

# KAM05CT70E475M#

( 0402, 2.5V, X7T, 4.7 $\mu$ F, +/-20 %, AEC-Q200, Sn Term )  
Multilayer Ceramic Chip Capacitor Datasheet



## DIMENSIONS



|        | millimetres   | inches           |
|--------|---------------|------------------|
| L      | 1.0 $\pm$ 0.2 | 0.04 $\pm$ 0.008 |
| W      | 0.5 $\pm$ 0.2 | 0.02 $\pm$ 0.008 |
| T max. | 0.70          | 0.028            |
| t      | 0.15 to 0.35  | 0.006 to 0.014   |

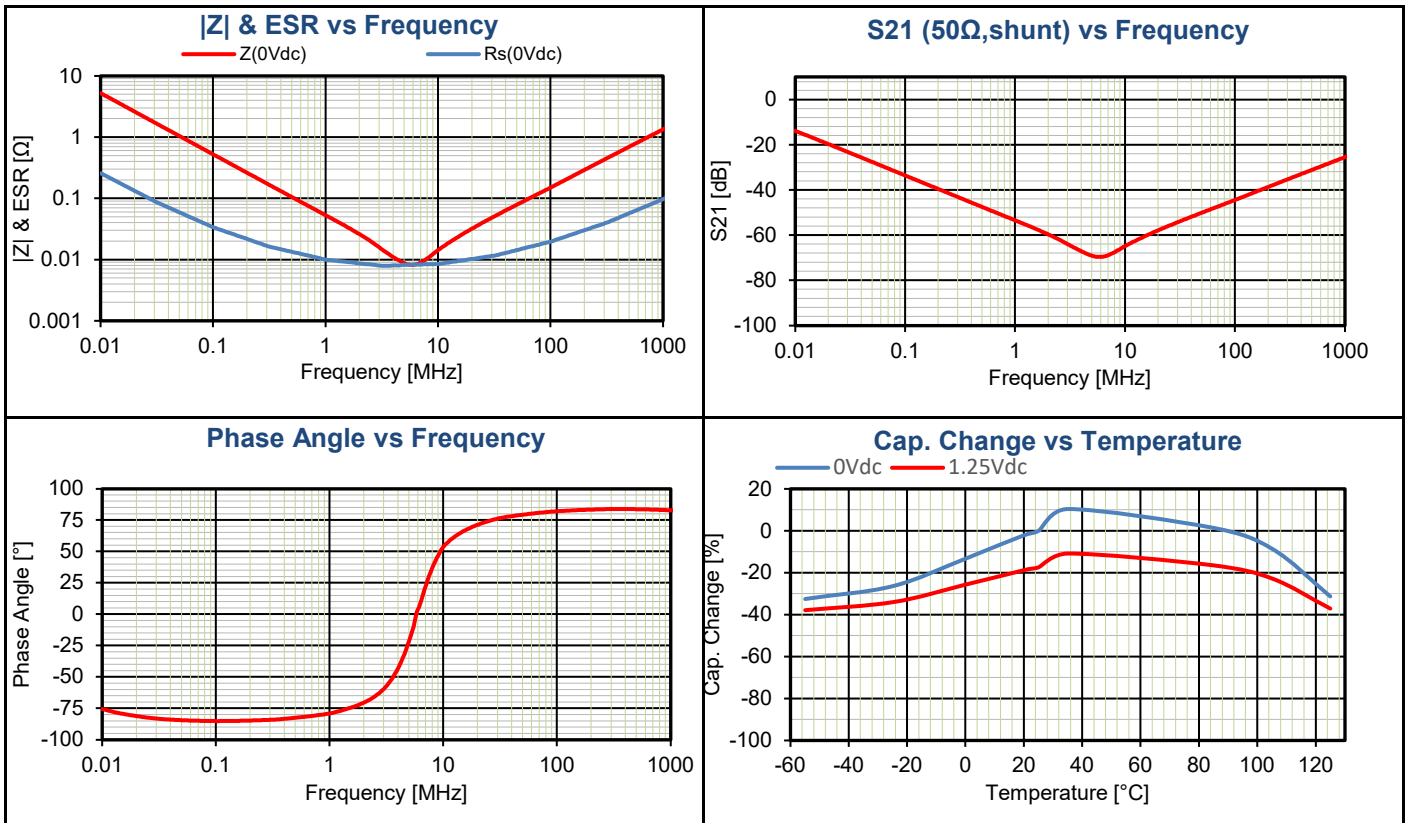
\*Inch is for reference only.

