



KXO-HC / KHO-HC Series Crystal Clock Oscillator

CMOS Drive - TTL or CMOS Compatible - f_o : 1.0 to 50MHz

FEATURES

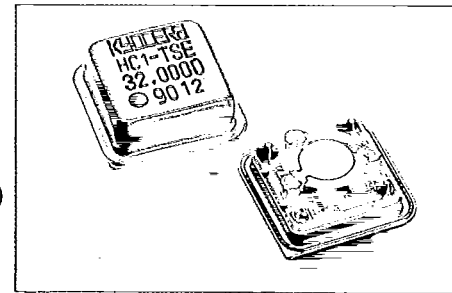
- 1) High Speed C-MOS clock oscillator
- 2) High Power drive level
- 3) Low Current Consumption
- 4) Output available with TTL or CMOS compatibility
- 5) Enable/Disable Optional
- 6) KHO-HC in 8 pin DIP

HOW TO ORDER

KXO-HC1-TSE-32.000M

① ② ③④⑤ ⑥

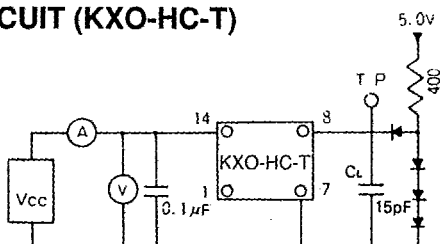
- ① Type: KXO=14 Pin DIP;
KHO=8 Pin DIP
- ② Frequency precision: S= ± 25 ppm(special)
0= ± 50 ppm; 1= ± 100 ppm
- ③ Output level: T:TTL compatible
C: C-MOS compatible
- ④ Duty cycle Nil: 40 to 60%
- ⑤ Enable/Disable function Nil: without
function; E: with function
- ⑥ Frequency



SPECIFICATIONS: (KXO-HC-T/TTL COMPATIBLE)

Classification	Code	Rating	Unit	Remarks
Output frequency	f_{out}	1M to 50M	Hz	
Frequency precision	$\Delta f/f$	± 25 ± 50 ± 100	ppm ppm ppm	0 to $\pm 70^\circ\text{C}$ 4.5V to 5.5V
Operating temperature range	T_{opr}	0 to $+70$	$^\circ\text{C}$	
Voltage	V_{CC}	5 ± 0.5	V	
Electrical current consumption	I_{CC}	Max 35	mA	$f=25\text{MHz}$ $C_L=15\text{pF}$ (10 TTL Load)
Output	Duty cycle	40 to 60 45 TO 55 (option)	% %	1.4V DC level Below 25 MHz 1.4V DC level
	"0" level	Max 0.4	V	$I_{OL}=At$ 16mA
	"1" level	Min $V_{CC}-0.2$	V	$I_{OH}=At$ -1mA
	Rise and Fall time	T_R, T_F	nsec	0.4V to 2.4V $C_L=15\text{pF}$ 10 TTL load
Fan out		TTL 10gate		MOS level OK
Time to Enable/Disable		Max 100	nsec	Tristate Output
Input current	I_{IH} I_{IL}	Max 10 Max - 150	μA μA	$V_{CC}=5.5\text{V}$ $V_{CC}=5.5\text{V}$
Input voltage	V_{IH} V_{IL}	Min 2.2 Max 0.8	V V	

TEST CIRCUIT (KXO-HC-T)

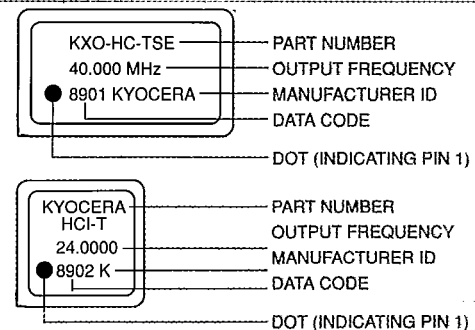


$C_L=15\text{pF}$ max
(Inclusive of test jig and
probe capacitance)

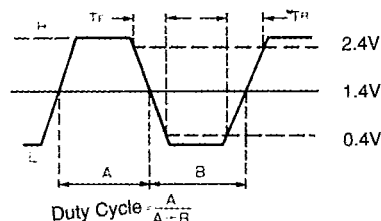
MARKINGS:

KXO-HC

KHO-HC



SHAPE OF OUTPUT WAVE (KXO-HC-T)



PIN CONNECTION

KXO KHO

1	1	N.C. or CONTROL
7	4	CASE/GND
8	5	OUT PUT
14	8	+5.0V D.C.

KXO-HC / KHO-HC Series Crystal Clock Oscillator

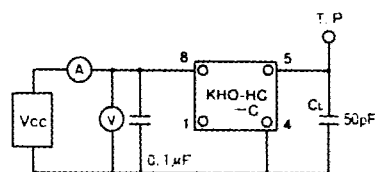
CMOS Drive - TTL or CMOS Compatible - f_o : 1.0 to 50MHz

SPECIFICATIONS (KXO-HC-C/C-MOS COMPATIBLE)

T-50-23

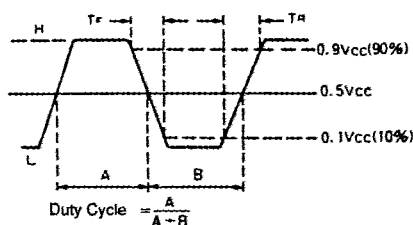
Classification		Code	Rating	Unit	Remarks
Output frequency		f _{out}	1M to 50M	Hz	
Frequency precision		Δf/f	0: ±0.005 (±50) 1: ±0.01 (±100)	%(ppm) %(ppm)	0 to ±70°C 4.5V to 5.5V
Operating temperature range		T _{opr}	0 to +70	°C	
Voltage		V _{CC}	5±0.5	V	
Electrical current consumption		I _{CC}	Max 35	mA	f=25MHz C _L =50pF
Output	Duty cycle	S _y	40 to 60	%	1/2V _{CC} level
			45 to 55 (option)	%	Below 25MHz 1/2 V _{CC} level
	"0" level	V _{OL}	Max 0.4	V	I _{OL} =At 16mA
	"1" level	V _{OH}	Min V _{CC} -0.4	V	I _{OH} =At -1mA
	Rise and Fall time	T _R , T _F	Max 10	nsec	10%V _{CC} to 90% V _{CC} C _L =50pF
Time to Enable/Disable			Max 100	nsec	Tristate Output
Input current		I _{IH} I _{IL}	Max 10 Max - 150	μA μA	V _{CC} =5.5V V _{CC} =5.5V
Input voltage		V _{IH} V _{IL}	Min 2.2 Max 0.8	V V	

TEST CIRCUIT (KXO-HC-C)



$C_L=50\text{pF}$ max
(Inclusive of test jig and probe capacitance)

SHAPE OF OUTPUT WAVE (KXO-HC-C)



PIN CONNECTION

KXO KHO

1	1	N.C. or CONTROL
7	4	CASE/GND
8	5	OUT PUT
14	8	+5.0V D.C.

DIMENSIONS:

KXO-HC

KHO-HC

