YXE

# Contents

# YXE

## 7.0×5.0mm TCXO/VCTCXO


● Feature

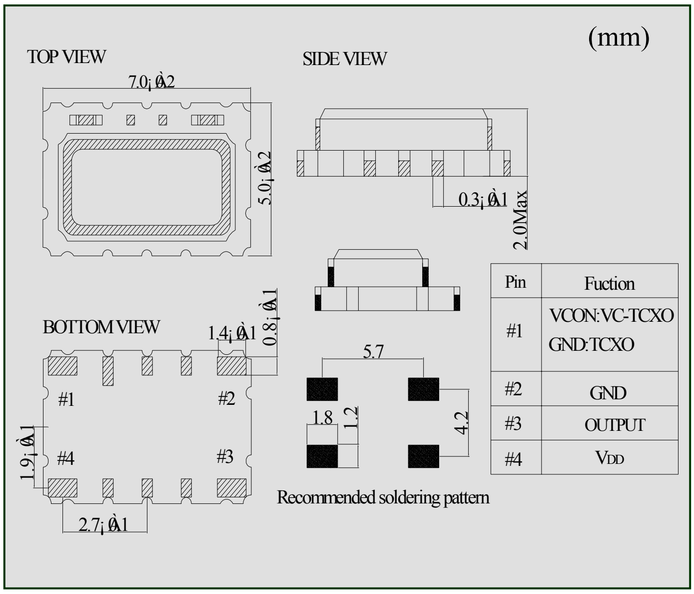
7.0×5.0mm SMD Temperature Compensated Crystal Oscillators

Surface Mount Package

● Specification

| Parameter / Model | | | YX7050TC Series | |
|---|---|---|---|---|
| Supply Voltage Variation (VDD) 5% | | V | 5.0 | 3.0 |
| Frequency Range | | MHz | 10 □ 26 | |
| Operating Temp. Range | | □ | –10-60 –20-70 -40-85 | |
| Frequency Stability | | ppm | See table below | |
| Pulling Range | | ppm | ±5 □ ±25 | |
| Supply Current | 10≤Fm<15MHz | mA | 1.5 Max. | |
| | 15≤Fm≤26MHz | | 2.0 Max. | |
| Phase Noise | 100Hz | dbc/Hz | -115 | |
| | 1KHz | | -135 | |
| | 10KHz | | -148 | |
| Frequency Stability | Vs Supply Voltage (±5%) Change | ppm | ±0.3 Max. | |
| | Vs Load (±10%) Change | | ±0.2 Max. | |
| | Vs Aging | ppm/y | ±1.0 Max. | |
| Start Time | | mSec | 2 Max. | |
| Output Level (Clipped Sine) | | Vp-p | 0.8 Min. | |
| Load | | | 10KΩ//10pF | |
| Vc Input Impedance | | MΩ | 1.0 Min. | |
| Storage Temp. Range | | □ | -55 □ 125 | |

● Outline Drawing




● Freq. Stability vs.Temp. Range

| ppm / Temp.□ | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|---|---|---|---|---|---|
| 0-+50 | Y | Y | Y | Y | Y |
| -10 - +60 | Y | Y | Y | Y | Y |
| -20 -+70 | N | Y | Y | Y | Y |
| -40 -+85 | N | N | Y | Y | Y |

Y: Available N: Not available

# 7.0×5.0mm TCXO/VCTCXO

## ● Feature

7.0×5.0mm SMD Temperature Compensated Crystal Oscillators

High Frequency Temperature Stability

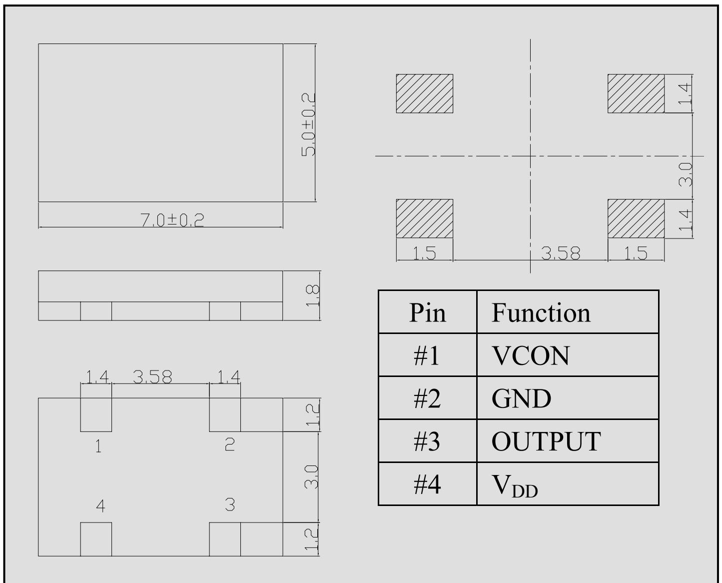
Low Power Consumption

Surface Mount Package


## ● Specification

| Parameter / Model | | | YX7050HTC Series |
|---|---|---|---|
| Supply Voltage Variatio (VDD) 5% | | V | 3.0 |
| Frequency Range | | MHz | 10 □ 26 |
| Operating Temp. Range | | □ | 0-50 –20-70 -40-85 |
| Frequency Stability | | ppm | See table below |
| Pulling Range | | ppm | ±5 □ ±25 |
| Supply Current | | mA | 2.0 Max |
| Phase Noise | 100Hz | dbc/Hz | -115 |
| | 1KHz | | -135 |
| | 10KHz | | -148 |
| Frequency Stability | Vs Supply Voltage (±5%) Change | ppm | ±0.3 Max |
| | Vs Load (±10%) Change | | ±0.2 Max |
| | Vs Aging | ppm/y | ±1.0 Max |
| Start Time | | mSec | 2 Max |
| Output Level (Clipped Sine) | | Vp-p | 0.8 Min |
| Load | | | 10KΩ//10pF |
| Storage Temp. Range | | □ | -55 □ 125 |

## ● Outline Drawing




| Pin | Function |
|---|---|
| #1 | VCON |
| #2 | GND |
| #3 | OUTPUT |
| #4 | $V_{DD}$ |

## ● Freq. Stability vs.Temp. Range

| ppm / Temp.(□) | ±0.1 | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|---|---|---|---|---|---|---|
| | Y | Y | Y | Y | Y | Y |
| | N | Y | Y | Y | Y | Y |
| | N | Y | Y | Y | Y | Y |

Y: Available N: Not available

# YXE

## 5.0×3.2mm TCXO/VCTCXO


- Feature

5.0×3.2mm SMD Temperature Compensated Crystal Oscillators

Surface Mount Package

- Specification

| Parameter \ Model | | Unit | YX5032TC Series | |
|---|---|---|---|---|
| Supply Voltage Variatio (VDD) 5% | | V | 5.0 | 3.0 |
| Frequency Range | | MHz | 12.8 □ 26 | |
| Operating Temp. Range | | □ | 0□55 –10-60 –20-70 -40-85 | |
| Frequency Stability | | ppm | See table below | |
| Pulling Range | | ppm | ±5 □ ±25 | |
| Supply Current | 12.8≤Fm<15MHz | mA | 1.5 Max. | |
| | 15≤Fm≤26MHz | | 2.0 Max. | |
| Phase Noise | 100Hz | dbc/Hz | -115 | |
| | 1kHz | | -135 | |
| | 10kHz | | -148 | |
| Frequency Stability | Vs Supply Voltage (±5%) Change | ppm | ±0.3 Max. | |
| | Vs Load (±10%) Change | | ±0.2 Max. | |
| | Vs Aging | ppm/year | ±1.0 Max. | |
| Start Time | | mSec | 2 Max. | |
| Output Level (Clipped Sine Wave) | | Vp-p | 0.8 Min. | |
| Load | | | 10KΩ//10pF | |
| Vc Input Impedance | | MΩ | 1.0 Min. | |
| Storage Temp. Range | | □ | -55 □ 125 | |

- Outline Drawing

(mm)

- Freq. Stability vs.Temp. Range

| Temp.□ \ ppm | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|---|---|---|---|---|---|
| 0 -+55 | Y | Y | Y | Y | Y |
| -10 - +60 | N | Y | Y | Y | Y |
| -20 -+70 | N | Y | Y | Y | Y |
| -40 -+85 | N | N | Y | Y | Y |

N: Not available

Available from DLPC (Australia)
Ph +61 7 3207 1398 Fax +61 7 3207 5160 Email mail@dlpc.com.au www.dlpc.com.au 

# 11.4×9.6mm TCXO/VCTCXO

● Feature

11.4×9.6mm SMD Temperature Compensated Crystal Oscillators

High Frequency Temperature Stability

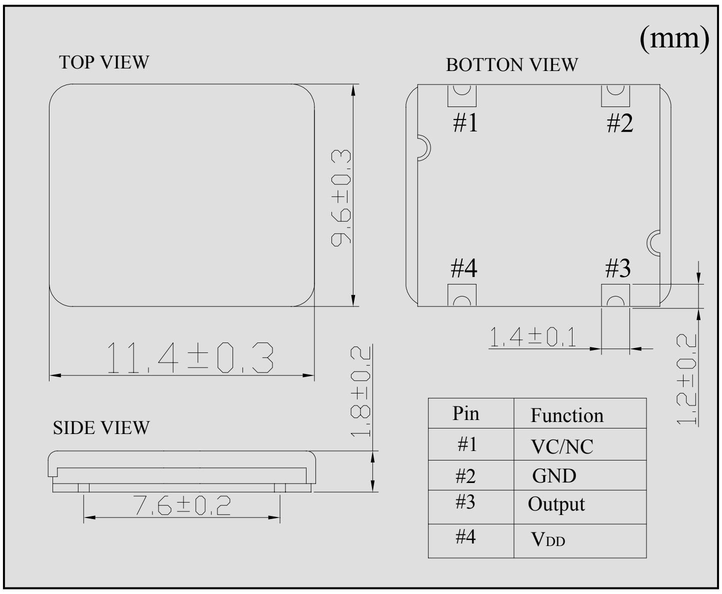
Low Power Consumption

Surface Mount Package


● Specification

| Parameter \ Model | | | YX-114TC Series |
|---|---|---|---|
| Frequency Range | | MHz | 10.000~26.000Mhz |
| Supply Voltage | | V | 3.0±10% |
| Operating Temp. Range | | □ | 0□50 –20-70 -40-85 |
| Frequency Stability | | ppm | See table below |
| Pulling Range | | ppm | ±10□±14 |
| Supply Current | | mA | 2.0 Max |
| Frequency Stability | Vs Supply Voltage (±5%) Change | ppm | ±0.3 Max |
| | Vs Load (±10%) Change | | ±0.2 Max |
| | Vs Aging | | ±1.0 Max |
| Start Time | | mSec | 2 (Max) |
| Output Level | | Vp-p | 0.8 Min |
| Load | | | 10KΩ//10pF |
| Storage Temp. Range | | □ | -55 □ 125 |

