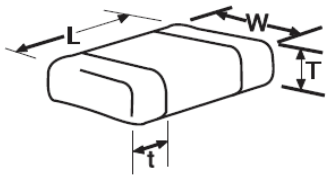
# KGM05AR51A224KH Datasheet

**(0402 10 V X5R 220nF ±10%)**

## Dimensions



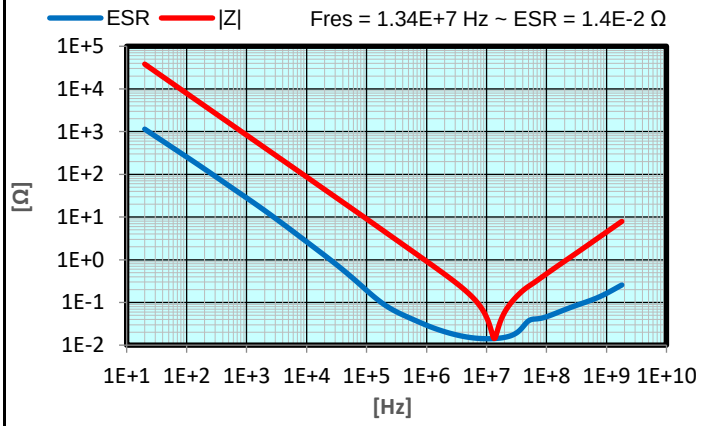

| | *millimetres (inches)* |
|---|---|
| **L** | 1.00 ± 0.20 (0.040 ± 0.008) |
| **W** | 0.50 ± 0.20 (0.020 ± 0.008) |
| **T max.** | 0.56 (0.022) |
| **t** | 0.25 ± 0.15 (0.010 ± 0.006) |

## Basic Specifications

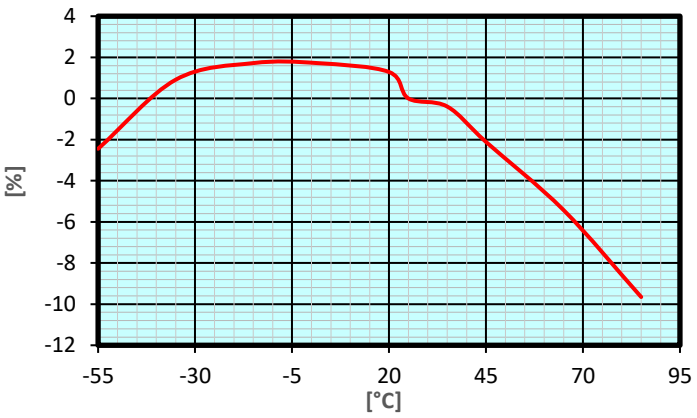
| *Item* | *Unit* | *Spec.* | *Conditions* |
|---|---|---|---|
| **Capacitance** | nF | 198 to 242 | @ 1 kHz, 1 Vrms |
| **DF** | % | 12.5 max. | @ 1 kHz, 1 Vrms |
| **IR** | GΩ | 2.2 min. | @ 10 Vdc |
| **DWV** | Vdc | 25 | @ I ≤ 50mA, t ≤ 5 s |
| **Operating Temperature** | | -55 °C to +85 °C | |
| **Dielectric** | | X5R | |
| **Product Level** | | General | |
| **RoHS Compliant** | | Yes | |
| **Termination** | | Sn | |

## Electrical Characteristics

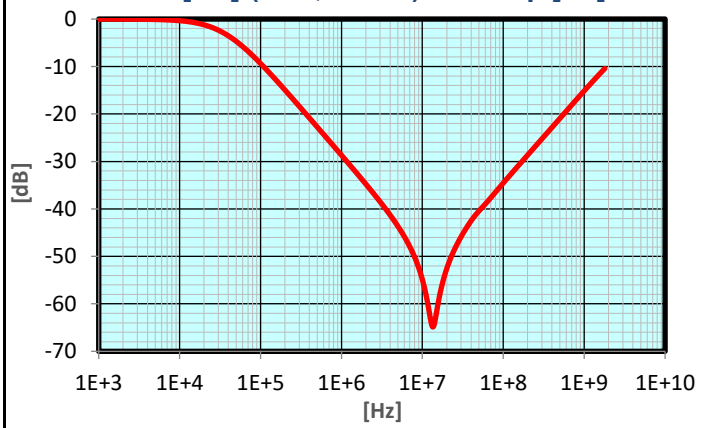
### |Z| & ESR [Ohm] vs Frequency [Hz]



