

# SURFACE MOUNT MULTILAYER CERAMIC

## SMC (Surface Mount) SERIES

The SMC Series are ideally suited for thick-film hybrid circuit and automated surface mounting on any printed circuit board. The nickel barrier terminations consist of a nickel barrier layer over a silver metallization and then finished by an electroplated solder layer to ensure the terminations have good solderability.

### RATINGS

**Capacitance Range:** 1.0pf to 1.0 $\mu$ f

**Voltage:** 50VDC

### PERFORMANCE SPECIFICATIONS

**Operating Temperature Range:**

NPO - -55 ° to +125°C

X7R - -55 ° to +125°C

Z5U - +10 ° to +85°C

Y5V - -25 ° to +85°C

**Tolerance Range:**

C -  $\pm 0.25\mu$ F

J -  $\pm 5\%$

K -  $\pm 10\%$

Z - +80%, -20%

**Temperature Coefficient:**

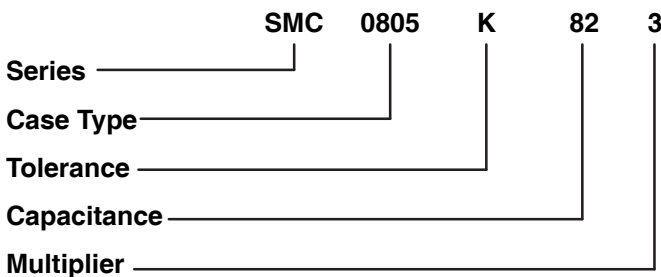
NPO - Stable

X7R -  $\pm 15\%$

Z5U - +22%, -56%

Y5V - +22%, -82%

### ORDERING INFORMATION



### CAPACITANCE RANGE:

#### Capacitance

| Cap    | Temp. Coeff. | Cap      | Temp. Coeff. | Cap           | Temp. Coeff. |
|--------|--------------|----------|--------------|---------------|--------------|
| 1.0pF  | NPO          | 68.0pF   | NPO          | 4700.0pF      | X7R          |
| 1.2pF  | NPO          | 82.0pF   | NPO          | 5600.0pF      | X7R          |
| 1.5pF  | NPO          | 100.0pF  | NPO          | 6800.0pF      | X7R          |
| 1.8pF  | NPO          | 120.0pF  | NPO          | 8200.0pF      | X7R          |
| 2.2pF  | NPO          | 150.0pF  | NPO          | 0.010 $\mu$ F | X7R          |
| 2.7pF  | NPO          | 180.0pF  | NPO          | 0.012 $\mu$ F | X7R          |
| 3.3pF  | NPO          | 220.0pF  | NPO          | 0.015 $\mu$ F | X7R          |
| 3.9pF  | NPO          | 270.0pF  | NPO          | 0.018 $\mu$ F | X7R          |
| 4.7pF  | NPO          | 330.0pF  | NPO          | 0.022 $\mu$ F | X7R          |
| 5.6pF  | NPO          | 390.0pF  | NPO          | 0.027 $\mu$ F | X7R          |
| 6.8pF  | NPO          | 470.0pF  | NPO          | 0.033 $\mu$ F | X7R          |
| 8.3pF  | NPO          | 560.0pF  | NPO          | 0.039 $\mu$ F | X7R          |
| 10.0pF | NPO          | 680.0pF  | NPO          | 0.047 $\mu$ F | X7R          |
| 12.0pF | NPO          | 820.0pF  | NPO          | 0.056 $\mu$ F | X7R          |
| 15.0pF | NPO          | 1000.0pF | NPO          | 0.068 $\mu$ F | X7R          |
| 18.0pF | NPO          | 1000.0pF | X7R          | 0.082 $\mu$ F | X7R          |
| 22.0pF | NPO          | 1200.0pF | X7R          | 0.1 $\mu$ F   | X7R          |
| 27.0pF | NPO          | 1500.0pF | X7R          | 0.1 $\mu$ F   | Z5U          |
| 30.0pF | NPO          | 1800.0pF | X7R          | 0.22 $\mu$ F  | Z5U          |
| 33.0pF | NPO          | 2200.0pF | X7R          | 0.33 $\mu$ F  | Y5V          |
| 39.0pF | NPO          | 2700.0pF | X7R          | 0.47 $\mu$ F  | Y5V          |
| 47.0pF | NPO          | 3300.0pF | X7R          | 1.0 $\mu$ F   | Y5V          |
| 56.0pF | NPO          | 3900.0pF | X7R          | 2.2 $\mu$ F   | Y5V          |

### MECHANICAL SPECIFICATIONS (Figure 1)

#### Dimensions in (mm)

| Case | L          | W          | H          | tw         |
|------|------------|------------|------------|------------|
| 0805 | .080 (2.0) | .050 (1.2) | .051 (1.3) | .020 (0.5) |
| 1206 | .126 (3.2) | .063 (1.6) | .031 (0.8) | .020 (0.5) |

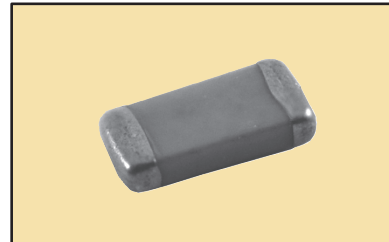


FIGURE 1