## BASIC SPECIFICATIONS

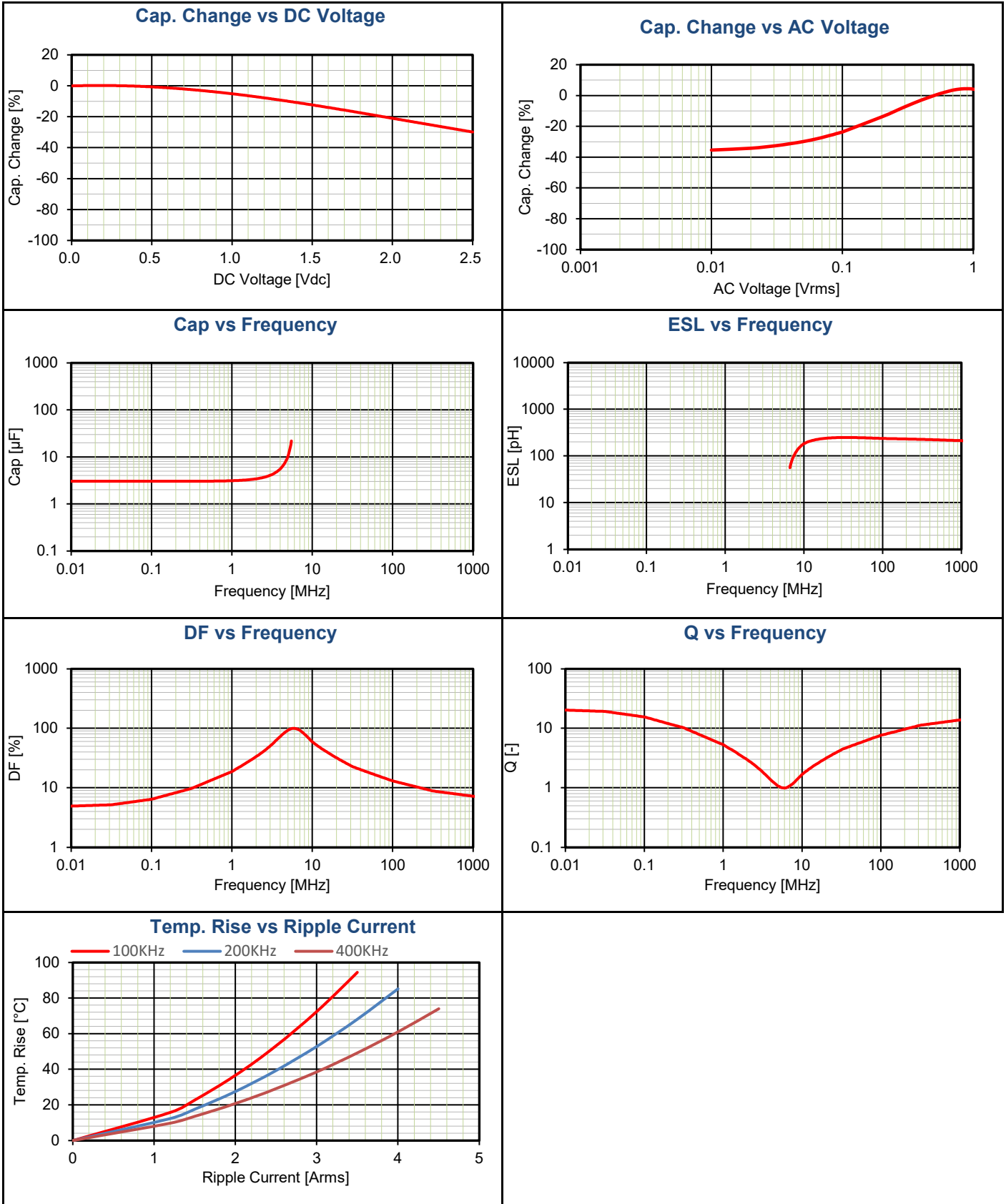
| Item                  | Spec.            | Conditions                  |
|-----------------------|------------------|-----------------------------|
| Rated Voltage         | 2.5 V            |                             |
| Capacitance           | 4.7 $\mu$ F      | 1kHz, 0.5Vrms               |
| Capacitance Tolerance | +/-20 %          |                             |
| DF Max                | 12.5 %           | 1kHz, 0.5Vrms               |
| IR Min                | 10.64 M $\Omega$ | 2.5Vdc, t=60s               |
| DWV                   | 6.25 Vdc         | I $\leq$ 50mA, t $\leq$ 5 s |

