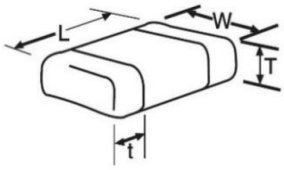
# KGM05AR71H471KN Datasheet

**(0402 50 V X7R 470pF ±10%)**

To download data and simulation models visit: SpiCAT ONLINE TOOL

KYOCERA AVX

## Dimensions



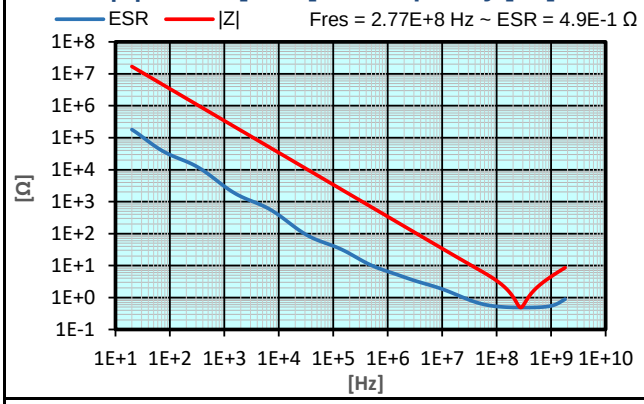

| | *millimetres* | *inches* |
|---|---|---|
| **L** | 1 ± 0.1 | 0.039 ± 0.004 |
| **W** | 0.5 ± 0.1 | 0.02 ± 0.004 |
| **T max.** | 0.56 | 0.022 |
| **t** | 0.25 ± 0.15 | 0.01 ± 0.006 |

## Basic Specifications

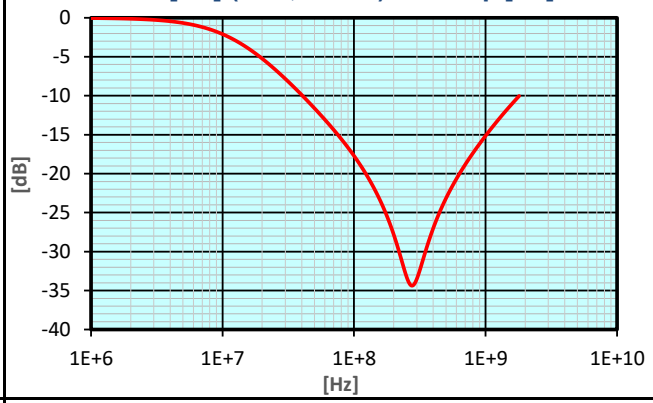
| *Item* | *Unit* | *Spec.* | *Conditions* |
|---|---|---|---|
| **Capacitance** | pF | 423 to 517 | @ 1 kHz, 1 Vrms |
| **DF** | % | 10 max. | @ 1 kHz, 1 Vrms |
| **IR** | GΩ | 100 min. | @ 50 Vdc, t = 120 s |
| **DWV** | Vdc | 125 | @ I ≤ 50mA, t ≤ 5 s |
| **Operating Temperature** | | -55°C to +125°C | |
| **Dielectric** | | X7R | |
| **Product Level** | | General | |
| **RoHS Compliant** | | Yes | |
| **Termination** | | Sn | |

## Electrical Characteristics

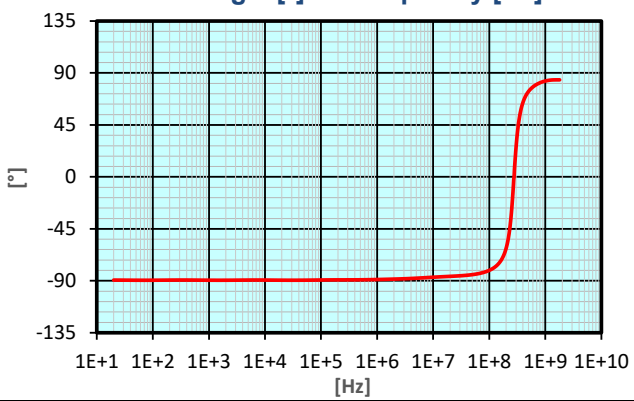
### |Z| & ESR [Ohm] vs Frequency [Hz]



