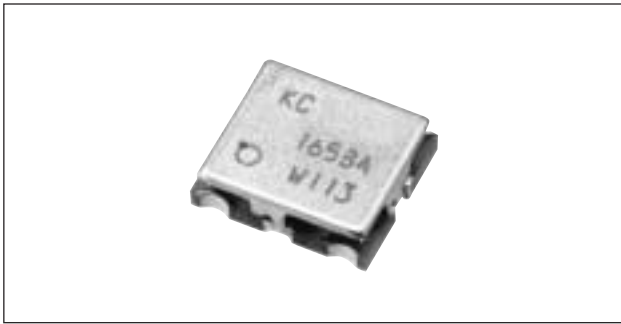


# Voltage Controlled Oscillators



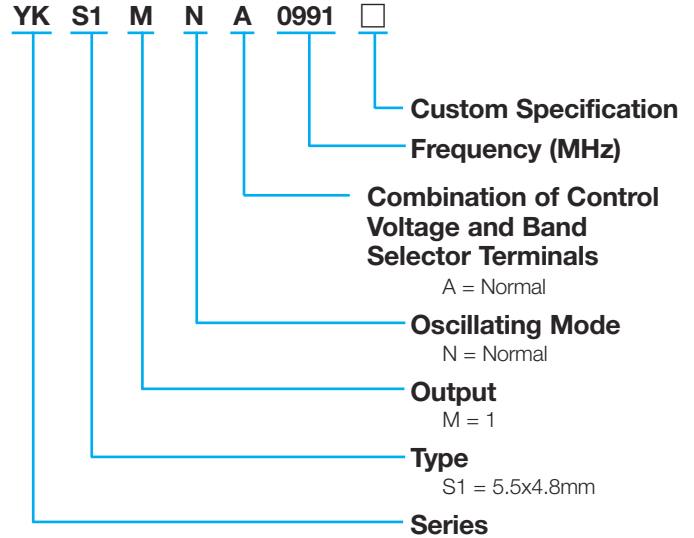
## YKS1 Series



### FEATURES

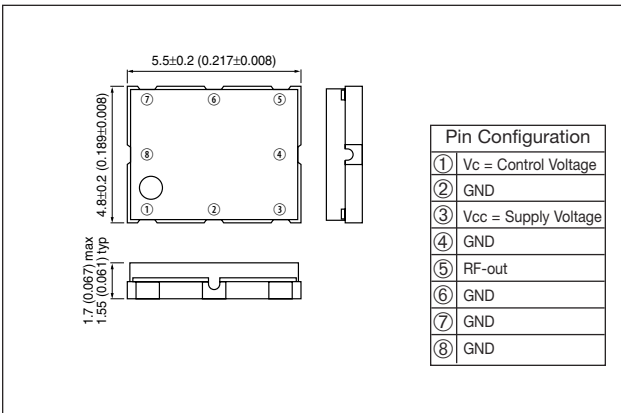
- Small and low profile
- Frequency 700MHz to 2.5GHz available
- Application for UMTS, AMPS(CDMA), PCS, PDC, PHS

### HOW TO ORDER



### DIMENSIONS

millimeters (inches)

