

Clock Oscillators (SMD)



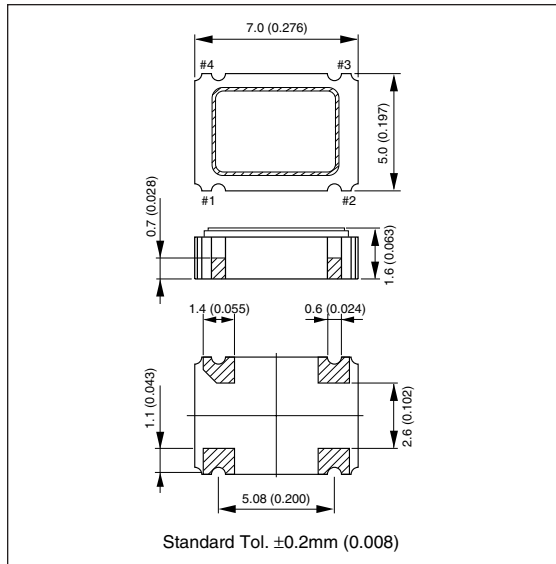
K50H-3C Series (3.3V)

K50 SERIES



DIMENSIONS

millimeters (inches)



PIN CONNECTION

Pin #	Function
1	CONTROL
2	CASE GND
3	OUTPUT
4	+V _{CC}

ENABLE/DISABLE

Pin #1	Pin #3
"H" or Open	Oscillation
"L"	High Impedance or Oscillation Stop

FEATURES

- Special design package for high frequency applications
- Frequency range = 50MHz to 160MHz
- Frequency tolerance = $\pm 100\text{ppm}$, $\pm 50\text{ppm}$, $\pm 25\text{ppm}$
- Tristate output inhibit
- Low jitter

APPLICATIONS

- Fibre channel
- 10 Gigabit Ethernet
- Networking Devices

HOW TO ORDER

K50H - 3C 1 S E 125.000M R

Packaging

R = Tape and reel,
1,000 pcs/reel

Frequency (MHz)

50.0000	100.000	106.250
125.000	133.333	155.520
156.250	—	—

Enable/Disable Function

E = with function (STD)

Duty Ratio

S = 45% to 55% (STD)

Tolerance

1 = $\pm 100\text{ppm}$
0 = $\pm 50\text{ppm}$
S = $\pm 30\text{ppm}$
U = $\pm 25\text{ppm}$

Series

SPECIFICATIONS

Items	Code	Rating	Unit	Remarks
Output Frequency	F _{OUT}	50 to 160	MHz	—
Frequency Tolerance	$\Delta F/F$	$\pm 100, \pm 50, \pm 30, \pm 25$	ppm	Over all conditions
Aging	$\Delta F/F$	$\pm 5.0, \pm 1.5$	ppm/y	@ 25°C
Operating Temperature	T _{OPR}	-10 to 70	°C	—
Storage Temperature	T _{STR}	-55 to 125	°C	—
Supply Voltage	V _{CC}	3.3 \pm 0.3	V	—
Supply Current	I _{CC}	60 max.	mA	Loaded @ 160MHz
Duty Ratio	SYM	45 to 55	%	0.5V _{CC} DC Level
Output 0 Level	V _{OL}	0.1V _{CC} max.	V	I _{OL} = 8mA
Output 1 Level	V _{OH}	0.9V _{CC} min.	V	I _{OH} = -8mA
Rise/Fall Time	T _R , T _F	10 max.	nsec	0.1V _{CC} -0.9V _{CC}
Load Capacitance	C _L	15 max.	pF	—
Enable Time	—	10 max.	msec	—
Disable Time	—	10 max.	msec	—
Input Voltage Low	V _{IL}	0.3V _{CC} max.	V	—
Input Voltage High	V _{IH}	0.7V _{CC} min.	V	—

*Please contact us for inquiries about Extend Operating Temperature Range (-40 to +85°C), available frequencies, other condition.