● Outline Drawing




● Freq. Stability vs.Temp. Range

| Temp.(□) \ ppm | ±0.1 | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|---|---|---|---|---|---|---|
| -10 - +60 | Y | Y | Y | Y | Y | Y |
| -20 -+70 | N | Y | Y | Y | Y | Y |
| -40 -+85 | N | Y | N | Y | Y | Y |

Y: Available N: Not available

# Dip14 TCXO


● Feature

Dip14 Type Temperature Compensated Crystal Oscillators

High Frequency Stability

Low Power Consumption

With modulation

● Specification

| Parameter / Model | | | YX-14TC Series | |
|---|---|---|---|---|
| Supply Voltage Variation (VDD)5% | | V | 5.0 | 12 |
| Frequency Range | | MHz | 1.0 □ 100 | |
| Operating Temp. Range | | □ | 0 - +50 -20 -+70 -40 -+85 | |
| Frequency Stability | | ppm | See table below | |
| Supply Current | | mA | 10.0 Max. | |
| Phase Noise | 100Hz | dbc/Hz | -100 | |
| | 1kHz | | -130 | |
| | 10kHz | | -140 | |
| Frequency Stability | Vs Supply Voltage (±5%) change | ppm | ±0.3 Max. | |
| | Vs Load (±10%) change | | ±0.2 Max. | |
| | Vs Aging | ppm/year | ±1.0 Max. | |
| Output Level (Clipped Sine Wave) | | Vp-p | 0.8 Min | |
| Load | | | 10KΩ//10pF | |
| Mechanical Adjust Range | | ppm | ±5.0 | |
| Storage Temp. Range | | □ | -55 □ 105 | |

● Outline Drawing

(mm)

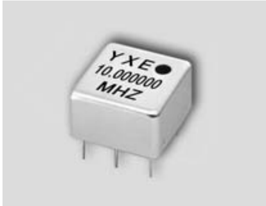
● Freq. Stability vs.Temp. Range

| Temp.(□) / ppm | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|---|---|---|---|---|---|
| 0 - +50 | Y | Y | Y | Y | Y |
| -20 -+70 | N | Y | Y | Y | Y |
| -40 -+85 | N | N | Y | Y | Y |

Y: Available N: Not available

# YXE

## OVEN CONTROLLED CRYSTAL OSCILLATORS




- Features

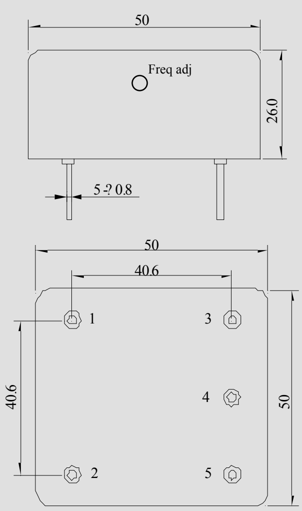
Crystal oscillators with Ultra high precision (SC-Cut)
Wide frequency range: 1MHz to 100MHz
Standard frequencies available
Standard package

- Specification

| Item / Model | YX-50oc Series |
|---|---|
| Frequency Range | 1MHz □ 100MHz |
| Standard Frequencies | 5.0, 8.192, 10.0, 12.8, 13.0, 15.36, 16.384, 20.0, 40.0, 80.0, 100.0MHz |
| Supply Voltage | +5.0VDC +12VDC |
| Output | Sine or HCMOS |
| Crystal Cut | AT-Cut or SC-Cut |
| Frequency Stability | |
| vs. Operating Temp. Range | See table below |
| vs. Aging/1 day | AT-Cut:±1ppb SC-Cut:±0.2ppb |
| vs. Aging/1st year | AT-Cut:±0.1ppm SC-Cut:±0.02ppm |
| vs. Voltage Change 5% | ±10ppb Max. |
| vs. Load Change 5% | ±10ppb Max. |
| Electronic Frequency Tuning (EFC) | |
| Tuning Range | AT-Cut:±3ppm SC-Cut:±1ppm |
| Control Voltage Range | 0 to +5VDC 0 to +10VDC |
| Linearity | ±20% |
| Transfer Function | Positive |
| Power Dissipation | 5W at steady-state +25□ amb 2W at turn-on |
| Warm-up Time (at 25□) | AT-Cut:5 minutes max. SC-Cut:4 minutes max. (to ±0.1ppm of nominal) |
| HCMOS Square Wave | |
| VOH Logic High"1" | 4.5 VDC min. for Vcc=12V or 5V 15pF load |
| VOL Logic Low"0" | 0.5 VDC max. for Vcc=12V or 5V 15pF load |
| Duty Cycle | 45%/55% |
| Rise and Fall Times | 10ns Max. |
| Load | 15pF |
| Sine Wave | |
| Output | 0 to +17 dBm min. (specify) |
| Load | 50Ω |
| Storage Temp. Range | -55 □ +105□ |

- Outline Drawing

□mm□



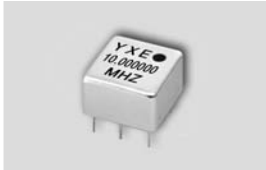

| Pin | Function |
|---|---|
| #1 | GND |
| #2 | Osc. Supply Voltage |
| #3 | Output |
| #4 | Oven Supply Voltage |
| #5 | Electronic Tuning |

- Frequency Stability vs. Operating Temperature Range

| Operating Temperature Range(□) | AT-Cut(ppm) | SC-Cut(ppm) |
|---|---|---|
| 0 □ +50 | ±0.005 | ±0.001 |
| -20 □ +70 | ±0.01 | ±0.002 |
| -40 □ +85 | ±0.02 | ±0.005 |

# YXE

# OVEN CONTROLLED CRYSTAL OSCILLATORS




● Features

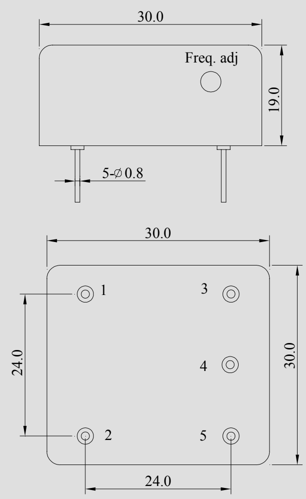
Crystal oscillators with Ultra high precision (SC-Cut)
Wide frequency range: 1MHz to 100MHz
Standard frequencies available
Standard package

● Specification

| Item / Model | YX-30oc Series |
|---|---|
| Frequency Range | 1MHz □ 100MHz |
| Standard Frequencies | 5.0, 8.192, 10.0, 12.8, 13.0, 15.36, 16.384, 20.0, 40.0, 80.0, 100.0MHz |
| Supply Voltage | +5.0VDC +12VDC |
| Output | Sine or HCMOS |
| Crystal Cut | AT-Cut or SC-Cut |
| Frequency Stability | |
| vs. Operating Temp. Range | See table below |
| vs. Aging/1 day | AT-Cut:±1ppb SC-Cut:±0.5ppb |
| vs. Aging/1st year | AT-Cut:±0.1ppm SC-Cut:±0.05ppm |
| vs. Voltage Change 5% | ±1ppb Max. |
| vs. Load Change 5% | ±1ppb Max. |
| Electronic Frequency Tuning (EFC) | |
| Tuning Range | AT-Cut:±3ppm SC-Cut:±1ppm |
| Control Voltage Range | 0 to +5VDC 0 to +10VDC |
| Linearity | ±20% |
| Transfer Function | Positive |
| Power Dissipation | 5W at steady-state,+25□ amb. 2W at turn-on |
| Warm-up Time (at 25□) | AT-Cut:5 minutes Max. SC-Cut:4 minutes max. (to ±0.1ppm of nominal) |
| HCMOS Square Wave | |
| VOH Logic High"1" | 4.5 VDC Min. for Vcc=12V or 5V 15pF load |
| VOL Logic Low"0" | 0.5 VDC Max. for Vcc=12V or 5V 15pF load |
| Duty Cycle | 45%/55% |
| Rise and Fall Times | 10ns Max |
| Load | 15pF |
| Sine Wave | |
| Output | 0 to +17 dBm Min |
| Load | 50Ω |
| Storage Temp. Range | -55 □ +105□ |

● Outline Drawing

□mm□




| Pin | Function |
|---|---|
| #1 | Ground/Voltage Control |
| #2 | Supply Voltage |
| #3 | Ground |
| #4 | Ground |
| #5 | Output |

●Frequency Stability vs. Operating Temperature Range

| Operating Temperature Range(□) | AT-Cut(ppm) | SC-Cut(ppm) |
|---|---|---|
| 0 □ +50 | ±0.01 | ±0.002 |
| -20 □ +70 | ±0.02 | ±0.005 |
| -40 □ +85 | ±0.05 | ±0.01 |

