

KXO-EH Series ECL Clock Oscillators

Drive - ECL 10 KH Compatible

f_o : 50 to 135 MHz

FEATURES:

- 1) ECL 10 KH output
- 2) Hermetically sealed package
- 3) Resistant to mechanical shock
- 4) Crystal technology
- 5) Complementary output or enable/disable function available

HOW TO ORDER

KXO-EH 1 - P S C - 100.0000M T

- ① Type: (Kyocera Crystal Oscillator)
- ② Frequency precision:
 1 = ± 100 ppm
 0 = ± 50 ppm
- ③ Power supply voltage:
 P = PLUS specification (PIN 7 Case GND)
 □ = MINUS specification (PIN 14 Case GND)
- ④ Duty cycle:
 S = 45% to 55%
 □ = 40% to 60%
- ⑤ 1 PIN function:
 C = Complementary output
 L = E/D function, 8 PIN output low stop
 H = E/D function, 8 PIN output high stop
- ⑥ Frequency
- ⑦ Packaging:
 □ = tray
 T = tube



SPECIFICATIONS (KXO-EH)

Classification	Code	Rating (Negative Supply)		Rating (Positive Supply)		Unit	Remarks	
		Min	Max	Min	Max			
Output Frequency	f_{OUT}	50	135	50	135	MHz		
Frequency Precision	$\Delta f/f_o$	-100	+100	-100	+100	ppm		
Operating Temperature Range	T_{OPR}	0	+70	0	+70	$^{\circ}C$		
Storage Temperature Range		-55	+125	-55	+125	$^{\circ}C$		
Voltage	V_{EE}	-5.2 \pm 5%		0 (GND)		VDC		
	V_{CC}	0 (GND)		+5.0 \pm 5%				
Electrical Current Consumption	I_{EE}	—	50	—	—	mA		
	I_{CC}	—	—	—	50			
Output	Duty Cycle	S_Y	40	60	40	60	%	
			45	55	45	55		
	"0" Level	V_{OL}	-1.95	-1.63	3.05	3.37	V	At 25 $^{\circ}C$
			-1.95	-1.60	3.05	3.4		At 0 $^{\circ}C$ to 70 $^{\circ}C$
	"1" Level	V_{OH}	-0.98	-0.81	4.02	4.19	V	At 25 $^{\circ}C$
			-1.02	-0.74	3.98	4.26		At 0 $^{\circ}C$ to 70 $^{\circ}C$
Rise and Fall Time	T_R, T_F	—	3.0	—	3.0	nsec	20% to 80% V_{DD}	

ENABLE/DISABLE FUNCTIONS ONLY

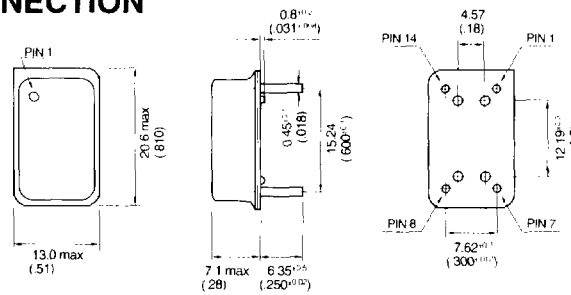
Input Voltage-Low	V_{IL}	-1.95	-1.48	3.05	3.52	V	
Input Voltage-High	V_{IH}	-1.17	-0.84	3.83	4.16	V	
Input current-Low	I_{IL}	—	500	—	500	μA	
Input Current-High	I_{IH}	—	0.5	—	0.5	μA	
Enable/Disable Time	t_D	—	20	—	20	nsec	

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DIMENSIONS AND PIN CONNECTION



Unit: mm (inch)

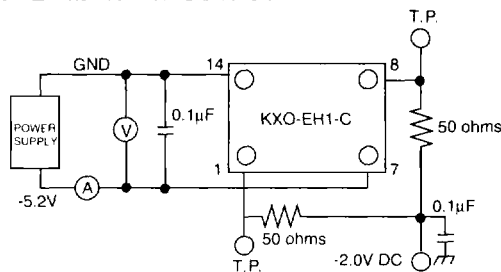
PIN CONNECTIONS

PIN #	Plus Spec	Minus Spec
1	E/D Function or Complementary Output	
7	Case/GND	V_{EE}
8	Output	Output
14	V_{DD}	Case/GND

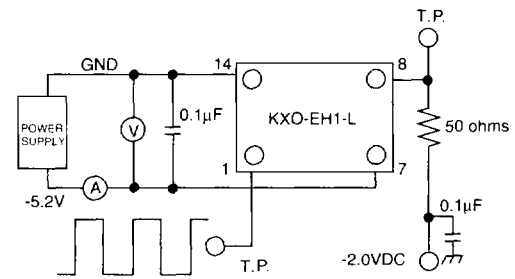
ENABLE/DISABLE FUNCTION

Option	Pin 1	Pin 8
Low or High	Low or Open	Oscillation
Low	High	Low
High	High	High

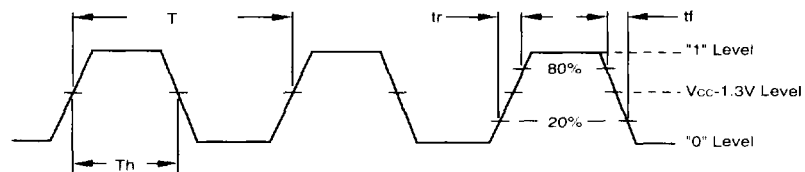
TEST CIRCUIT COMPLEMENTARY OUTPUT



ENABLE/DISABLE FUNCTION



SHAPE OF OUTPUT WAVE



$$\text{SYM.} = \text{Th}/T \times 100\%$$

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rated Value	Unit
Negative power supply voltage	V_{EE}	-8.0 to 0	V
Positive power supply voltage	V_{DD}	0 to 8.0	V
Input voltage	V_{IN}	0 to V_{EE}	V
Operating temperature	T_{opr}	0 to +70	°C
Storage temperature	T_{stor}	-55 to +125	°C

PACKAGING

Tray
100 pcs/tray
4 trays/box
Tube
25 pieces/tube