. | @ 1 kHz, 1 Vrms |
| **IR** | GΩ | 100 min. | @ 100 Vdc, t = 120 s |
| **DWV** | Vdc | 250 | @ I ≤ 50mA, t ≤ 5 s |
| **Operating Temperature** | | -55°C to +125°C | |
| **Dielectric** | | X7R | |
| **AEC-Q200** | | Not qualified | |
| **RoHS Compliant** | | Yes | |
| **Termination** | | Sn | |

## Electrical Characteristics

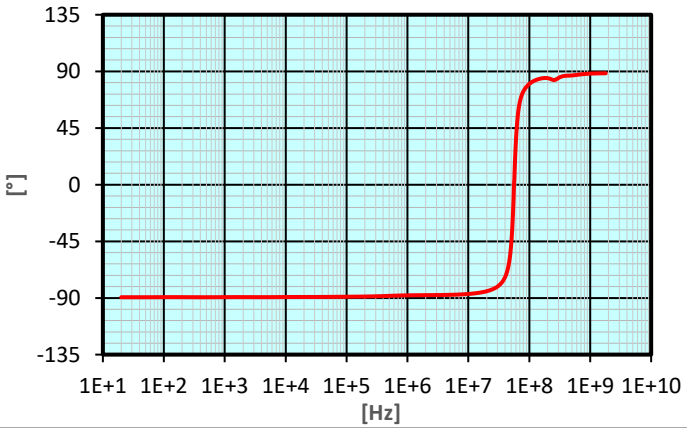
### |Z| & ESR [Ohm] vs Frequency [Hz]



