fordahl
FREQUENCY CONTROL PRODUCTS

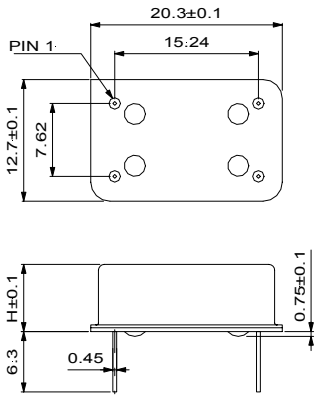
TTL OR HCMOS PRECISION OSCILLATORS

DFN 14-K & DFN 114-K

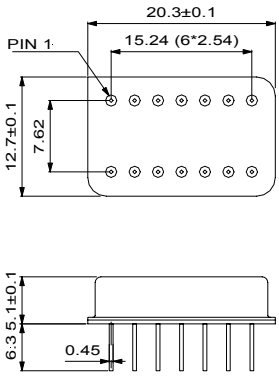
KEY FEATURES
1 to 70 MHz
± 15 ppm overall stability available
Encapsulated crystal
APPLICATIONS
Sonet/SDH/Avionics/High rel. clocks

Function	DFN 14	DFN 114
NC/Trim/Enable	1	1
GND	7	7
Output	8	8
Vcc	14	14
NC		others

DFN 14



DFN 114



H = 5.10 mm

TYPE	DFN 14-KH & DFN 114-KH	DFN 14-KT & DFN 114-KT
Frequency Range	1 to 70 MHz	1 to 70 MHz

ELECTRICAL SPECIFICATIONS			
supply voltage		5 V ± 10 %	5 V ± 10 %
supply current (no load)	≤ 25 MHz	≤ 10 mA (KH), 20 mA (KHZ)	≤ 20 mA
	> 25 MHz	≤ 40 mA (KH), 50 mA (KHZ)	≤ 50 mA
output load		HCMOS 50 pF up to 25 MHz, 15 pF above	10 TTL
duty cycle		40/60 ...60/40 % @ 50% level	40/60...60/40 % @ 1.4 V
rise/fall times (HCMOS @ 15 pF load)		10 to 90 % ≤ 10 ns up to 25 MHz or ≤ 5 ns > 25 MHz	0.4 to 2.4 V ≤ 5 ns up to 25 MHz or ≤ 3 ns > 25MHz
high/low levels		≥ 4.5 V/ ≤ 0.5 V	≥ 2.4 V/ ≤ 0.4 V
start up		≤ 10 ms @ 4.5 V	≤ 10 ms @ 4.5 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	≤ ± 100	XE100
	-55 to 125°C	≤ ± 50	XH50	≤ ± 75	XH75	≤ ± 100	XH100
remark		includes calibration at 25°C, temperature, ageing, Vcc and load changes 1st year					

OPTIONS	CODE		
external trimmer (f ≤ 50 MHz)	T	≥ ± 5 ppm (3 to 15 pF)	
internal trimmer (f ≤ 50 MHz)	A	≥ ± 5 ppm, package height ≤ 7 mm	
tight symmetry (f ≤ 50 MHz)	R	45/55...55/45 %	45/55...55/45 %
tri-state control (higher current)	Z	high or open = enable, low = high Z	high or open = enable, low = high Z

ORDERING CODE	type + option code + frequency + temperature code	
Example	DFN 14-KH 49.152 MHz XB15	DFN 114-KTR 32.000 MHz XH50