# OVEN CONTROLLED CRYSTAL OSCILLATORS


- Features

  High precision oscillators

  Wide frequency range: 1MHz to 100MHz

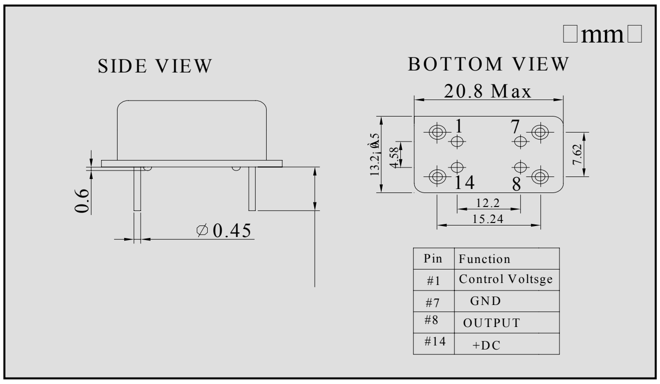
  Standard frequencies available

  Dip14 package

- Specification

| Item / Model | YX-14oc Series |
|---|---|
| Frequency Range | 1MHz □ 100MHz |
| Standard Frequencies | 5.0, 8.192, 10.0, 12.8, 13.0, 15.36, 16.384, 20.0, 40.0, 80.0, 100.0MHz |
| Supply Voltage | +5.0VDC ±5% +12VDC ±5% |
| Output | Sine wave or HCMOS |
| Initial Calibration Tolerance | ±2ppm at time of shipment(with EFC = +2.5±0.5V) |
| Frequency Stability | |
| vs. Operating Temp. Range | See table below |
| vs. Aging/1 day | ±10ppb Max. after 72 hours op. |
| vs. Aging/1st year | ±500ppb Max. after 72 hours op. |
| vs. Voltage Change 5% | ±10ppb Max. |
| vs. Load Change 5% | ±10ppb Max. |
| Electronic Frequency Tuning (EFC) | |
| Tuning Range | ±5ppm min. |
| Control Voltage Range | 0 to +5 VDC 0 to +10 VDC |
| Linearity | ±10% |
| Transfer Function | Positive |
| Power Dissipation | 1W at steady-state,+25□ |
| Warm-up Time (at 25□) | 4 minutes maximum (to ±100ppb of nominal) |
| HCMOS Square Wave | |
| VOH Logic High"1" | 4.5 VDC Min. for Vcc=12V or 5V 15pF load |
| VOL Logic Low"0" | 0.5 VDC Max. for Vcc=12V or 5V 15pF load |
| Duty Cycle | 45%/55% |
| Rise and Fall Times | 10ns Max |
| Load | 15pF |
| Sine Wave | |
| Output | 7 dBm Min |
| Load | 50Ω |
| Storage Temp. Range | -55 □ +105□ |

- Outline Drawing




- Frequency Stability

| Operature Temp. Range(□) | Stability(ppm) |
|---|---|
| 0 □ +50 | ±0.1 |
| -20 □ +70 | ±0.2 |
| -40 □ +85 | ±0.5 |

# 7.0×5.0mm SMD CLOCK Oscillator

- Feature

Frequency range: 1.8MHz to 110MHz

Stand-by function for output: Tri-state output

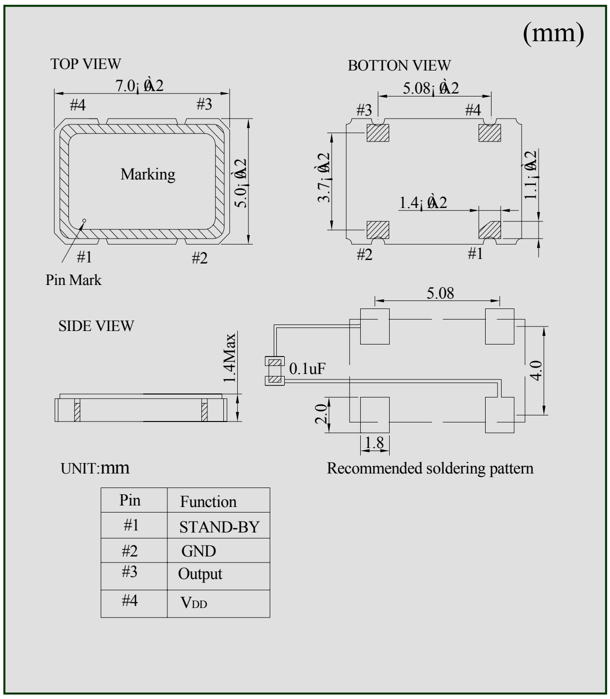
Low Power Consumption

Surface mount package

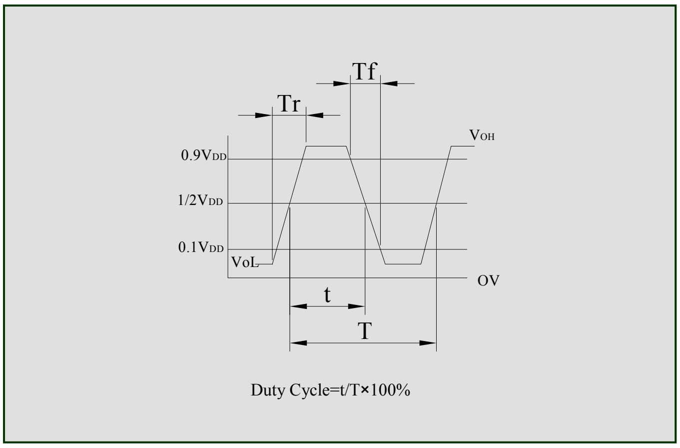

- Specification

| Item / Model | | YX7533P Series | | | | |
|---|---|---|---|---|---|---|
| Output Level | | CMOS | | | | |
| Frequency Range | (MHz) | 1.8≤Fm<20MHz | 20≤Fm<32MHz | 32≤Fm<50MHz | 50≤Fm<80MHz | 80 ≤ Fm<110MHz |
| Frequency Stability | (ppm) | ±100; ±50; ±25 | | | | |
| Operating Temp. Range | (□) | -10 □ +70 | | | | |
| Supply Voltage ($V_{DD}$) | (V) | 3.3±10% | | | | |
| Current Consumption | (mA) | 7 | 12 | 20 | 25 | 30 |
| $V_{OL}$ max/ $V_{OH}$ min | (V) | 0.1$V_{DD}$/0.9 $V_{DD}$ $I_{OL}$=2mA $I_{OH}$ =-2mA | | | | |
| Tr max./ Tf max. | (ns) | 6/6(0.1$V_{DD}$ □ 0.9 $V_{DD}$) | | | | |
| Duty Cycle | (%) | 45□55 | | | 40□60 | |
| Fan out (gate) | $C_L$(pF) | 15 | | | | |
| Stand-by Function | Tri-state | Yes | | | | |
| Aging | (ppm/year) | ±3 | | | | |
| Storage Temp. Range | (□) | -55 □ +125 | | | | |

- Outline Drawing




- Output Wave (CMOS)




- Stand-by Function (Tri-state)

| #1 input | #3 output |
|---|---|
| H level (+0.7 $V_{DD}$ min) or open | Operating |
| L level (+0.3 $V_{DD}$ max ) | High Impedance |

# YXE

## 7.0×5.0mm SMD CLOCK Oscillator

● Feature

Frequency range: 1.8MHz to 80MHz

Stand-by function for output: Tri-state output

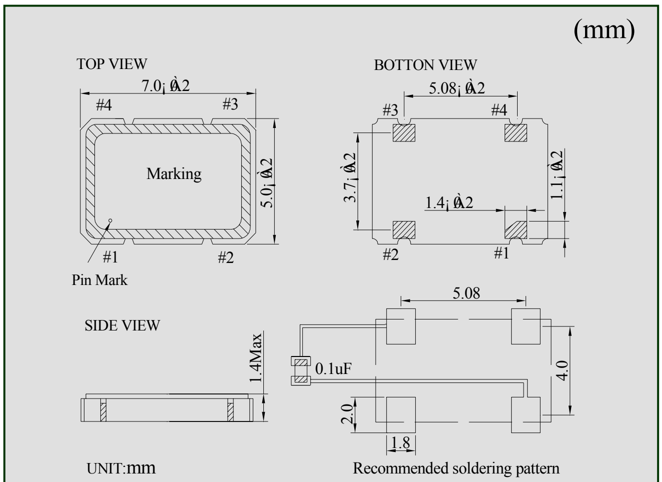
Low Power Consumption

Surface mount package


●Specification

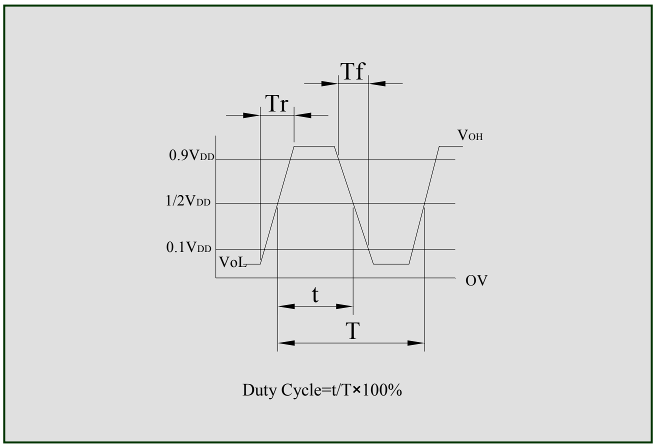
| Item / Model | | YX7550P Series | | | | |
|---|---|---|---|---|---|---|
| Output Level | | CMOS | | | | |
| Frequency Range | (MHz) | 1.8≤Fm<10MHz | 10≤Fm<20MHz | 20≤Fm<32MHz | 32≤Fm<50MHz | 50≤Fm<80MHz |
| Frequency Stability | (ppm) | ±100 ±50 ±25 | | | | |
| Operating Temp. Range | (□) | -10 □ +70 | | | | |
| Supply Voltage ($V_{DD}$) | (V) | 5.0±10% | | | | |
| Current Consumption | (mA) | 10 | 15 | 25 | 35 | 50 |
| $V_{OL}$ max/ $V_{OH}$ min | (V) | 0.1$V_{DD}$/0.9 $V_{DD}$ $I_{OL}$=16mA $I_{OH}$=-16mA | | | | |
| Tr max/ Tf max | (ns) | 5/5(0.1$V_{DD}$ □ 0.9 $V_{DD}$) | | | | |
| Duty Cycle | (%) | 45□55 | | | | |
| Fanout (gate) | $C_L$(pF) | 50 | | | | |
| Stand-by Function | Tri-state | Yes | | | | |
| Aging | (ppm/year) | ±3 | | | | |
| Storage Temp. Range | (□) | -55 □ +125 | | | | |

● Outline Drawing




| Pin | Function |
|---|---|
| #1 | STAND-BY |
| #2 | GND |
| #3 | Output |
| #4 | $V_{DD}$ |

● Output Wave (CMOS)




● Stand-by Function (Tri-state)

| #1 input | #3 output |
|---|---|
| H level (+0.7 $V_{DD}$ min) or open | Operating |
| L level (+0.3 $V_{DD}$ max ) | High impedance |