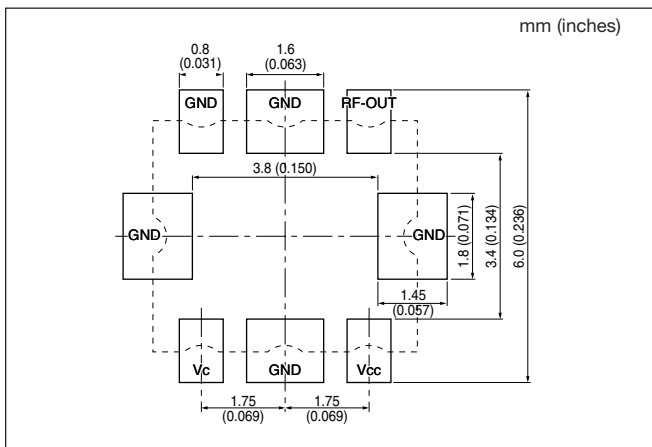


### SPECIFICATIONS

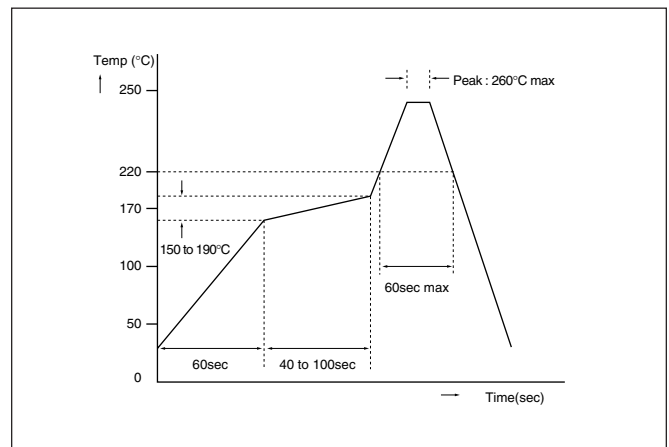
| Part Number  | System     | Function | Frequency MHz    | Vcc (V)   | Icc (mA) | Po (dBm) | fru (MHz/V) | C/N (dBC/Hz)              |
|--------------|------------|----------|------------------|-----------|----------|----------|-------------|---------------------------|
| YKS1MNA0991* | AMPS(CDMA) | RF       | 978 to 1004      | 2.45±0.10 | ≤8.0     | -1.5±3   | 27±4        | ≥117@60kHz<br>≥140@900kHz |
| YKS1MNA2070* | PCS        | RF       | 2039 to 2100     | 2.45±0.10 | ≤9.5     | -1.5±3   | 60±10       | ≥137@1.25MHz              |
| YKS1MNA1668* | PHS        | RF       | 1649.5 to 1686.5 | 2.80±0.40 | ≤6.0     | ≥-7      | 45±7        | ≥125@600kHz               |

Vcc: Power supply Icc: Current consumption Po: Output level fru: Tuning voltage sensitivity Top: Operating temperature range

### RECOMMENDED LAND PATTERN



### RECOMMENDED REFLOW PROFILE



# Voltage Controlled Oscillators

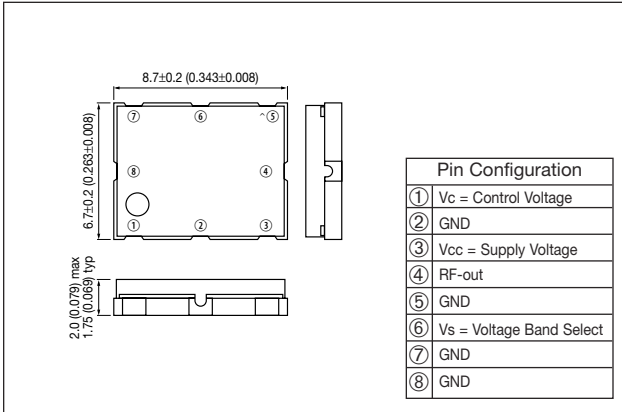


## YK509 Series



### DIMENSIONS

millimeters (inches)



### FEATURES

- For Dualband Offset Solution
- Dual high power signal output
- Small Size (8.7x6.7mm)

### HOW TO ORDER

YK 509 M D B 1390M2139 A

Custom Specification

Frequency (MHz)

Frequency Band 1  
Frequency Band 2

Combination of Control Voltage and Band Selector and Power Save Terminals

|   | Vc | Band Select | Power Save | Vc | Band Select | Power Save  |
|---|----|-------------|------------|----|-------------|-------------|
| A | 1  | 0           | -          | E  | 2           | -           |
| B | 1  | 1           | -          | F  | 1           | Low/Active  |
| C | 1  | 2           | -          | G  | 1           | High/Active |
| D | 2  | 1           | -          | H  | 1           | High/Active |