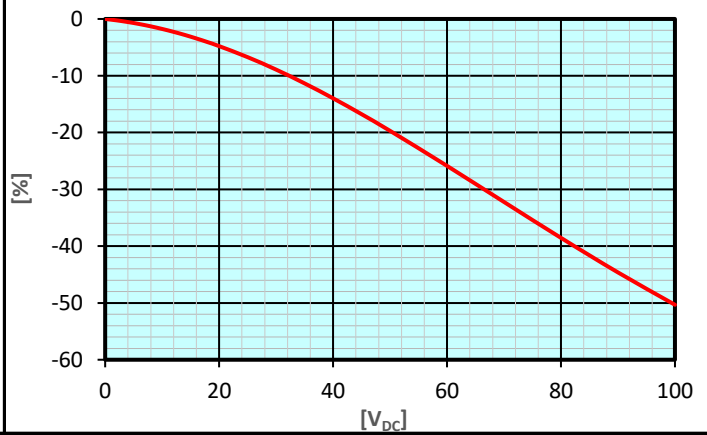

### S21 [dB] (50Ω, shunt) vs Freq. [Hz]



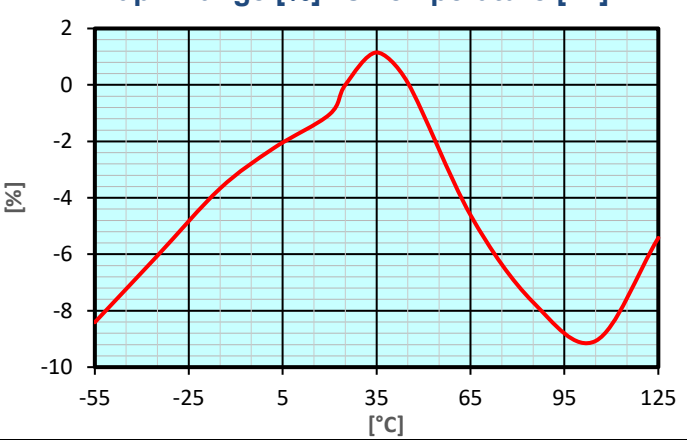

### Phase Angle [°] vs Frequency [Hz]



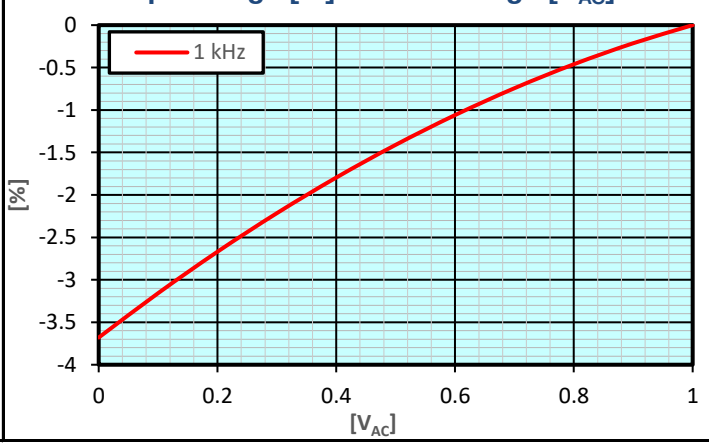

### Cap.Change [%] vs DC Voltage [$V_{DC}$]




### Cap.Change [%] vs Temperature [°C]




### Cap.Change [%] vs AC Voltage [$V_{AC}$]

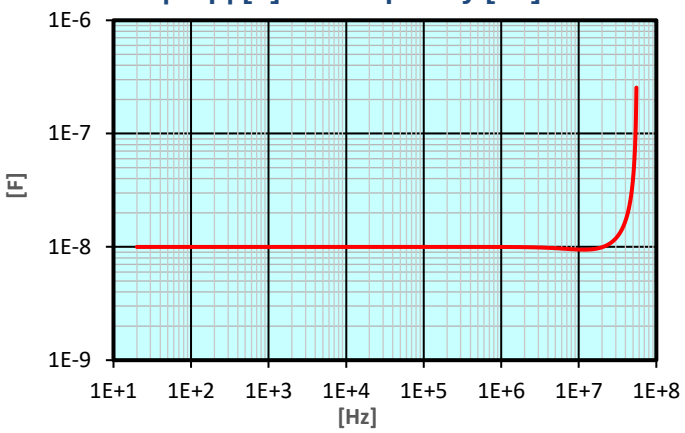




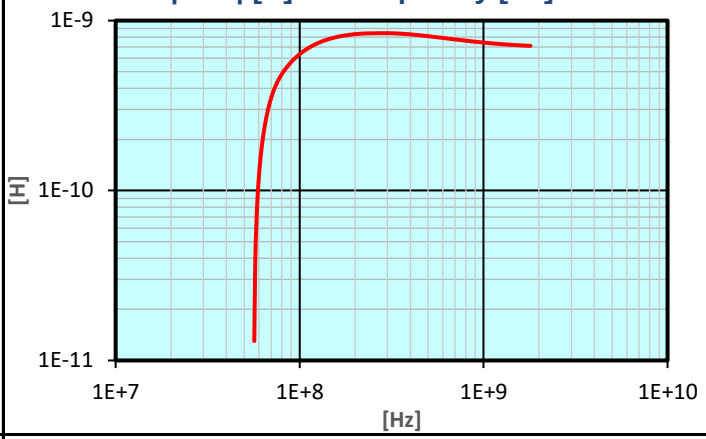
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## Electrical Characteristics

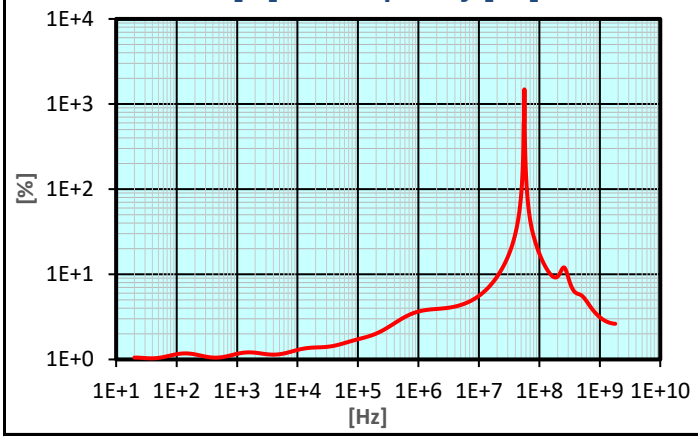
### |Cap| [F] vs Frequency [Hz]



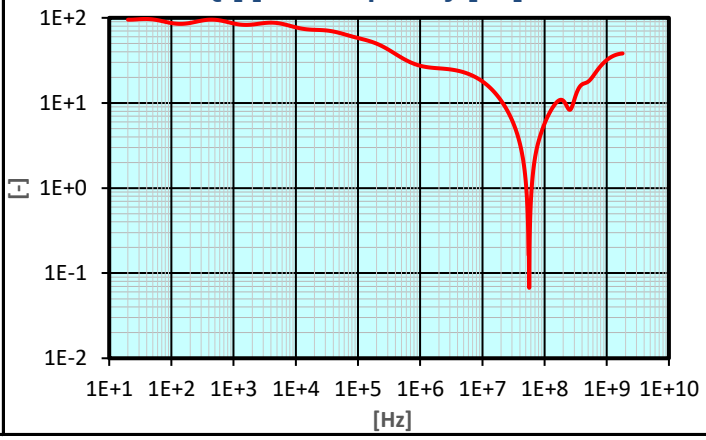

### |ESL| [H] vs Frequency [Hz]




### DF [%] vs Frequency [Hz]




### Q [-] vs Frequency [Hz]






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## (0603 100V X7R 10nF ±20%)

### How To Order

| 0805 | 5 | C | 103 | M | A | T | 2 | A |
|---|---|---|---|---|---|---|---|---|
| **Size** (L" x W") | **Voltage** 4V = 4, 6.3V = 6, 10V = Z, 16V = Y, 25V = 3, 50V = 5, 100V = 1, 200V = 2, 500V = 7 | **Dielectric** X7R = C | **Capacitance** Code (In pF) 2 Sig. Digits + Number of Zeros | **Capacitance Tolerance** J = ± 5%* K = ±10% M = ± 20% *≤1µF only, contact factory for additional values | **Failure Rate** A = Not Applicable 4=Automotive | **Terminations** T = Plated Ni and Sn Z= FLEXITERM®** *Optional termination **See FLEXITERM® X7R section | **Packaging** 2 = 7" Reel 4 = 13" Reel **Contact Factory For Multiples** | **Special Code** A = Std. Product |

NOTE: Contact factory for availability of Termination and Tolerance Options for Specific Part Numbers.
Contact factory for non-specified capacitance values.

**NOTICE:** Specifications are subject to change without notice. All statements, information and data given herein are beleived to be accurate and reliable, but are presented without guarantee or responsibility of any kind, expressed or implied. Specifications are typical and may not apply to all applications.