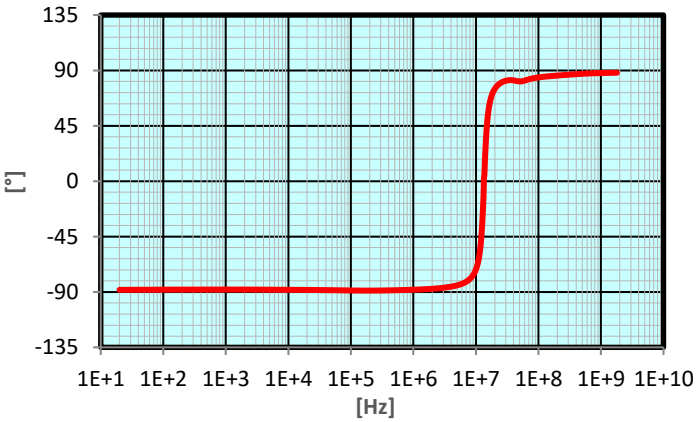

### Cap.Change [%] vs Temperature [°C]



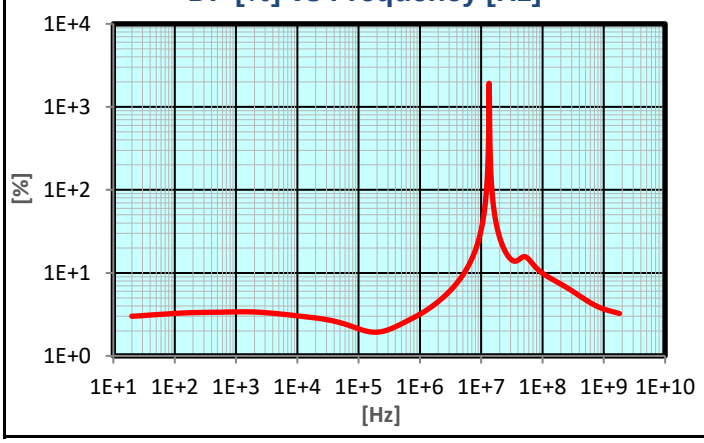

### S21 [dB] (50Ω, shunt) vs Freq. [Hz]



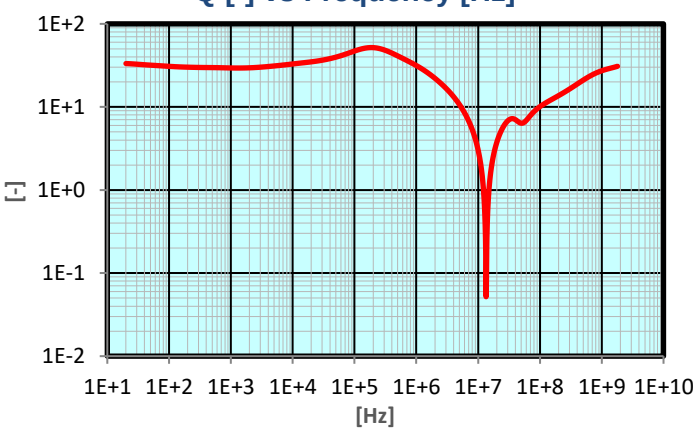

### Phase Angle [°] vs Frequency [Hz]




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




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