# 5.0×3.2mm SMD CLOCK Oscillator


- Feature

Frequency range: 1.8MHz to 110MHz

Stand-by function for output: Tri-state output

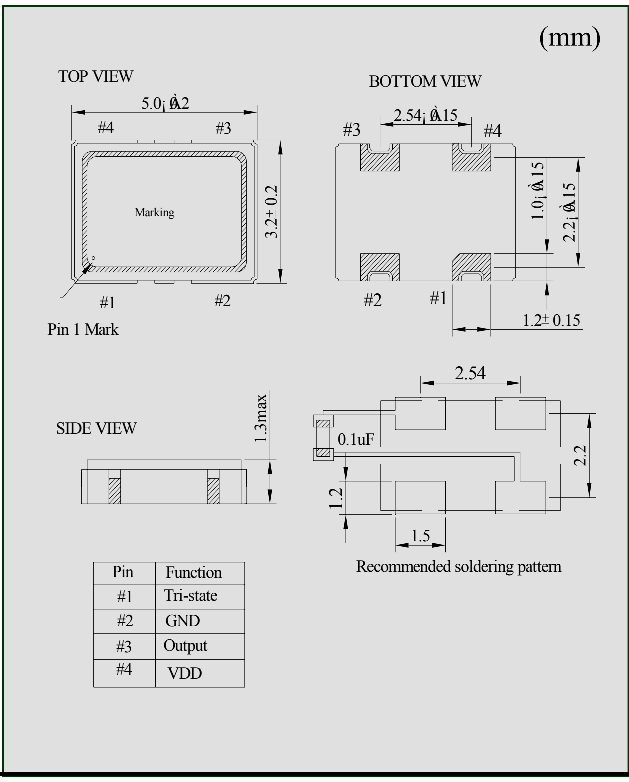
Low Power Consumption

Surface mount package

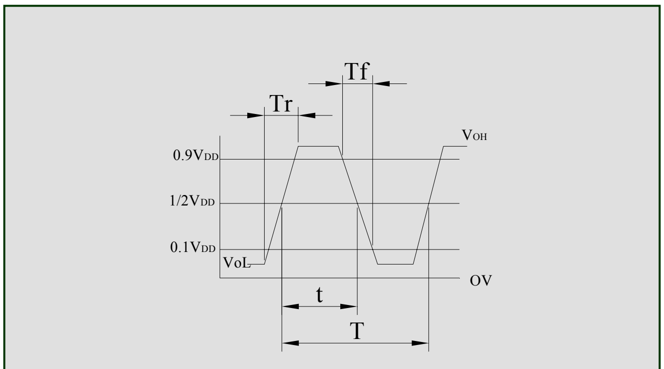
- Specification

| Item / Model | | YX5333P Series | | | | |
|---|---|---|---|---|---|---|
| Output Level | | CMOS | | | | |
| Frequency Range | (MHz) | 1.8≤Fm<20MHz | 20≤Fm<32MHz | 32≤Fm<50MHz | 50≤Fm<80MHz | 80≤Fm<110MHz |
| Frequency Stability | (ppm) | ±100 ±50 ±25 | | | | |
| Operating Temp. Range | (□) | -10 □ +70 | | | | |
| Supply Voltage (VDD) | (V) | +3.3±10% | | | | |
| Current Consumption | (mA) | 7 | 12 | 20 | 25 | 30 |
| VOL max/ VOH min | (V) | 0.1VDD/0.9 VDD IOL=4mA IOH =-4mA | | | | |
| Tr max/ Tf max | (ns) | 5/5(0.1VDD □ 0.9 VDD) | | | | |
| Duty Cycle | (%) | 45-55 | | | | |
| Fanout (gate) | CL(pF) | 15 | | | | |
| Stand-by Function | Tri-state | Yes | | | | |
| Aging | (ppm/year) | ±3 | | | | |
| Storage Temp. Range | (□) | -55 □ +125 | | | | |

- Outline Drawing




- Output Wave (CMOS )




Duty Cycle=t/T×100%

- Stand-by Function (Tri-state)

| #1 input | #3 output |
|---|---|
| H level (0.7 VDD min) or open | Operating |
| L level (+0.3 VDD max ) | High impedance |

# 5.0×3.2mm SMD CLOCK Oscillator

● Feature

Frequency range: 1.8MHz to 100MHz

Stand-by function for output: Tri-state output

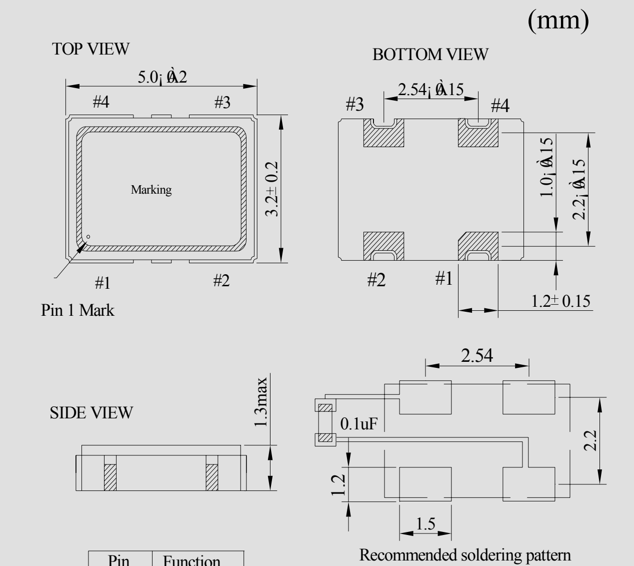
Low Power Consumption

Surface mount package


● Specification

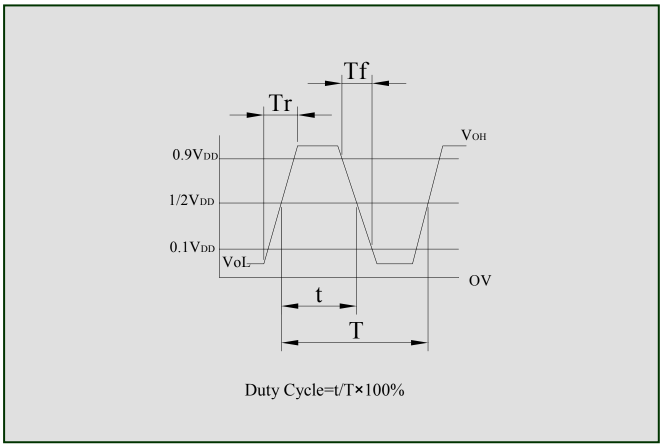
| Item / Model | | YX5350P Series | | | | |
|---|---|---|---|---|---|---|
| Output Level | | CMOS | | | | |
| Frequency Range | (MHz) | 1.8≤Fm<20MHz | 20≤Fm<32MHz | 32≤Fm<50MHz | 50≤Fm<80MHz | 80≤Fm<100MHz |
| Frequency Stability | (ppm) | ±100 ±50 ±25 | | | | |
| Operating Temp. Range | (□) | -10 □ +70 | | | | |
| Supply Voltage (VDD) | (V) | +5.0±10% | | | | |
| Current Consumption | (mA) | 7 | 12 | 20 | 25 | 30 |
| VOL max/ VOH min | (V) | 0.1VDD/0.9 VDD IOL=8mA IOH =-8mA | | | | |
| Tr max/ Tf max | (ns) | 5/5(0.1VDD □ 0.9 VDD) | | | | |
| Duty Cycle | (%) | 45-55 | | | | |
| Fanout (gate) | CL(pF) | 15 | | | | |
| Stand-by Function | Tri-state | Yes | | | | |
| Aging | (ppm/year) | ±3 | | | | |
| Storage Temp. Range | (□) | -55 □ +125 | | | | |

● Outline Drawing




| Pin | Function |
|---|---|
| #1 | Tri-state |
| #2 | GND |
| #3 | Output |
| #4 | VDD |

● Output Wave (CMOS)




● Stand-by Function (Tri-state)

| #1 input | #3 output |
|---|---|
| H level (+2.0 VDD min) or open | Operating |
| L level (+0.8 VDD max ) | High impedance |

# YXE

## Dip8 CLOCK Oscillator

● Feature

Frequency range: 1.8MHz to 125MHz

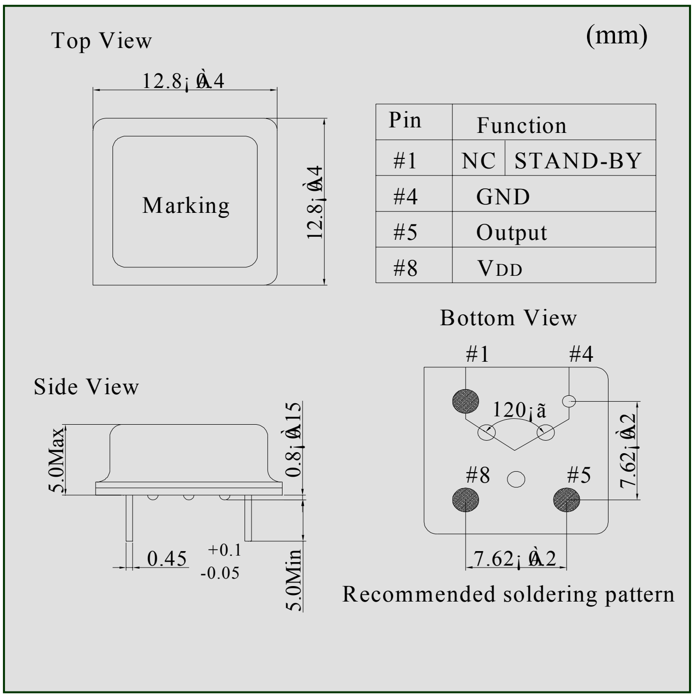
CMOS IC circuit with tri-state function

Low power consumption

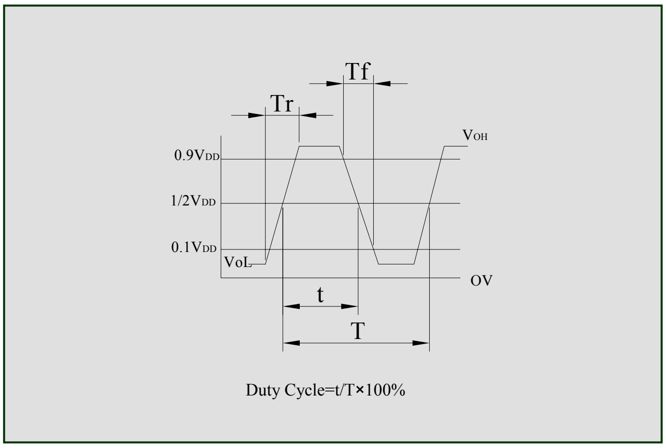

● Specification

| Item / Model | | YX-8p Series | | | | |
|---|---|---|---|---|---|---|
| Output Level | | CMOS | | | | |
| Frequency Range | (MHz) | 1.8≤Fm<20MHz | 20≤Fm<35MHz | 35≤Fm<50MHz | 50≤Fm<100MHz | 100≤Fm<125MHz |
| Frequency Stability | (ppm) | ±100 ±50 ±25 | | | | |
| Operating Temp. Range | (□) | -10 □ +70 | | | | |
| Supply Voltage(VDD) | (V) | +5.0±10% | | | | |
| Current Consumption | (mA) | 7 | 12 | 20 | 25 | 30 |
| VOL max/ VOH min | (V) | 0.1VDD/0.9 VDD IOL=8mA IOH =-8mA | | | | |
| Rise and Fall Time | (ns) | 10 | | | 5 | |
| Duty Cycle | (%) | 40-60 | | | | |
| Output Load | CL(pF) | 15 | | | | |
| Stand-by Function | Tri-state | Yes | | | | |
| Aging | (ppm/year) | ±5 | | | | |
| Storage Temp. Range | (□) | -55 □ +125 | | | | |

