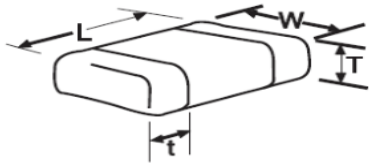
# KGM31ACG2A103JU Datasheet

**(1206 100V C0G 10nF ±5%)**

## Dimensions



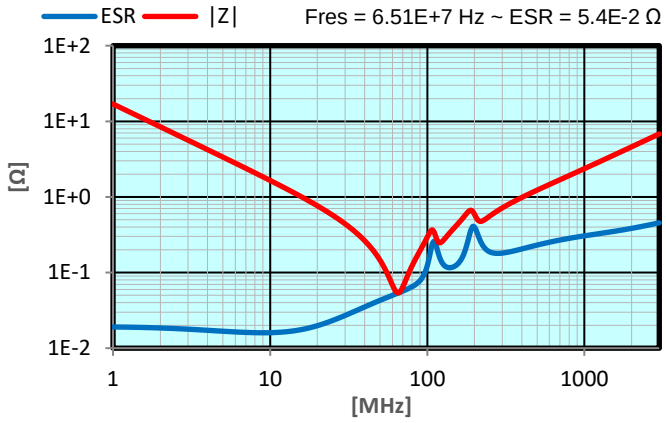

| | *millimetres (inches)* |
|---|---|
| **L** | 3.20 ± 0.20 (0.126 ± 0.008) |
| **W** | 1.60 ± 0.20 (0.063 ± 0.008) |
| **T max.** | 1.8 (0.071) |
| **t** | 0.50 ± 0.25 (0.020 ± 0.010) |

## Basic Specifications

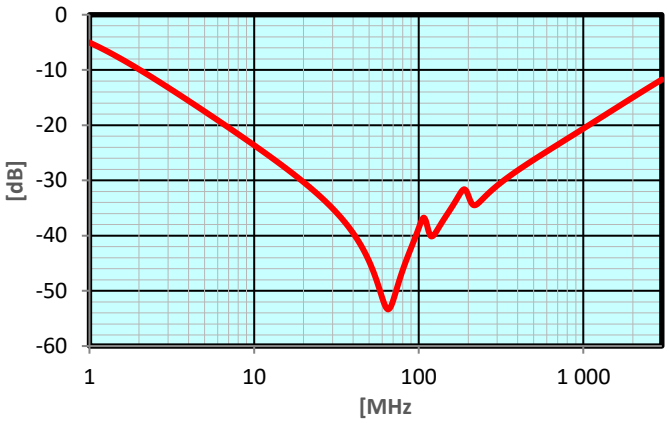
| *Item* | *Unit* | *Spec.* | *Conditions* |
|---|---|---|---|
| **Capacitance** | nF | 9.5 to 10.5 | @ 1 kHz, 1 Vrms |
| **DF** | % | 0.1 max. | @ 1 kHz, 1 Vrms |
| **IR** | GΩ | 50 | @ 100 Vdc,t =60 ± 5 s |
| **DWV** | Vdc | 250 | @ I ≤ 50mA, t ≤ 5 s |
| **Op. Temperature** | | -55 °C to +125 °C | |
| **Dielectric** | | C0G | |
| **Product Level** | | General | |
| **RoHS Compliant** | | Yes | |
| **Termination** | | Sn | |

## Electrical Characteristics

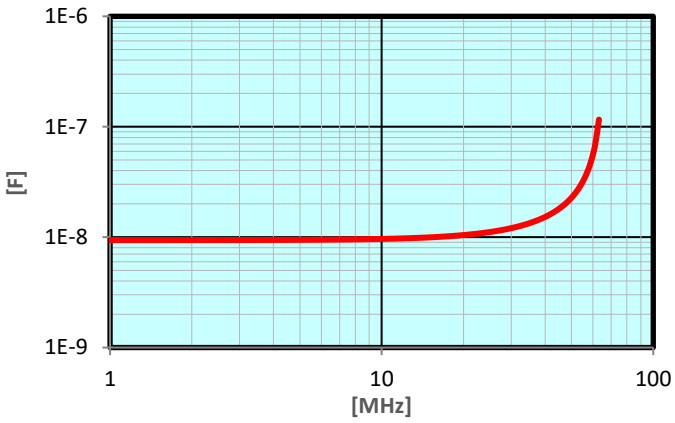
### |Z| & ESR [Ohm] vs Frequency [MHz]