Oscillating Mode

S = Shift W = Doubler  
N = Normal D = 2 Resonator

Output

M = 1 D = 2

Type

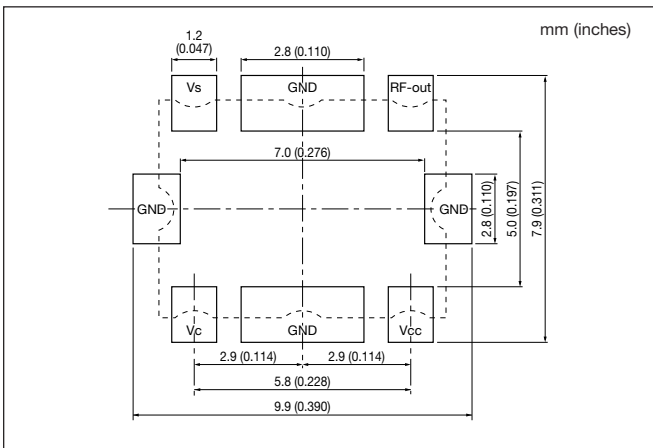
509 = 8.7x6.7mm

Series

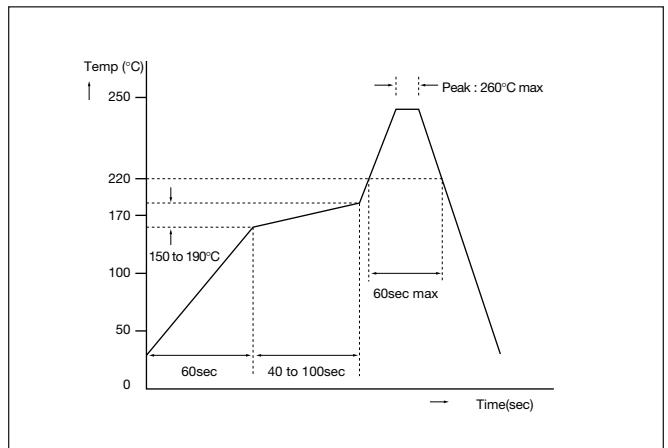
### SPECIFICATIONS

| Part Number        | System   | Function | Frequency MHz | Vcc (V)   | Icc (mA) | Po (dBm) | f <sub>ru</sub> (MHz/V) | C/N (dBC/Hz)              |
|--------------------|----------|----------|---------------|-----------|----------|----------|-------------------------|---------------------------|
| YK509MDB1390M2139* | GPS      | RF       | 1385 to 1396  | 2.80±0.10 | ≤15      | 0 typ    | 14±3                    | ≥90@10kHz<br>≥139@1.25MHz |
|                    | AMPS/PCS | RF       | 2104 to 2174  | 2.80±0.10 | ≤15      | 0 typ    | 50±10                   | ≥112@60kHz<br>≥118@120kHz |

### RECOMMENDED LAND PATTERN



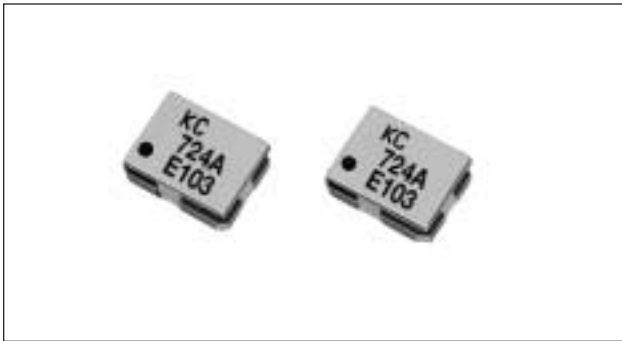
### RECOMMENDED REFLOW PROFILE



# Voltage Controlled Oscillators

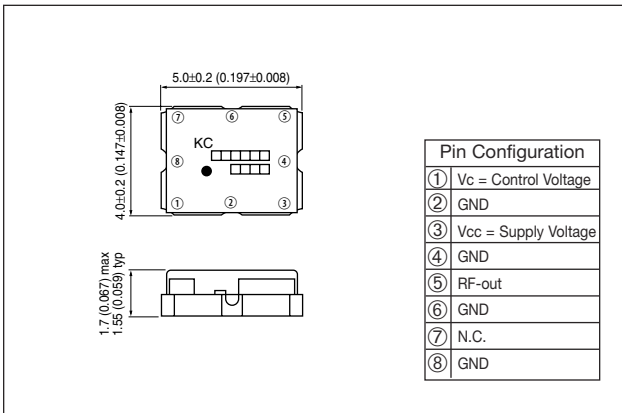


## YK511 Series



### DIMENSIONS

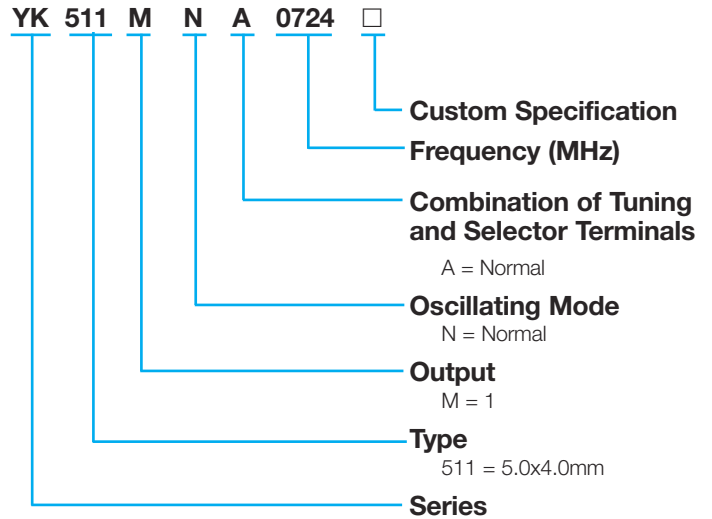
millimeters (inches)