● Outline Drawing




● Output Wave (CMOS)




● Stand-by Function (Tri-state)

| #1 input | #5 output |
|---|---|
| H level (+2.2 VDD min) or open | Operating |
| L level (+0.8 VDD max ) | High impedance |

# YXE

## Dip14 CLOCK Oscillator

● Feature

Frequency range: 1.8MHz to 125MHz

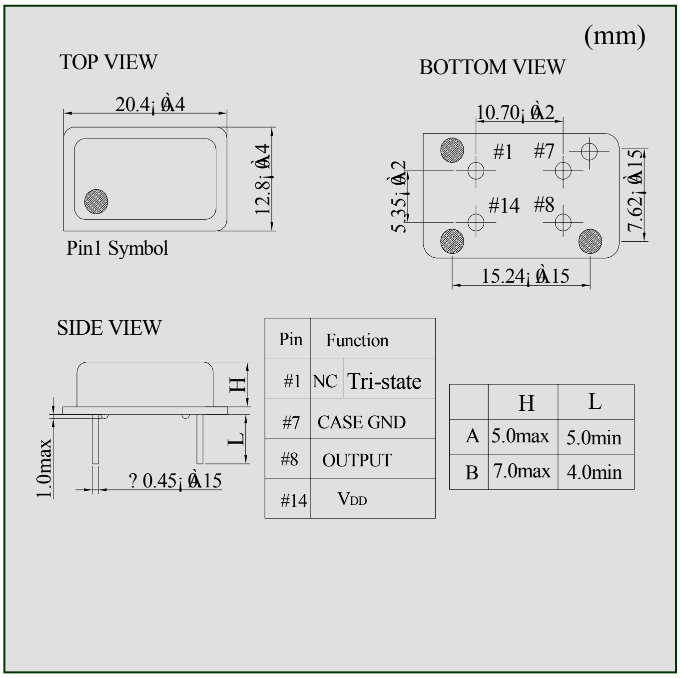
CMOS IC circuit with tri-state function

Low power consumption


● Specification

| Item \ Model | | YX—14p Series | | | | |
|---|---|---|---|---|---|---|
| Output Level | | CMOS | | | | |
| Frequency Range | (MHz) | 1.8≤Fm<20MHz | 20≤Fm<35MHz | 35≤Fm<50MHz | 50≤Fm<100MHz | 100≤Fm<125MHz |
| Frequency Stability | (ppm) | ±100 □±50 □±25 | | | | |
| Operating Temp. Range | (□) | -10 □ +70 | | | | |
| Supply Voltage ($V_{DD}$) | (V) | +5.0±10% | | | | |
| Current Consumption | (mA) | 10 | 20 | 30 | 40 | 50 |
| $V_{OL}$ max/ $V_{OH}$ min | (V) | 0.1$V_{DD}$/0.9 $V_{DD}$ $I_{OL}$=8mA $I_{OH}$=-8mA | | | | |
| Rise and Fall Time | (ns) | 10 | | | 5 | |
| Duty Cycle | (%) | 40-60 | | | | |
| Output Load | $C_L$(pF) | 15 | | | | |
| Stand-by Function | Tri-state | Yes | | | | |
| Aging | (ppm/year) | ±5 | | | | |
| Storage Temp. Range | (□) | -55 □ +125 | | | | |

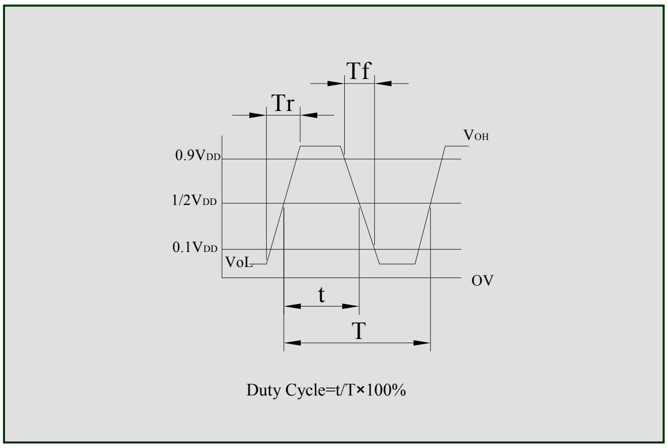
● Outline Drawing




| Pin | Function |
|---|---|
| #1 | NC Tri-state |
| #7 | CASE GND |
| #8 | OUTPUT |
| #14 | $V_{DD}$ |

| | H | L |
|---|---|---|
| A | 5.0max | 5.0min |
| B | 7.0max | 4.0min |

● Output Wave (CMOS)




● Stand-by Function (Tri-state)

| #1 input | #3 output |
|---|---|
| H level (+2.2 $V_{DD}$ min) or open | Operating |
| L level (+0.8 $V_{DD}$ max ) | High impedance |

# YXE

## Dip14 VOLTAGE CONTROLLED CRYSTAL OSCILLATOR

● Feature

Frequency range: 1.0MHz to 45MHz

Wide voltage control range

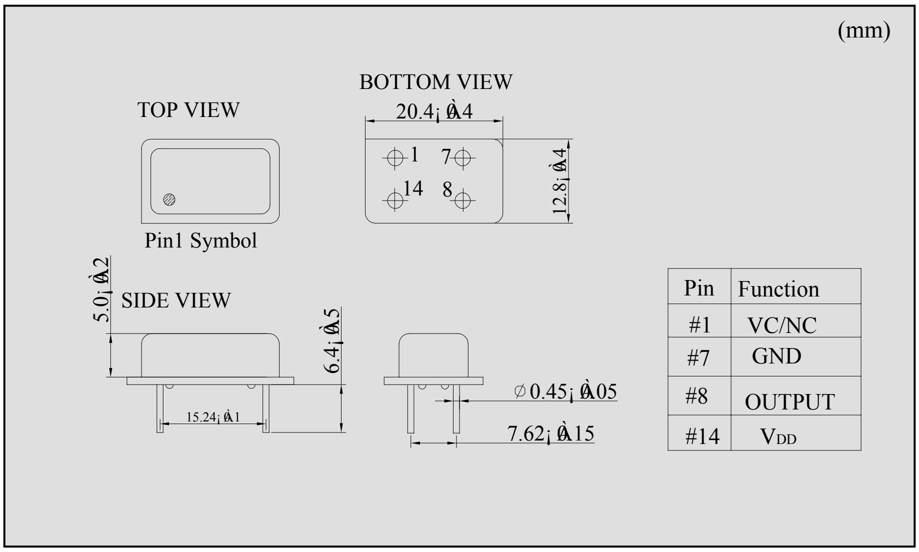
HCMOS or TTL output

Low power consumption


● Specification

| Item / Model | | YX-14VC Series |
|---|---|---|
| Package | | 14-pin DIP (Full size) |
| Frequency Range | (MHz) | 1.0 □ 45.0 |
| Frequency Stability | (ppm) | ±25 ±50 ±100 |
| Operating Temp. Range | (□) | -10 □ +60 -20 □ +70 -40 □ +85 |
| Supply Voltage ($V_{DD}$) | (V) | 5.0±10% |
| Pulling Range | ppm(min) | ±50 ±100 ±200 |
| Linearity | (%) | ±10 |
| Supply Current | mA | 1.0MHz □ 24.0MHz 30mA Max |
| | | 24.0MHz □ 30.0MHz 40mA Max |
| | | 30.0MHz □ 45.0MHz 50mA Max |
| Duty Cycle | (%) | 40□60 |
| Output Load | $C_L$(pF) | TTL: 10TTL Max CMOS: 15pF Max |
| Rise Time | ns | 5ns Max |
| Fall Time | ns | 5ns Max |
| Start-up Time | ms | 10ms Max |
| Output Load | (TTL) | 10 |
| Aging | (ppm/year) | ±5 |
| Storage Temp. Range | (□) | -40 □ +85 |

● Outline Drawing



# YXE

## 10.7MHz SERIES MCF

● Feature

Compactness and light weight

Operates stably in operating temperature range

Outstanding vibration and shock resistance characteristics

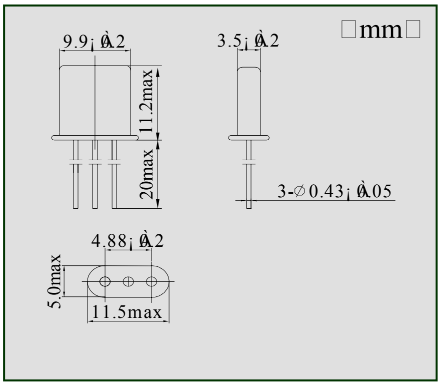

● Specification

| Part Number | Center Frequency (MHz) | Pole | Pass Band Width | | Ripple | Insertion Loss | Stop Band Width | | Terminating Impedance | Holder |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | dB | KHz | dB Max | dB MAX | dB | KHz MAX | Ω//PF | |
| 10M7A | 10.7 | 2 | 3 | ±3.75 | 0.5 | 1.5 | 20 | ±18 | 1800//5.0 | 49/T |
| 10M15A | 10.7 | 2 | 3 | ±7.5 | 0.5 | 1.5 | 18 | ±25 | 3000//2.0 | 49/T |
| 10M30A | 10.7 | 2 | 3 | ±12.5 | 0.5 | 1.5 | 15 | ±50 | 5000//0 | 49/T |
| 10M7B | 10.7 | 4 | 3 | ±3.75 | 1.0 | 2.5 | 40 | ±14 | 1800//4.5 | 49/T×2 |
| 10M15B | 10.7 | 4 | 3 | ±7.5 | 1.0 | 2.5 | 40 | ±25 | 3000//1.5 | 49/T×2 |
| 10M30B | 10.7 | 4 | 3 | ±15 | 1.0 | 2.5 | 30 | ±40 | 5500//-1 | 49/T×2 |
| 10M7A1 | 10.7 | 2 | 3 | ±3.75 | 0.5 | 2.0 | 20 | ±18 | 3.5KΩ//3Pf | UM-1 |
| 10M15A1 | 10.7 | 2 | 3 | ±7.5 | 0.5 | 2.0 | 18 | ±25 | 3.5KΩ//2.5Pf | UM-1 |