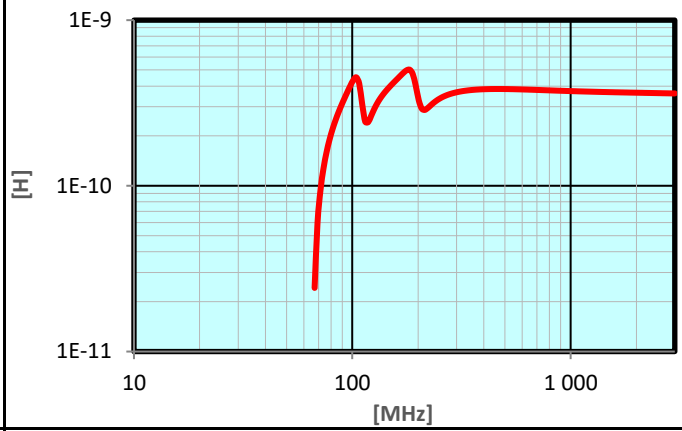

### S21 [dB] (50Ω, shunt) vs Freq. [MHz]



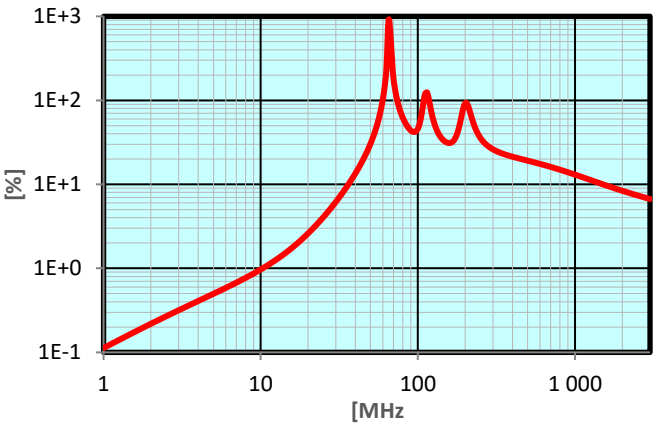

### |Cap| [F] vs Frequency [MHz]



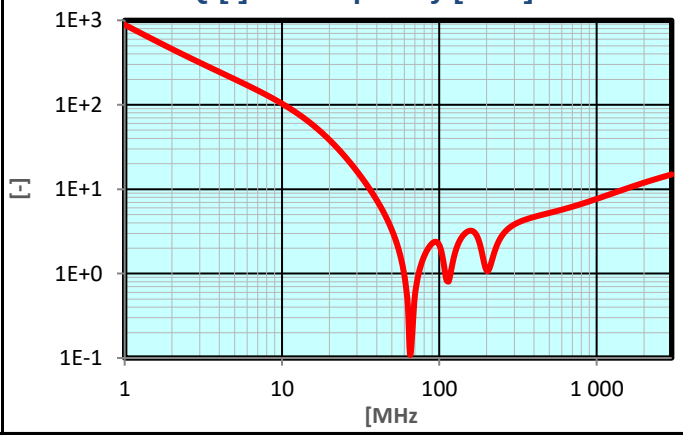

### |ESL| [H] vs Frequency [MHz]




### DF [%] vs Frequency [MHz]




### Q [-] vs Frequency [MHz]





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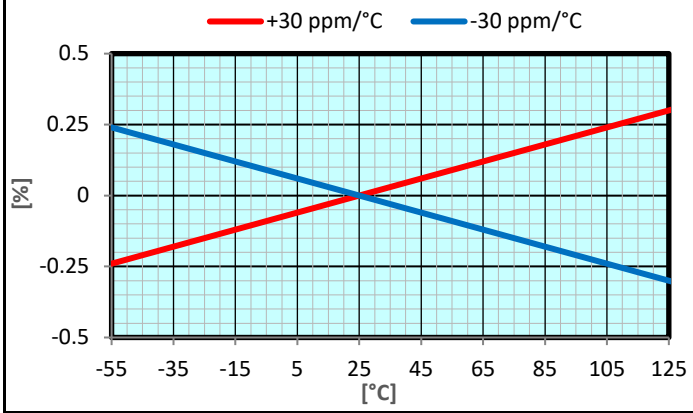
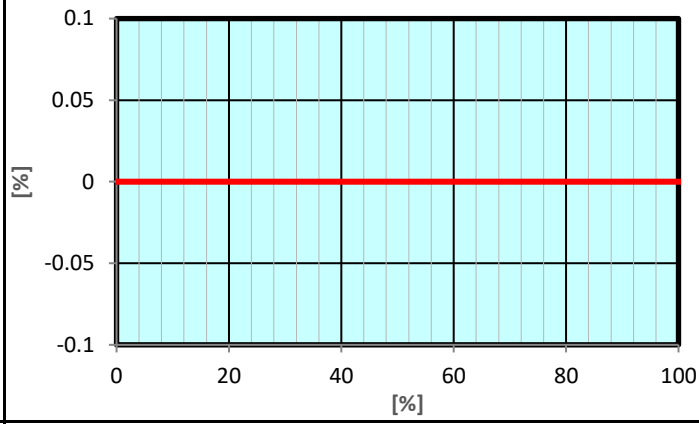
**(1206 100V C0G 10nF ±5%)**