### FEATURES

- Small and low profile
- Frequency 700MHz to 2GHz available
- Application for PDC CDMA

### HOW TO ORDER

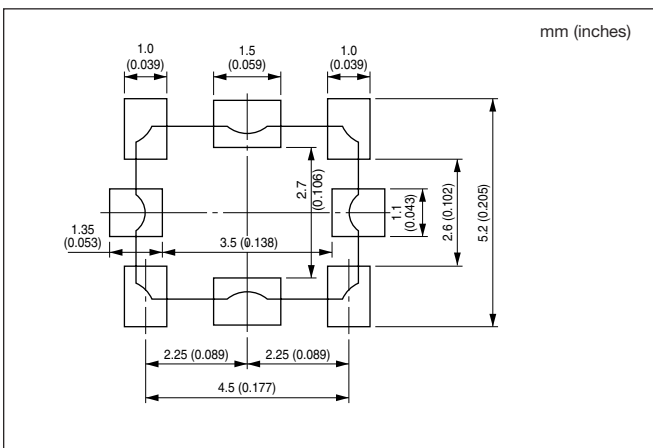


### SPECIFICATIONS

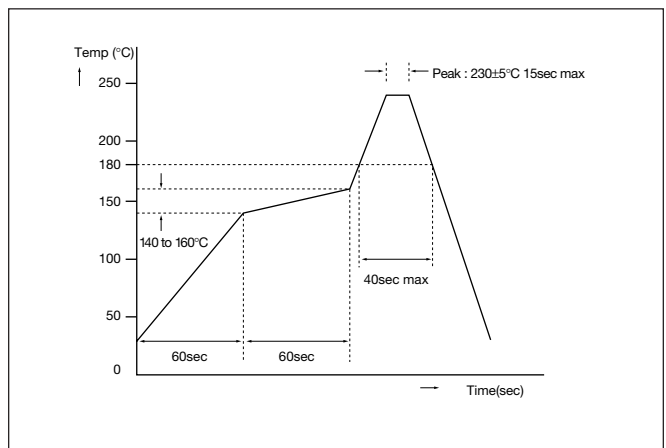
| Part Number   | System   | Function | Frequency MHz  | Vcc (V)   | Icc (mA) | Po (dBm) | f <sub>TU</sub> (MHz/V) | C/N (dBC/Hz)               |
|---------------|----------|----------|----------------|-----------|----------|----------|-------------------------|----------------------------|
| YK511MNA0724* | PDC800   | RF       | 680 to 766.4   | 2.80±0.10 | ≤4.0     | ≥-8      | 61±9                    | ≥104@25kHz                 |
| YK511MNA0741* | CDMA-ONE | RF       | 721.5 to 760.5 | 2.70±0.10 | ≤6.0     | ≥-4      | 34±4                    | ≥107@25kHz<br>≥119@100kHz  |
| YK511MNA0760* | W-CDMA   | IF       | 760            | 2.70±0.10 | ≤5.0     | -7±3     | 19.5±3                  | ≥118@200kHz<br>≥142@5.0MHz |
| YK511MNA2330* | W-CDMA   | RF       | 2270 to 2390   | 2.70±0.10 | ≤8.0     | ≥-5      | 82±12                   | ≥109@200kHz<br>≥136@5.0MHz |

Vcc: Power supply Icc: Current consumption Po: Output level f<sub>TU</sub>: Tuning voltage sensitivity Top: Operating temperature range

### RECOMMENDED LAND PATTERN



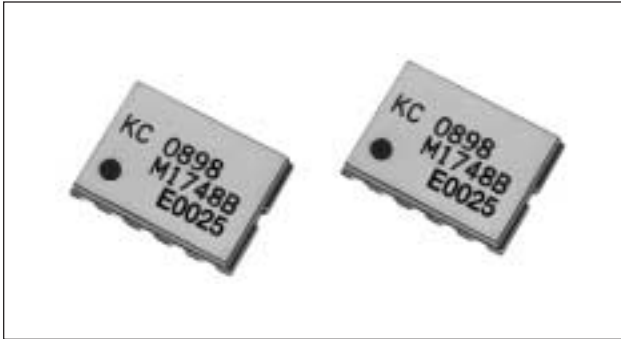
### RECOMMENDED REFLOW PROFILE



# Voltage Controlled Oscillators



## YK512 Series



### DIMENSIONS

millimeters (inches)