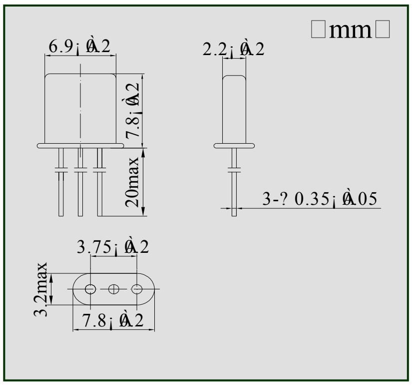
Operating Temp. Range: -20 to +70℃

● Outline Drawing

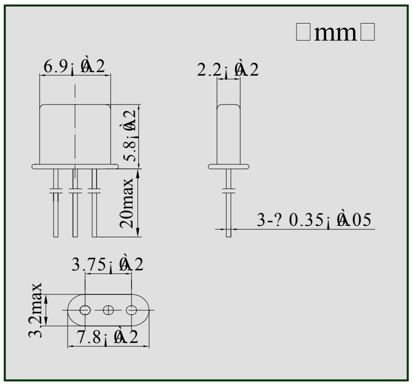
49/T



UM-1



UM-5



# YXE

## 21.4MHz\45MHz SERIES MCF


- Feature

Compactness and light weight
Operates stably in operating temperature range
Outstanding vibration and shock resistance characteristics

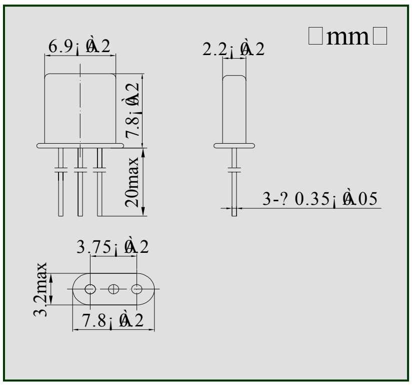
- Specification

| Part Number | Center Frequency □MHz□ | Pole | Pass Band Width | | Ripple | Insertion Loss | Stop Band Width | | Terminating Impedance | Holder |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | dB | dB Max | dB MAX | dB | dB Max | KHz MAX | Ω//PF | |
| 21M7A | 21.4 | 2 | 3 | ±3.75 | 0.5 | 1.5 | 20 | ±18 | 850//6 | UM-1 |
| 21M15A | 21.4 | 2 | 3 | ±7.5 | 1.0 | 2.0 | 18 | ±25 | 1500//2.5 | UM-1 |
| 21M30A | 21.4 | 2 | 3 | ±15 | 1.0 | 2.0 | 15 | ±45 | 1500//1.0 | UM-1 |
| 21M7B | 21.4 | 4 | 3 | ±3.75 | 1.0 | 2.5 | 40 | ±14 | 850//5 | (UM-1)×2 |
| 21M15B | 21.4 | 4 | 3 | ±7.5 | 1.0 | 2.0 | 40 | ±25 | 1500//2.0 | (UM-1)×2 |
| 21M30B | 21.4 | 4 | 3 | ±15 | 1.0 | 2.0 | 40 | ±50 | 2000//0.5 | (UM-1)×2 |
| 45M15A | 45 | 2 | 3 | ±7.5 | 1.0 | 2.5 | 15 | ±25 | 470//5 | UM-1 UM-5 |
| 45M50A | 45 | 2 | 3 | ±25 | 1.0 | 2.5 | 15 | ±100 | 2000 | UM-1 UM-5 |
| 45M15B | 45 | 4 | 3 | ±7.5 | 1.0 | 3.0 | 30 | ±25 | 470//5 | UM-1×2 UM-5×2 |
| 45M50B | 45 | 4 | 3 | ±25 | 2.0 | 3.0 | 35 | ±100 | 2000 | UM-1×2 UM-5×2 |

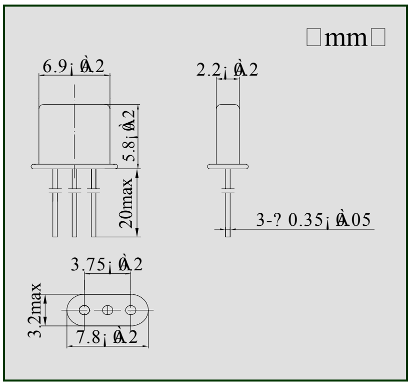
Operating Temp. Range: -20 to +70□

- Outline Drawing

UM-1




UM-5



# YXE

## CRYSTAL UNITS UM-1 UM-5

● Feature

Excellent shock-proof feature

Smaller frequency deviation

Wide frequency range


● Frequency Tolerance (at 25±3□)

| A | B | C | D |
|---|---|---|---|
| ±5ppm | ± 10ppm | ± 15ppm | ± 20ppm |

● Frequency Stability VS. Temperature Range

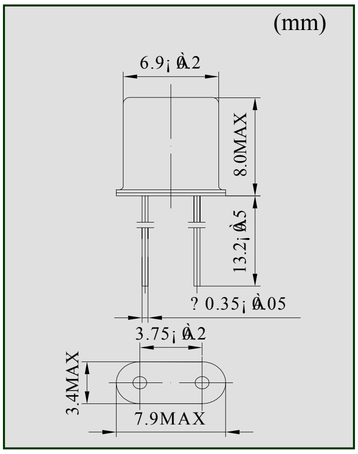
| ppm □ | A:±5 | B:±7.5 | C:±10 | D:±15 | E:±20 | F:±25 | G:±30 | H:±50 |
|---|---|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | N | Y | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | N | Y | Y | Y | Y |

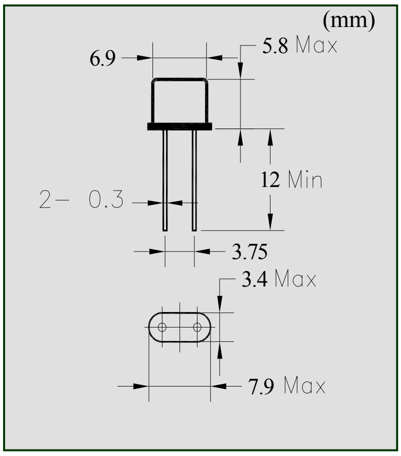
Y□Available N□Not available

● Equivalent Series Resistance (ESR)

| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 8.0<Fo<10.0 | Fund | 100 | 16≤Fo<30 | Fund | 35 |
| 10.0≤Fo<12.0 | Fund | 60 | 30≤Fo<90 | 3rd | 40 |
| 12.0≤Fo<16.0 | Fund | 40 | 60≤Fo<150 | 5th | 90 |

● Dimensions




● Standard Specifications

| | |
|---|---|
| Frequency Range | 8.0□150MHz |
| Mode of Vibration | Fund 3rd 5th |
| Drive Level | 0.1□0.5 mW |
| Load Capacitance | 8pF to 50pF, Series |
| Shunt Capacitance | 7.0pF Max |
| Insulation Resistance | 500M□ Min.@ DC 100V |
| Storage Temp. Range | -40□□120□ |
| Aging | ±3ppm/year |

# YXE

## CRYSTAL UNITS 7.0×5.0mm SMD


● Feature

Excellent solder ability

Excellent vibration and shock resistance

● Frequency Tolerance (at 25±3□)

| A | B | C | D | E |
|---|---|---|---|---|
| ±10ppm | ±15ppm | ±20ppm | ±30ppm | ±50ppm |

● Frequency Stability VS. Temperature Range

| ppm / □ | A:±5 | B:±10 | C:±15 | D:±20 | E:±25 | F:±30 |
|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | Y | Y | Y |

Y□Available N□Not available

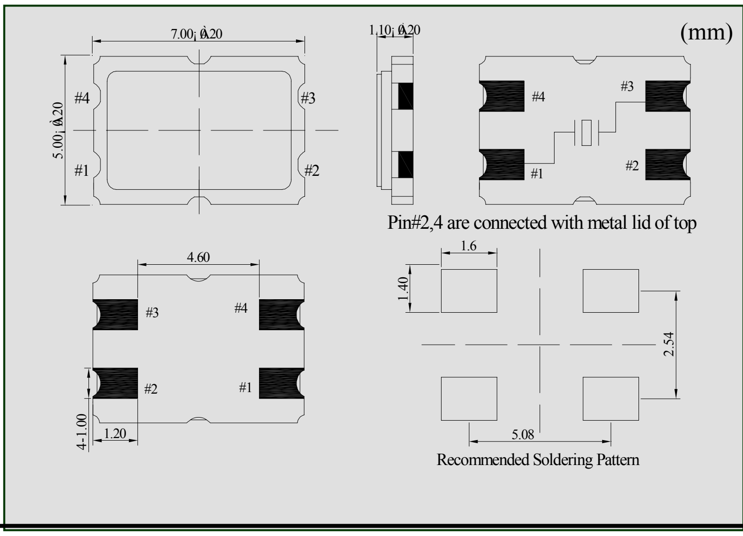
● Equivalent Series Resistance (ESR)

| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 6MHz≤F0□10.0MHz | Fund | 120 | 20.0MHz≤F0□30.0MHz | Fund | 40 |
| 10.0MHz≤Fo□12.0MHz | Fund | 70 | 30.0.0MHz≤F0□40.0MHz | Fund | 30 |
| 12.0MHz≤Fo□15.0MHz | Fund | 60 | 40.0MHz≤F0□52.0MHz | 3rd | 100 |
| 15.0MHz≤Fo□20.0MHz | Fund | 50 | 52.0MHz≤F0□80.0MHz | 3rd | 80 |