## Electrical Characteristics

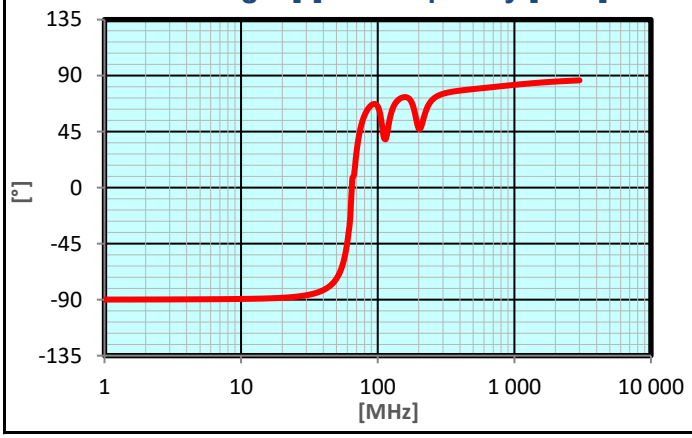
### Typ. Cap. Change [%] vs Temperature [°C] Envelope




### Cap.Change [%] vs Rated DC Voltage [%]




### Phase Angle [°] vs Frequency [MHz]




## Part Number Information

| K | G | M | 21 | C | R5 | 1E | 103 | K | | T | #### |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Symbol:** | **Product Level:** | **Requirement:** | **Size:** | **Thickness:** | **Dielectric:** | **Voltage:** | **Capacitance:** | **Tolerance:** | | **Packing:** | **Optional:** |
| KAVX | G General | M Standard | **Code:** **EIA:** | See catalog | CG C0G | **Multiplier:** **Base:** | (2 significant digits | A ± 0.05 pF | H | | See catalog for |
| | A Automotive | U Hi-Q (Special function) | 02 01005 | for list of | R5 X5R | 0 1x A 1 | + no of zeros) | B ± 0.1 pF | T | | optional codes |
| | (AEC-Q200) | E ESD (Special function) | 03 0201 | codes | S6 X6S | 1 10x N 1.5 | | C ± 0.25 pF | U | Φ 180 (7 inch)* | |
| | M Medical | L Low inductance reverse Geometry | 05 0402 | | T6 X6T | 2 100x D 2 | **Examples:** | D ± 0.5 pF | Y | | |
| | | A Low Inductance LGA | 15 0603 | | R7 X7R | 3 1000x E 2.5 | 100 = 10 pF | F ± 1 % | V | | |
| | | F Flexiterm (Special function/structure) | 21 0805 | | S7 X7S | U 3 | 102 = 1000 pF | G ± 2 % | | | |
| | | S Flexisafe (Special function/structure) | 31 1206 | | T7 X7T | V 3.5 | 224 = 220 nF | J ± 5 % | M | | |
| | | G Gold Termination (Special Structure) | 32 1210 | | R8 X8R | G 4 | 105 = 1 µF | K ± 10 % | L | | |
| | | C IDC (Special structure) | 42 1808 | | L8 X8L | H 5 | | M ± 20 % | N | Φ 330 (13 inch)* | |
| | | Q Ultra Low ESR | 43 1812 | | G8 X8G | J 6.3 | | | K | | |
| | | | 44 1825 | | V5 Y5V | | | | S | | |
| | | | 55 2220 | | | **Example:** | | | | | |
| | | | 56 2225 | | | 1E = 25V (10 x 2.5) | | | X | Waffle pack | |
| | | | 91 3640 | | | | | | | | |

**Note:**
* See catalog for more information.

**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.