**YK512 DD**

| P/N | DDC  | DDF  |
|-----|------|------|
| ①   | Vcc2 | GND  |
| ②   | GND  | GND  |
| ③   | Vc   | Vc   |
| ④   | GND  | Ps   |
| ⑤   | Vcc1 | Vcc  |
| ⑥   | GND  | GND  |
| ⑦   | OUT1 | OUT1 |
| ⑧   | Vs1  | Vs   |
| ⑨   | GND  | GND  |
| ⑩   | Vs2  | GND  |
| ⑪   | OUT  | OUT2 |
| ⑫   | GND  | GND  |

Vcc = Supply Voltage  
Vc = Control Voltage  
Vs = Band Select  
Ps = Power Save

### FEATURES

- Small and low profile (1.7mm max.)
- Dual high power signal output
- For Dualband Offset Solution

### HOW TO ORDER

YK 512 D D C 0898M1748 A

Custom Specification

Frequency (MHz)

Frequency Band 1  
Frequency Band 2

Combination of Control Voltage and Band Selector and Power Save Terminals

|   | Vc | Band Select | Power Save | Vc | Band Select | Power Save |
|---|----|-------------|------------|----|-------------|------------|
| A | 1  | 0           | -          | E  | 2           | 2          |
| B | 1  | 1           | -          | F  | 1           | 1          |
| C | 1  | 2           | -          | G  | 1           | 1          |
| D | 2  | 1           | -          | H  | 1           | 2          |

Oscillating Mode

S = Shift W = Doubler  
N = Normal D = 2 Resonator

Output

M = 1 D = 2

Type

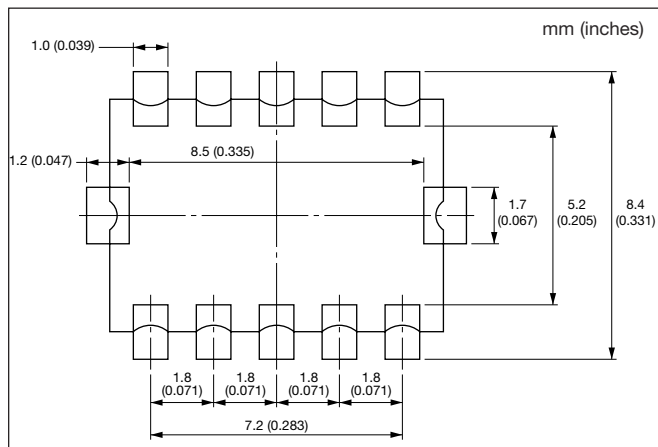
512 = 9.6x7.0mm

Series

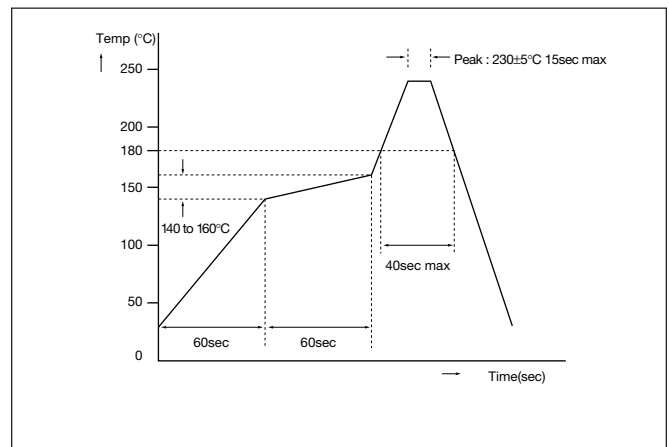
### SPECIFICATIONS

| Part Number        | System | Function | Frequency MHz | Vcc (V)   | Icc (mA) | Po (dBm) | f <sub>TU</sub> (MHz/V) | C/N (dBC/Hz)               |
|--------------------|--------|----------|---------------|-----------|----------|----------|-------------------------|----------------------------|
| YK512DDC0898M1748* | GSM    | Tx       | 880 to 915    | 2.75±0.10 | ≤27      | 9.5 typ  | 52±8                    | ≥117@100kHz<br>≥164@ 20MHz |
|                    | DCS    | Tx       | 1710 to 1785  | 2.75±0.10 | ≤35      | 9.5 typ  | 90±12                   | ≥110@100kHz<br>≥156@ 20MHz |
| YK512DDF0898M1748* | GSM    | Tx       | 880 to 915    | 2.80±0.10 | ≤30      | 9.0 typ  | 33±5                    | ≥120@100kHz<br>≥162@ 20MHz |
|                    | DCS    | Tx       | 1710 to 1785  | 2.80±0.10 | ≤30      | 9.0 typ  | 66±10                   | ≥110@100kHz<br>≥154@ 20MHz |