● Electrical Specifications

| | |
|---|---|
| Storage Temp. Range | -55□ - 125□ |
| Drive Level | 10μW typical |
| Shunt Capacitance | 7.0pF Max. |
| Insulation Resistance | 500MΩ Min @ DC 100V |
| Aging | ±3.0ppm/Year |

● Outline Drawing



# YXE

## CRYSTAL UNITS 6.0×3.5mm SMD

● Feature

Excellent solder ability

Excellent vibration and shock resistance


● Frequency Tolerance (at 25±3□)

| A | B | C | D | E |
|---|---|---|---|---|
| ± 10ppm | ± 15ppm | ± 20ppm | ± 30ppm | ± 50ppm |

● Frequency Stability VS. Temperature Range

| ppm / □ | A:±5 | B:±10 | C:±15 | D:±20 | E:±25 | F:±30 |
|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | Y | Y | Y |

Y□Available N□Not available

● Equivalent Series Resistance (ESR)

| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 10MHz≤Fo□12.0MHz | Fund | 90 | 20.0MHz≤ Fo□30.0MHz | Fund | 50 |
| 12.0MHz≤Fo□15.0MHz | Fund | 70 | 30.0MHz≤Fo□40.0MHz | Fund | 40 |
| 15.0MHz≤Fo□20.0MHz | Fund | 60 | 52.0MHz≤Fo□80.0MHz | 3rd | 100 |

● Electrical Specifications

| | |
|---|---|
| Storage Temp. Range | -55□ - 125□ |
| Drive Level | 10μW typical 100μW Max. |
| Shunt Capacitance | 7.0pF Max. |
| Insulation Resistance | 500MΩ Min @ DC 100V |
| Aging | ±3.0ppm/year |

● Outline Drawing

(mm)

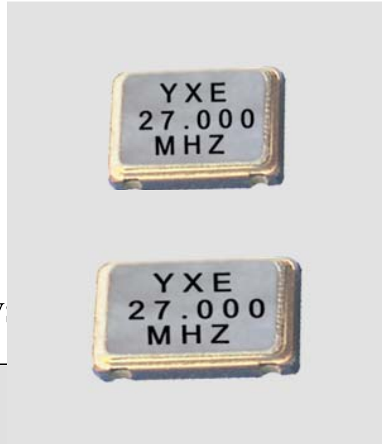
YXE

# CRYSTAL UNITS 5.0×3.2mm SMD

● Feature

Excellent solder ability

Excellent vibration and shock resistance




● Frequency Tolerance (at 25±3□)

| A | B | C | D | E |
|---|---|---|---|---|
| ±10ppm | ±15ppm | ±20ppm | ±30ppm | ±50ppm |

● Frequency Stability V

| ppm □ | A:±5 | B:±10 | | | |
|---|---|---|---|---|---|
| | Y | Y | Y | Y | Y |
| -20 to +70 | N | Y | Y | Y | Y |
| -40 to +85 | N | N | N | Y | Y |

Y□Available　　N□Not available

● Equivalent Series Resistance (ESR)

| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 12MHz≤Fo□15.0MHz | Fund | 80 | 30.0MHz≤Fo□40.0MHz | Fund | 40 |
| 15.0MHz≤Fo□20.0MHz | Fund | 60 | 40.0MHz≤Fo□52.0MHz | Fund | 30 |
| 20.0MHz≤Fo□30.0MHz | Fund | 50 | 52.0MHz≤Fo□80.0MHz | 3rd | 120 |

● Electrical Specifications

| | |
|---|---|
| Storage Temp. Range | -55□ - 125□ |
| Drive Level | 10μW typical 100μW Max. |
| Shunt Capacitance | 7.0pF Max. |
| Insulation Resistance | 500MΩ Min @ DC 100V |
| Aging | ±3.0ppm/year |

● Outline Drawing

(mm)

# YXE

## CRYSTAL UNITS 4.0×2.5mm SMD

● Feature

Excellent solder ability

Excellent vibration and shock resistance


● Frequency Tolerance (at 25±3□)

| A | B | C | D | E |
|---|---|---|---|---|
| ± 10ppm | ± 15ppm | ± 20ppm | ± 30ppm | ± 50ppm |

● Frequency Stability VS. Temperature Range

| ppm □ | A:±5 | B:±10 | C:±15 | D:±20 | E:±25 |
|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y |
| -20 to +70 | N | Y | Y | Y | Y |
| -40 to +85 | N | N | N | Y | Y |

Y□Available N□Not available

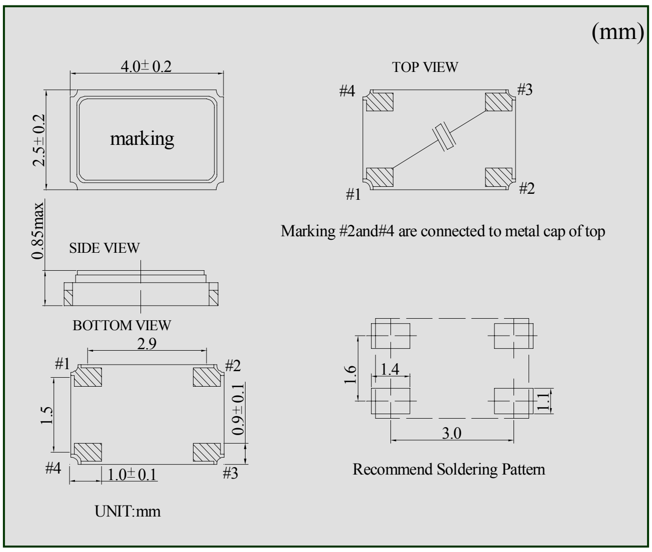
● Equivalent Series Resistance (ESR)

| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 12MHz≤Fo□16.0MHz | Fund | 80 | 16.0MHz≤Fo | Fund | 50 |

● Electrical Specifications

| | |
|---|---|
| Storage Temp. Range | -55□ - 125□ |
| | 10μW typical 100μW Max. |
| | 3.0pF Max. |
| | 500MΩ Min @ DC 100V |
| | ±3.0ppm/year |

● Outline Drawing



# YXE

## CRYSTAL UNITS HC-49/U

● Description

Providing stable signals for many electronic products, such as TV, PC, DVD

● Feature

Wide frequency range: 1.8432MHz to 120MHz

Low cost


● Frequency Tolerance (at 25±3□)

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| ±5ppm | ± 10ppm | ± 15ppm | ± 20ppm | ± 30ppm | ± 50ppm |

● Frequency Stability VS. Temperature Range

| ppm □ | A:±5 | B:±7.5 | C:±10 | D:±15 | E:±20 | F:±25 | G:±30 | H:±50 |
|---|---|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | N | Y | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | N | Y | Y | Y | Y |

Y□Available N□Not available

● Equivalent Series Resistance (ESR)

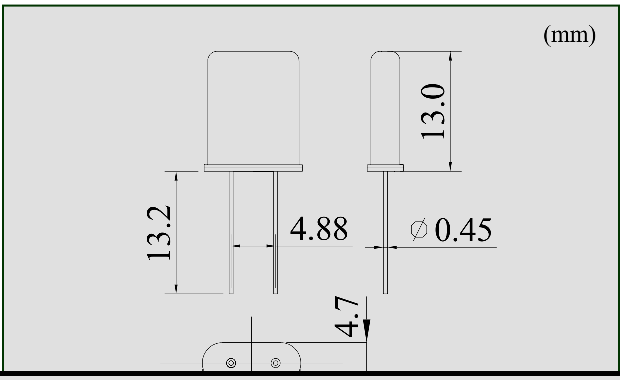
| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 1.8432≤Fo<2.5 | Fund | 500 | 5.0≤Fo<7.0 | Fund | 50 |
| 2.5≤Fo<3.0 | Fund | 300 | 7.0≤Fo<10.0 | Fund | 40 |
| 3.0≤Fo<3.5 | Fund | 150 | 10.0≤Fo<30.0 | Fund | 30 |
| 3.5≤Fo<4.0 | Fund | 120 | 25.0≤Fo<100.0 | 3rd | 40 |
| 4.0≤Fo<5.0 | Fund | 100 | 75.0≤Fo<120.0 | 5rd | 80 |

● Dimensions

● Standard Specifications

| | |
|---|---|
| Frequency Range | 1.8432–120MHz |
| Mode of Vibration | Fund 3rd 5th |
| Drive Level | 0.1□1mW |
| Load Capacitance | 8pF to 50pF, Series |

# YXE




| Shunt Capacitance | 7.0pF Max |
|---|---|
| Insulation Resistance | 500M□ Min @ DC 100V |
| Storage Temp. Range | -40□□120□ |
| Aging | ±5ppm/year |

## CRYSTAL UNITS HC-49U-SMD

● Description

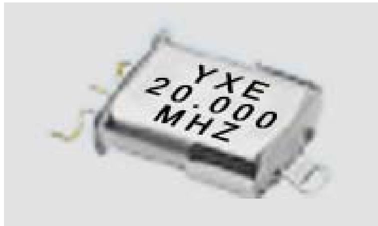
Providing stable signals for many electronic products

● Feature

Wide frequency range: 1.8432MHz to 120MHz

High impact resistance

Low cost




● Frequency Tolerance (at 25±3□)

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| ±5ppm | ± 10ppm | ± 15ppm | ± 20ppm | ± 30ppm | ± 50ppm |

● Frequency Stability VS. Temperature Range

| ppm □ | A:±5 | B:±7.5 | C:±10 | D:±15 | E:±20 | F:±25 | G:±30 | H:±50 |
|---|---|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | N | Y | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | N | Y | Y | Y | Y |

Y□Available N□Not available

● Equivalent Series Resistance (ESR)