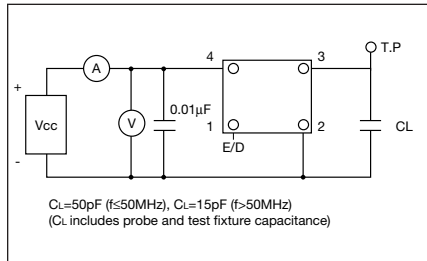
Clock Oscillators



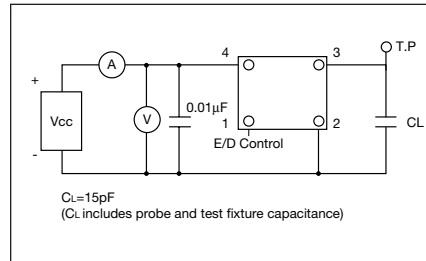
K30/K50 Series

Kyocera has a wide range of clock oscillators with frequency and package size to match the various customer requirements.

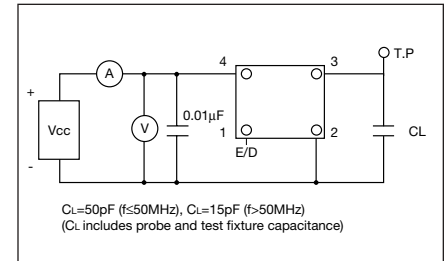
K50/K30 HC SERIES TEST CIRCUIT



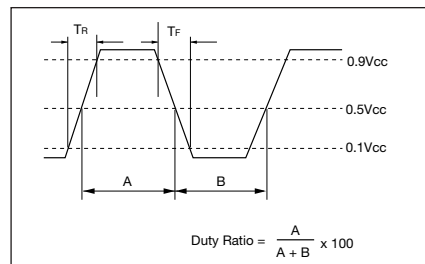
K50/K30 3C SERIES TEST CIRCUIT



K50H 3C SERIES TEST CIRCUIT



OUTPUT WAVE FORM FOR ALL SERIES



SPECIFICATIONS

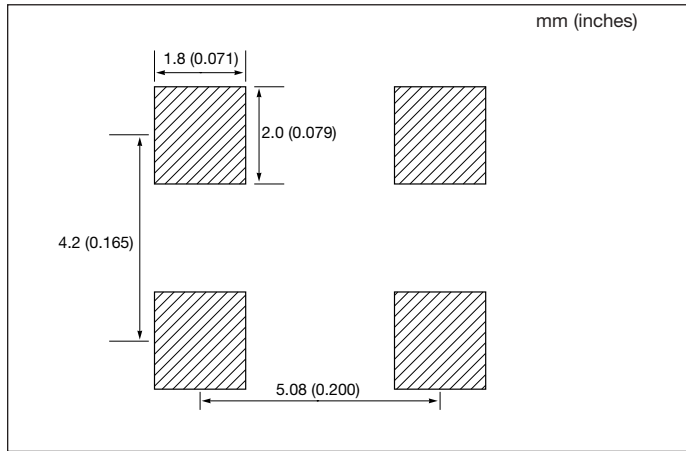
Type	Frequency Range (MHz)	Load	Drive Level	Duty Ratio	Features
K50-HC	8 to 68	$C_L=50\text{pF}$ (max.) ($f \leq 50\text{MHz}$)	CMOS $V_{OH}=0.9V_{CC}$ $V_{OL}=0.1V_{CC}$	45/55% (0.5Vcc)	1. IR Reflowable 2. Mini-SMD 3. Tristate Output, Enable/Disable Function $F > 50\text{MHz}$ $C_L=15\text{pF}$
K50-3C	8 to 80	$C_L=15\text{pF}$ (max.)	CMOS $V_{OH}=0.9V_{CC}$ $V_{OL}=0.1V_{CC}$	40/60% (0.5Vcc)	1. 3.3V Available 2. IR Reflowable 3. Mini-SMD 4. Tristate Output, Enable/Disable Function
K50H-3C	50 to 160	$C_L=15\text{pF}$ (max.)	CMOS $V_{OH}=0.9V_{CC}$ $V_{OL}=0.1V_{CC}$	45/55% (0.5Vcc)	1. 3.3V Available 2. IR Reflowable 3. Mini-SMD 4. Tristate Output, Enable/Disable Function
K30-HC	8 to 50	$C_L=50\text{pF}$ (max.) ($f \leq 50\text{MHz}$)	CMOS $V_{OH}=0.9V_{CC}$ $V_{OL}=0.1V_{CC}$	45/55% (0.5Vcc)	1. IR Reflowable 2. Mini-SMD 3. Tristate Output, Enable/Disable Function
K30-3C	8 to 67	$C_L=15\text{pF}$ (max.)	CMOS $V_{OH}=0.9V_{CC}$ $V_{OL}=0.1V_{CC}$	40/60% (0.5Vcc)	1. 3.3V Available 2. IR Reflowable 3. Mini-SMD 4. Tristate Output, Enable/Disable Function