### RECOMMENDED LAND PATTERN



### RECOMMENDED REFLOW PROFILE

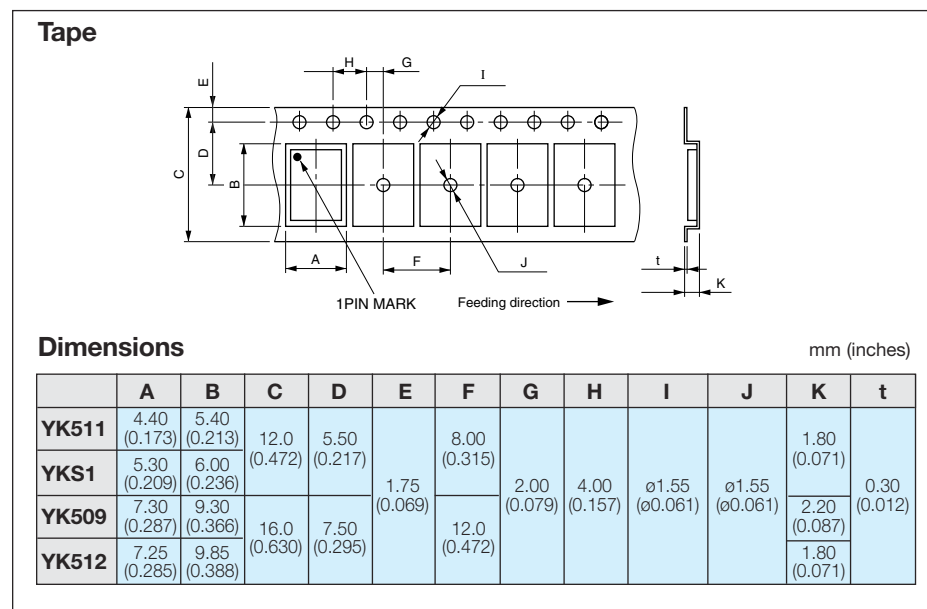
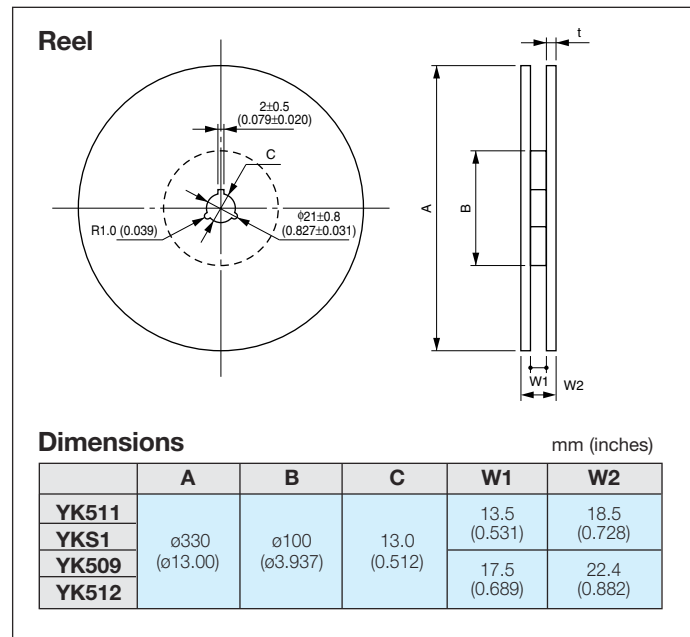


# Voltage Controlled Oscillators



## Packaging YK Series

### PACKAGING



### PACKAGING

| Part Number  | Packaging Quantity<br>(pcs/reel) |
|--------------|----------------------------------|
| <b>YK511</b> | 3,000                            |
| <b>YKS1</b>  |                                  |
| <b>YK509</b> | 2,000                            |
| <b>YK512</b> |                                  |