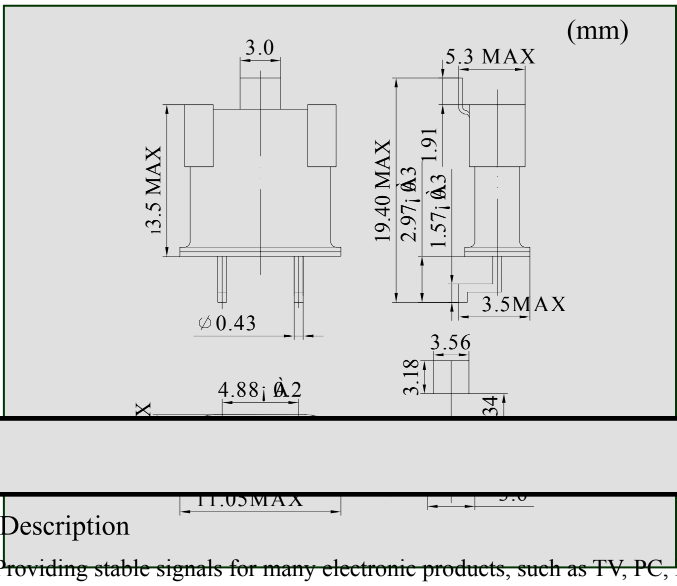
| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| 1.8432≤Fo<2.5 | Fund | 500 | 5.0≤Fo<7.0 | Fund | 50 |
| 2.5≤Fo<3.0 | Fund | 300 | 7.0≤Fo<10.0 | Fund | 40 |
| 3.0≤Fo<3.5 | Fund | 150 | 10.0≤Fo<30.0 | Fund | 30 |
| 3.5≤Fo<4.0 | Fund | 120 | 25.0≤Fo<100.0 | 3rd | 40 |
| 4.0≤Fo<5.0 | Fund | 100 | 75.0≤Fo<120.0 | 5rd | 80 |

● Dimensions

● Standard Specifications

| Frequency Range | 1.8432–120MHz |
|---|---|
| Mode of Vibration | Fund 3rd 5th |

# YXE




| | |
|---|---|
| Drive Level | 0.1□1mW |
| Load Capacitance | 8pF to 50pF, Series |
| Shunt Capacitance | 7.0pF Max |
| Insulation Resistance | 500M☐ Min @ DC 100V |
| Storage Temp. Range | -40☐□120□ |
| Aging | ±5ppm/year |

● Description

Providing stable signals for many electronic products, such as TV, PC, DVD

● Feature

Wide frequency range: 3.5MHz to 90MHz

Low cost


● Frequency Tolerance (at 25±3☐)

| A | B | C | D | E |
|---|---|---|---|---|
| ± 10ppm | ± 15ppm | ± 20ppm | ± 30ppm | ± 50ppm |

● Frequency Stability VS. Temperature Range

| ☐ PPM | A:±5 | B:±7.5 | C:±10 | D:±15 | E:±20 | F:±25 | G:±30 | H:±50 |
|---|---|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | N | Y | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | N | Y | Y | Y | Y |

Y☐Available N☐Not available

● Equivalent Series Resistance (ESR)

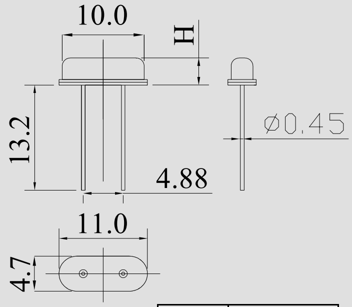
| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| Fo≤4.0 | Fund | 150 | 12≤Fo<16 | Fund | 40 |
| 4.0<Fo<7.0 | Fund | 120 | 16≤Fo<30 | Fund | 35 |
| 7.0≤Fo<10.0 | Fund | 80 | 30≤Fo<40 | 3rd | 120 |
| 10≤Fo<12 | Fund | 50 | 41≤Fo<90 | 3rd | 80 |

● Dimensions

● Standard Specifications

| | |
|---|---|
| Frequency Range | 3.5□90MHz |

# YXE




| H | 2.6 |
|---|---|
| | 3.5 |

| | |
|---|---|
| Mode of Vibration | Fund 3rd |
| Drive Level | 0.1□0.5 mW |
| Load Capacitance | 8pF to 50pF, Series |
| Shunt Capacitance | 7.0pF Max |
| Insulation Resistance | 500M□ Min @ DC 100V |
| Storage Temp. Range | -40□□120□ |
| Aging | ±5ppm/year |

# CRYSTAL UNITS 49S-SMD

● Description

Providing stable signals for many electronic products, such as PC, DVD

● Feature

Wide frequency range: 3.5MHz to 90MHz

Low cost


● Frequency Tolerance (at 25±3□)

| A | B | C | D | E |
|---|---|---|---|---|
| ± 10ppm | ± 15ppm | ± 20ppm | ± 30ppm | ± 50ppm |

● Frequency Stability VS. Temperature Range

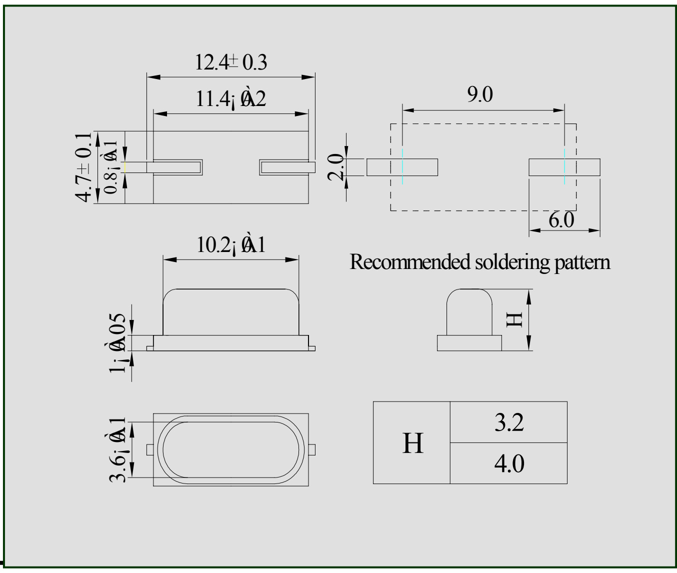
| ppm □ | A:±5 | B:±7.5 | C:±10 | D:±15 | E:±20 | F:±25 | G:±30 | H:±50 |
|---|---|---|---|---|---|---|---|---|
| -10 to +60 | Y | Y | Y | Y | Y | Y | Y | Y |
| -20 to +70 | N | N | Y | Y | Y | Y | Y | Y |
| -40 to +85 | N | N | N | N | Y | Y | Y | Y |

Y□Available N□Not available

● Equivalent Series Resistance (ESR)

| Fo (MHz) | Mode | RS (ohm) Max | Fo (MHz) | Mode | RS (ohm) Max |
|---|---|---|---|---|---|
| Fo≤4.0 | Fund | 150 | 12≤Fo<16 | Fund | 40 |
| 4.0<Fo<7.0 | Fund | 120 | 16≤Fo<30 | Fund | 35 |
| 7.0≤Fo<10.0 | Fund | 80 | 30≤Fo<40 | 3rd | 120 |
| 10≤Fo<12 | Fund | 50 | 41≤Fo<90 | 3rd | 80 |

● Dimensions




● Standard Specifications

| | |
|---|---|
| Frequency Range | 3.5□90MHz |
| Mode of Vibration | Fund 3rd |
| Drive Level | 0.1□0.5 mW |
| Load Capacitance | 8pF to 50pF, Series |
| Shunt Capacitance | 7.0pF Max |
| Insulation Resistance | 500M□ Min.@ DC 100V |
| Storage Temp. Range | -40□□120□ |
| Aging | ±5ppm/year |

YXE

# TUNING FORK CRYSTAL

● Feature

Excellent shock resistance

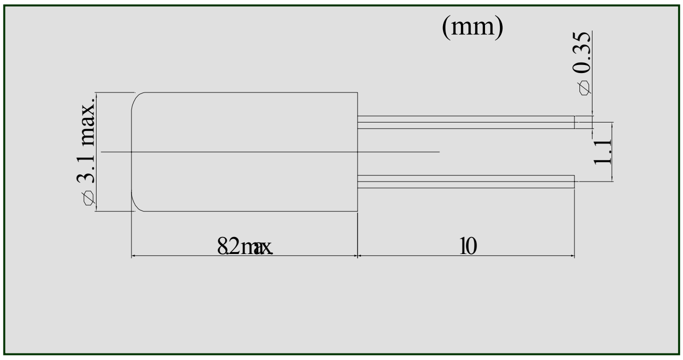
Low power consumption

Ideal for portable equipment

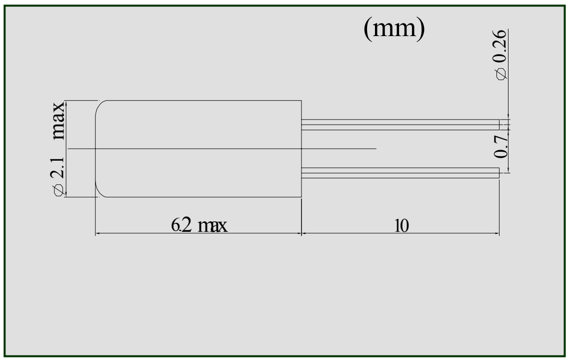

● Standard Specification

| Item | 308 Series | 206 Series |
|---|---|---|
| Nominal Frequency | 32.768KHz | |
| Frequency Tolerance | ±5ppm ±10ppm ±20ppm ±50ppm | |
| Turnover Temperature | 25□±5□ | |
| Temperature Coefficient | -0.034±0.006ppm/□ | |
| Equivalent Series Resistance | 35KΩ Max | |
| Load Capacitance | 12.5pF typ. | |
| Shunt Capacitance | 1.60pF typ. | 1.35pF typ. |
| Drive level | 1μW Max | |
| Insulation Resistance | 500MΩ Min DC100V±15V | |
| Aging (First year) | ±3ppm Max | |
| Storage Temperature Range | -40□ to 85□ | |

● Dimensions (Φ3×8)




● Dimensions (Φ2×6)



# YXE

## TUNING FORK CRYSTAL

● Feature

Excellent shock resistance

Low power consumption

Ideal for portable equipment


● Standard Specification

| Item | 308 Series | 206 Series |
|---|---|---|
| Nominal Frequency | 32.768KHz | |
| Frequency Tolerance | ±5ppm ±10ppm ±20ppm ±50ppm | |
| Turnover Temperature | 25□±5□ | |
| Temperature Coefficient | -0.034±0.006ppm/□ | |
| Equivalent Series Resistance | 35KΩ Max | |
| Load Capacitance | 12.5pF typ. | |
| Shunt Capacitance | 1.60pF typ. | 1.35pF typ. |
| Drive level | 1μW Max | |
| Insulation Resistance | 500MΩ Min DC100V±15V | |
| Aging (First year) | ±3ppm Max | |
| Storage Temperature Range | -40□ to 85□ | |

● Dimensions (Φ3×8)