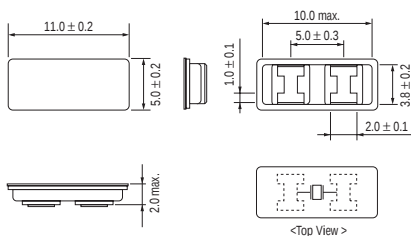


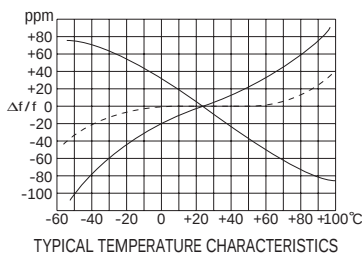
## 49SMX-CB (N)



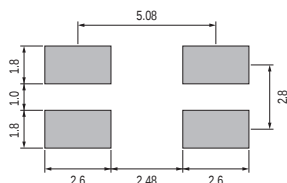
## 49SMX-CB (N)



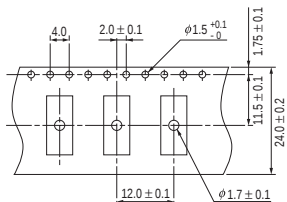
## AT-CUT



## SOLDERING PATTERN



## TAPE SPECIFICATIONS



QTY/REEL REEL DIA  
49SMX-CB(N) : 2000 pcs 330 mm

## SPECIFICATIONS

- Package type ..... 49SMX-CB(N)
- Frequency range ..... 3.579545 MHz to 80.000 MHz
- Calibration tolerance ..... O:  $\pm 10$  ppm at  $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$   
Q:  $\pm 15$  ppm at  $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$   
R:  $\pm 20$  ppm at  $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$   
T:  $\pm 30$  ppm at  $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
- Temperature stability (referred to  $+25^{\circ}\text{C}$ ) ..... See table below

| Temp.<br>Ope.<br>Temp. Range.     | Stability | PPM               |                   |                  |                  |                  |                  |
|-----------------------------------|-----------|-------------------|-------------------|------------------|------------------|------------------|------------------|
|                                   |           | $\pm 5.0$<br>(JJ) | $\pm 7.5$<br>(LL) | $\pm 10$<br>(OO) | $\pm 15$<br>(QQ) | $\pm 20$<br>(RR) | $\pm 30$<br>(TT) |
| 0 ~ $+50^{\circ}\text{C}$ (eee)   |           | O                 | O                 | O                | O                | O                | O                |
| -10 ~ $+50^{\circ}\text{C}$ (gee) |           | O                 | O                 | O                | O                | O                | O                |
| -10 ~ $+60^{\circ}\text{C}$ (ggg) |           | O                 | O                 | O                | O                | O                | O                |
| -10 ~ $+70^{\circ}\text{C}$ (gii) |           |                   | O                 | O                | O                | O                | O                |
| -20 ~ $+70^{\circ}\text{C}$ (iii) |           |                   |                   | O                | O                | O                | O                |
| -30 ~ $+75^{\circ}\text{C}$ (kii) |           |                   |                   |                  | O                | O                | O                |
| -30 ~ $+80^{\circ}\text{C}$ (kkk) |           |                   |                   |                  | O                | O                | O                |
| -35 ~ $+80^{\circ}\text{C}$ (lkk) |           |                   |                   |                  |                  | O                | O                |
| -40 ~ $+85^{\circ}\text{C}$ (mll) |           |                   |                   |                  |                  | O                | O                |

- Equivalent series resistance (ESR) ..... See table below

| FREQUENCY | 3.579 MHz ±       | 4.000 MHz ±       | 5.000 MHz ±       | 6.000 MHz ±        | 9.000 MHz ±      |
|-----------|-------------------|-------------------|-------------------|--------------------|------------------|
| ESR       | 150 $\Omega$ max. | 120 $\Omega$ max. | 100 $\Omega$ max. | 80 $\Omega$ max.   | 60 $\Omega$ max. |
| FREQUENCY | 10.000 MHz ±      | 13.000 MHz ±      | 19.000 MHz ±      | 36.000 MHz ± (30T) |                  |
| ESR       | 50 $\Omega$ max.  | 40 $\Omega$ max.  | 30 $\Omega$ max.  | 60 $\Omega$ max.   |                  |

- Shunt capacitance (Co) ..... 5 pF max.
- Drive level (P) ..... 100  $\mu\text{W}$  max. (10  $\mu\text{W}$  for testing)
- Aging .....  $\pm 5$  ppm max. at  $+25^{\circ}\text{C}$  per year
- Cut ..... AT-Cut
- Reflow soldering condition ..... 10 seconds max. at  $+235^{\circ}\text{C} \pm 5^{\circ}\text{C}$

## PART NUMBERING GUIDE

19.200 MHz 49SMX-CB(N) R / RR / lkk / 20

Frequency ..... Load Capacitance (CL)  
Package Type ..... Operating Temperature Range  
Calibration Tolerance ..... Temperature Stability

## EXAMPLE

| FREQUENCY  | PACKAGE     | CALIBRATION TOLERANCE | TEMPERATURE STABILITY |
|------------|-------------|-----------------------|-----------------------|
| 19.200 MHz | 49SMX-CB(N) | R = $\pm 20$ ppm      | RR = $\pm 20$ ppm     |

| OPERATING TEMPERATURE RANGE                          | LOAD CAPACITANCE | PART NUMBER                        |
|------------------------------------------------------|------------------|------------------------------------|
| lkk = $-35^{\circ}\text{C}$ to $+80^{\circ}\text{C}$ | 20 pF            | 19.200 MHz 49SMX-CB(N) R/RR/lkk/20 |

## PACKAGE DATA

| Item             | Package | 49SMX-CB(N)     |
|------------------|---------|-----------------|
| LID              |         | Metal           |
| BASE             |         | Glass in metal  |
| SEALING          |         | Resistance—weld |
| TERMINAL PLATING |         | Gold            |