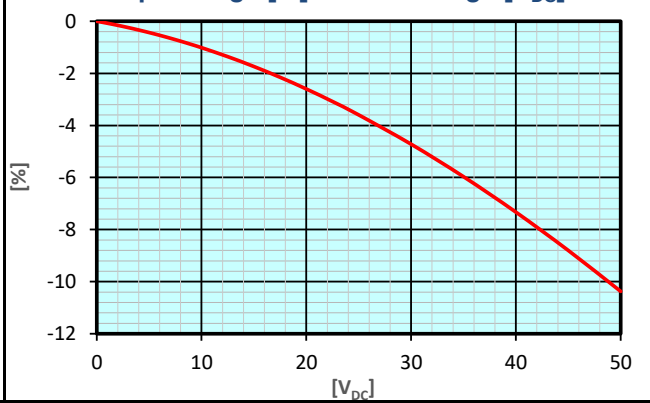

### S21 [dB] (50Ω, shunt) vs Freq. [Hz]



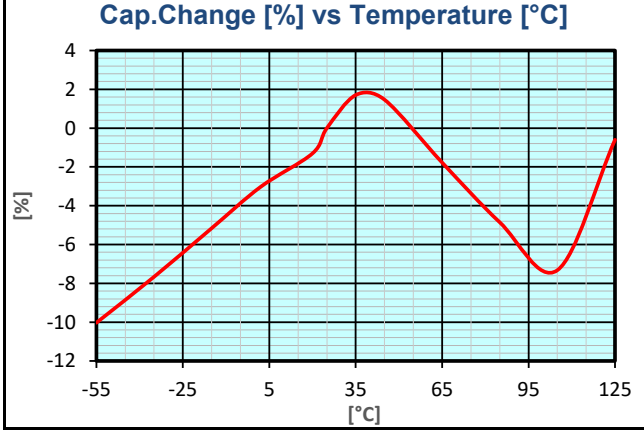

### Phase Angle [°] vs Frequency [Hz]



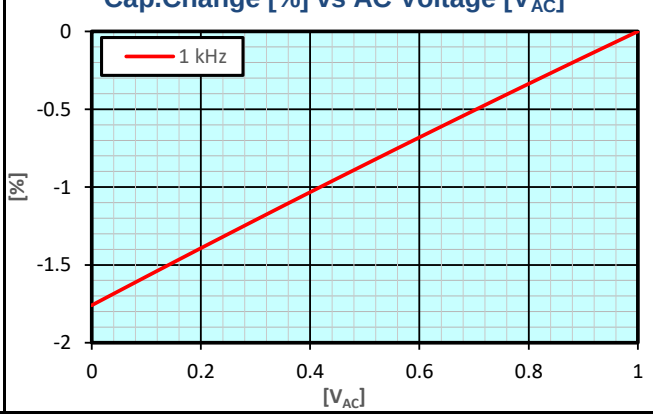

### Cap.Change [%] vs DC Voltage [$V_{DC}$]




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




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





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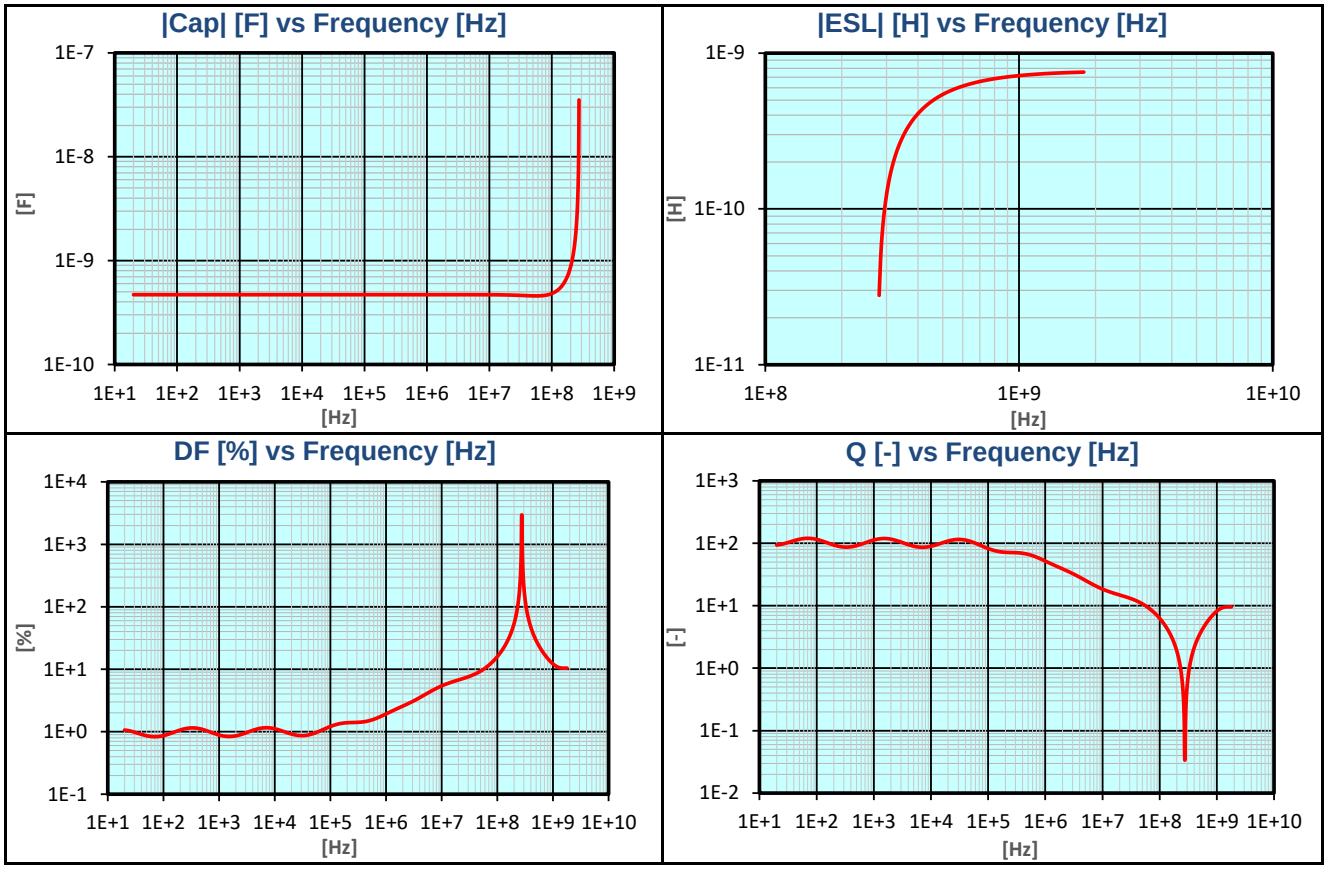
## Electrical Characteristics



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## (0402 50 V X7R 470pF ±10%)

### 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 | |
| | M Medical | L Low inductance reverse Geometry | 05 0402 | | T6 X6T | 2 100x D 2 | **Examples:** | D ± 0.5 pF | Y | Φ 180 (7 inch)* |
| | | 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.