|                       |                                    |
|-----------------------|------------------------------------|
| Case Size EIA (JIS)   | 0402(1005)                         |
| Operating Temperature | -55°C to +125°C                    |
| Dielectric            | X7T                                |
| Grade                 | AEC-Q200                           |
| RoHS Compliant        | Yes                                |
| Termination           | Sn                                 |
| Packaging             | T&R 7in (180mm) & T&R 13in (330mm) |

## ELECTRICAL CHARACTERISTICS



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## PART NUMBER INFORMATION

| K  | A  | M  | 05 | C  | T7 | 0E | 475 | M  | #   | □□□□ |
|----|----|----|----|----|----|----|-----|----|-----|------|
| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8.  | 9. | 10. | 11.  |

### 1.Symbol

KAVX

### 2.Grade

G General  
A Automotive  
(AEC-Q200)  
M Medical

### 3.Requirement

M Standard  
U Hi-Q  
E ESD  
T Low Profile  
L Low Inductance  
A Low Inductance  
(LGA)  
F Flexitem®  
S Flexisafe  
Q Ultra Low ESR  
N 3term

### 4.Size

02 01005  
03 0201  
05 0402  
15 0603  
21 0805  
31 1206  
32 1210  
42 1808  
43 1812  
44 1825  
55 2220  
56 2225  
91 3640

### 5.Thickness

See catalog  
for list of codes

### 6.Dielectric

CG C0G  
CH C0H  
R5 X5R  
S6 X6S  
T6 X6T  
R7 X7R  
S7 X7S  
T7 X7T  
R8 X8R  
L8 X8L  
G8 X8G  
V5 Y5V  
K7 X7R(KAVX)

### 7.Voltage

| Multiplier | Base  |
|------------|-------|
| 0 1x       | A 1   |
| 1 10x      | N 1.5 |
| 2 100x     | C 1.6 |
| 3 1000x    | D 2   |
|            | E 2.5 |
|            | U 3   |
|            | V 3.5 |
|            | G 4   |
|            | H 5   |
|            | J 6.3 |

### Example

1E = 25V (10 x 2.5)

### 8.Capacitance

Capacitance expressed in pF

2 significant digits  
+ No. of zeros

For Values < 10pF Letter R  
denotes decimal point

### Example

R50 0.5pF  
1R0 1pF  
100 10pF  
101 100pF  
103 10nF  
105 1 $\mu$ F  
107 100 $\mu$ F

### 9.Tolerance

A +/-0.05pF  
B +/-0.1pF  
C +/-0.25pF  
D +/-0.5pF  
F +/-1%  
G +/-2%  
J +/-5%  
K +/-10%  
M +/-20%  
Z +80/-20%

### 10.Packing

T&R 180mm(7in)

H  
T  
U  
Y  
V  
P  
Q

T&R 330mm(13in)

M  
L  
N  
K  
S  
W

Waffle

X

### 11.Option

See catalog for  
optional codes

Please check catalog for part number availability

NOTICE: Specifications are subject to change without notice. All statements, information and data given herein are believed 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.