Clock Oscillators (SMD)

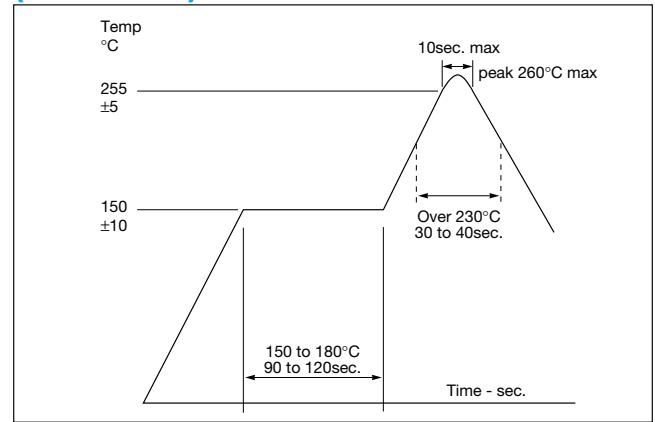


K50/K50H Series

RECOMMENDED LAND PATTERN

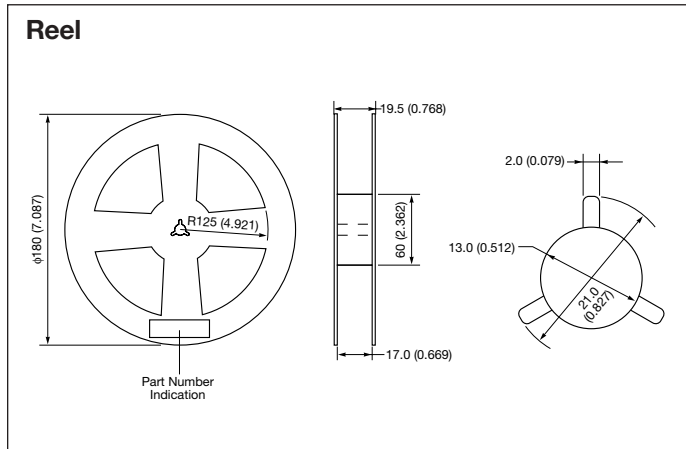


RECOMMENDED REFLOW PROFILE (Lead Free)

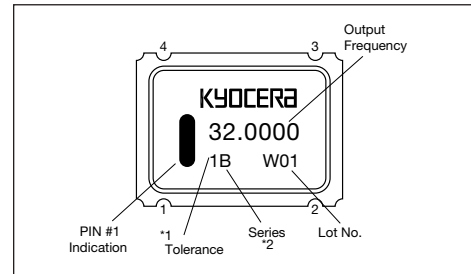


PACKAGING

millimeters (inches)

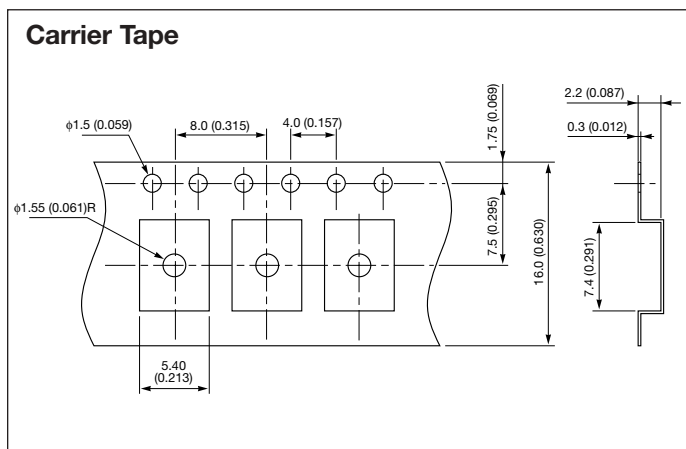


MARKING SPECIFICATIONS



- *1 1 = ± 100 ppm
0 = ± 50 ppm
S = ± 30 ppm
U = ± 25 ppm
- *2 B = K50-HC
L = K50-3C-E
M = K50-3C-SE
D = K50-CL
H = K50H-3C-SE

Carrier Tape



PACKAGING

1,000pcs/Reel