fordahl
FREQUENCY CONTROL PRODUCTS

T T L & H C M O S   P R E C I S I O N   O S C I L L A T O R S

D F N 1 4 - K B , D F N 4 - K B & D F N 4 - K H

KEY FEATURES

1 to 70 MHz

± 15 ppm overall stability available

Encapsulated crystal

APPLICATIONS

Sonet/SDH/Avionics/High rel. clocks

Function	DFN 14	DFN 4
NC/Enable	1	1
GND	7	4
Output	8	5
Vcc	14	8

DFN 14

DFN 4

H = 5.10 mm
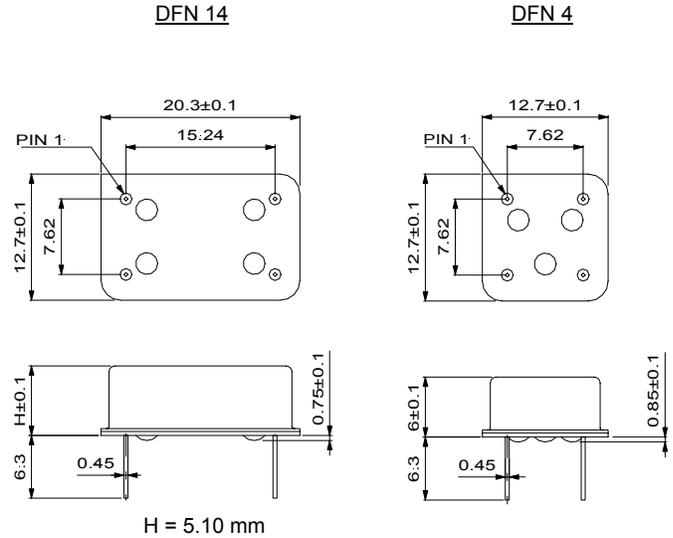
TYPE	DFN 14-KB	DFN 4-KB	DFN 4-KH
Frequency Range	1 to 70 MHz	1 to 70 MHz	1 to 70 MHz

ELECTRICAL SPECIFICATIONS			
supply voltage		5 V ± 5 %	5 V ± 5 %
supply current (no load) ≤ 25 MHz		≤ 20 mA	≤ 20 mA
> 25 MHz		≤ 50 mA	≤ 50 mA
output load		HCMOS 15 pF or 10 TTL	HCMOS 50 pF up to 25 MHz, 15 pF above
duty cycle		40/60...60/40 % @ 50% level or 1.4 V	40/60...60/40 % @ 50% level
rise/fall times 0.4 to 2.4 V		≤ 3.5 ns	
10 to 90%		≤ 5 ns 1 to 70 MHz	≤ 7 ns up to 25 MHz ≤ 3 ns > 25 MHz
high/low levels		≥ 4.5 V/ ≤ 0.5 V	≥ 4.5 V/ ≤ 0.5 V
start up		≤ 10 ms @ 4.75 V	≤ 10 ms @ 4.75 V

FREQUENCY STABILITY		stability [ppm] and temperature code					
types	temperature range	stability	code	stability	code	stability	code
all types	0 to 70°C	≤ ± 15	XB15	≤ ± 25	XB25	≤ ± 50	XB50
	-40 to 85°C	≤ ± 25	XE25	≤ ± 50	XE50	≤ ± 75	XE75
	-55 to 125°C	≤ ± 50	XH50	≤ ± 75	XH75	≤ ± 100	XH100
remarks		XH codes only available as DFN 14/4-KB type for F ≤ 50 MHz					
		includes calibration at 25°C, temperature, ageing, Vcc and load changes 1st year					

OPTIONS	CODE	
tight symmetry (f ≤ 50 MHz)	R	45/55...55/45 %
tri-state output on pin 1	Z	high or open = enable, low = high Z (DFN 4-KH up to 50 MHz only)

ORDERING CODE	type + option code + frequency + temperature code
Example	DFN 4-KBZ 50.000 MHz XB15