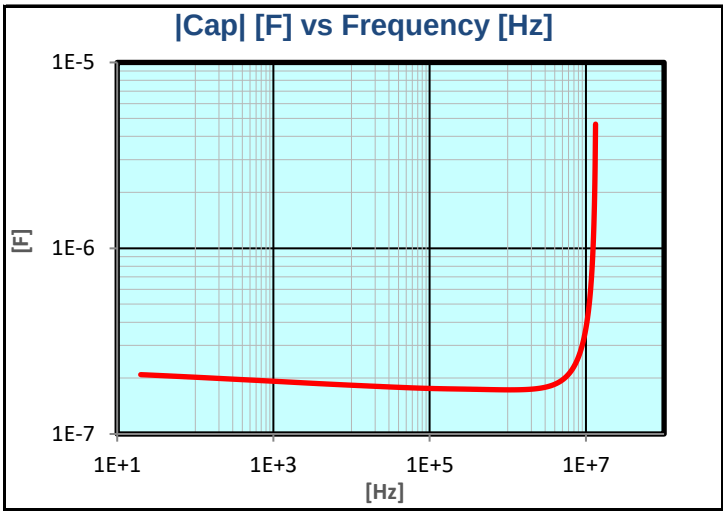


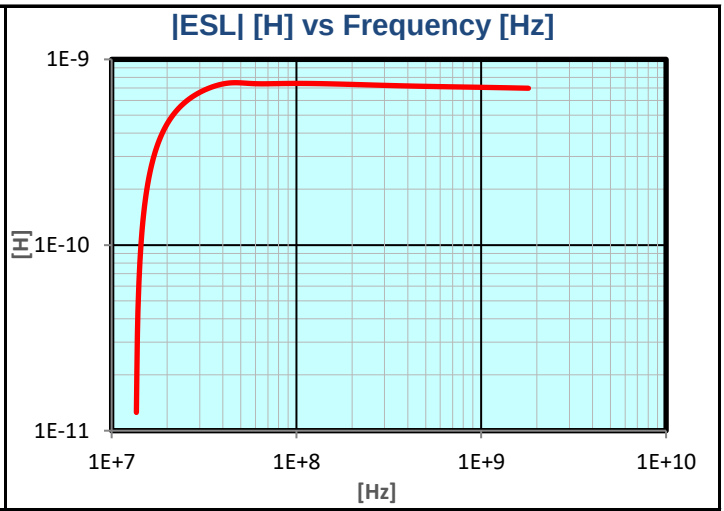
© KYOCERA AVX

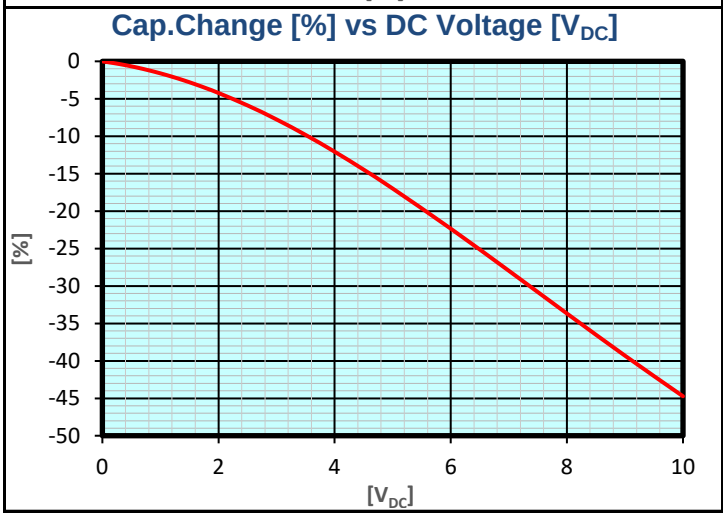
# KGM05AR51A224KH Datasheet

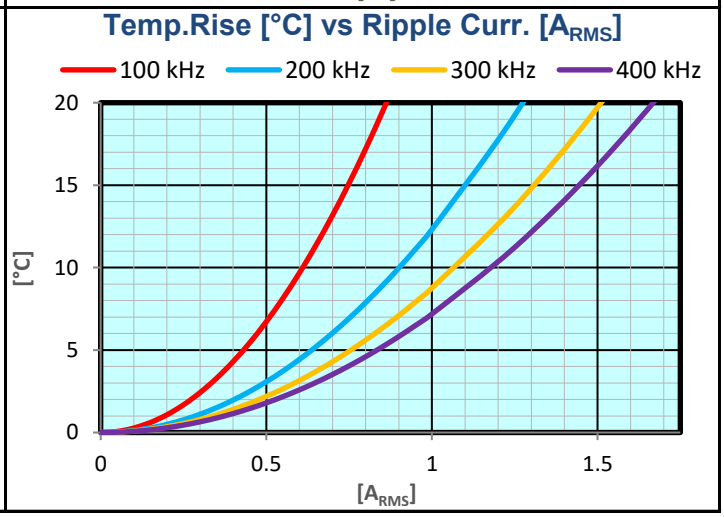
**(0402 10 V X5R 220nF ±10%)**

## Electrical Characteristics




## How To Order

| 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.


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