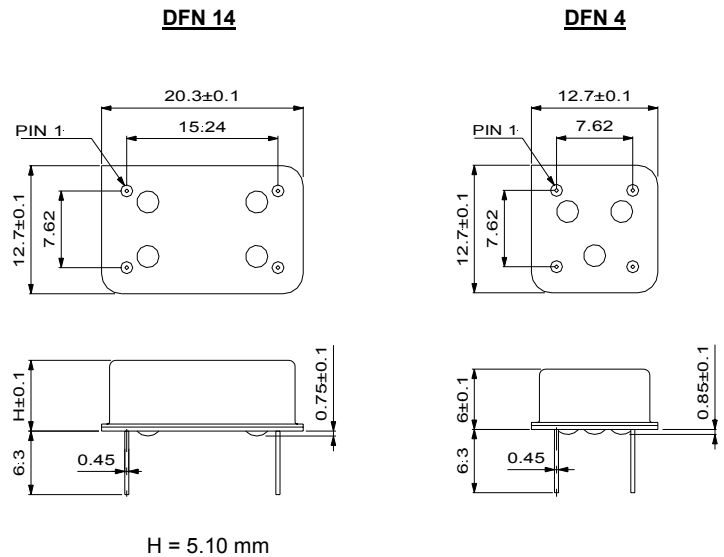


HCMOS & TTL COMPATIBLE CLOCK OSCILLATORS DFN 14-HL & DFN 4-HL (3.3 V)

KEY FEATURES
1 to 100 MHz
3.3 V, HCMOS/TTL compatible output
Standard DIL 14 or DIL 8 packages
APPLICATIONS
Clocking

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



TYPE	DFN 14-HL	DFN 4-HL
Frequency Range	1 to 100 MHz	1 to 100 MHz

ELECTRICAL SPECIFICATIONS		
supply voltage		3.3 V ± 5 %
supply current (no load)	≤ 20 MHz ≤ 50 MHz > 50 MHz	≤ 10 mA ≤ 20 mA ≤ 40 mA
output load		HCMOS 50 pF up to 25 MHz or 15 pF > 25 MHz
duty cycle		40/60...60/40 % @ 50% level
rise/fall times		10 to 90 % ≤ 10 ns up to 25 MHz ≤ 5 ns > 25MHz
high/low levels		≥ 2.7 V / ≤ 0.4 V
start up		≤ 10 ms @ 3.15 V

FREQUENCY STABILITY		stability [ppm] and temperature code					
types	temperature range	stability	code	stability	code	stability	code
all types	0 to 70°C	≤ ± 25	XB25	≤ ± 50	XB50	≤ ± 100	XB100
	-40 to 85°C	≤ ± 50	XE50	≤ ± 75	XE75	≤ ± 100	XE100
stability includes calibration at 25°C, temperature, ageing, Vcc and load changes 1 st yr.							

OPTIONS	CODE	
tight symmetry	R	45/55...55/45 %
tri-state output on pin 1	Z	high or open = enable, low = high Z

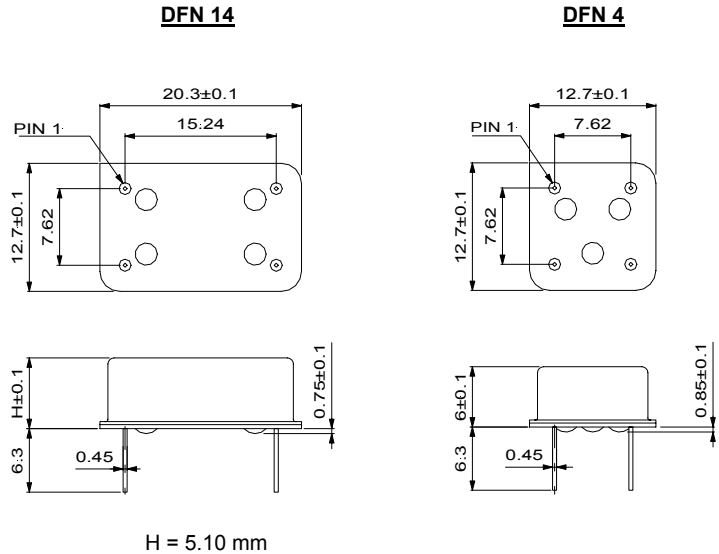
ORDERING CODE	type + option code + frequency + stability/temperature code	
Example	DFN 14-HLZ 16.000 MHz XE50	DFN 4-HL 65.536 MHz XB25

HCMOS & TTL COMPATIBLE CLOCK OSCILLATORS

DFN 14-B, DFN 4-B, DFN 14-H & DFN 4-H

KEY FEATURES
1 to 100 MHz
HCMOS/TTL compatible output
Standard DIL 14 or DIL 8 packages
APPLICATIONS
Clocking

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



TYPE	DFN 14-B	DFN 4-B	DFN 14-H	DFN 4-H
Frequency Range	1 to 100 MHz	1 to 70 MHz	1 to 100 MHz	1 to 70 MHz

ELECTRICAL SPECIFICATIONS					
supply voltage		5 V ± 5 %		5 V ± 5 %	
supply current (no load)	≤ 20 MHz ≤ 70 MHz > 70 MHz	≤ 20 mA ≤ 40 mA ≤ 90 mA		≤ 20 mA ≤ 40 mA ≤ 90 mA	
output load		HCMOS 15 pF or 10 TTL		HCMOS 50 pF up to 25 MHz or 15 pF > 25 MHz	
duty cycle		40/60...60/40 % @ 50% level or 1.4 V		40/60...60/40 % @ 50% level	
rise/fall times		10 to 90 % ≤ 5 ns		10 to 90 % ≤ 10 ns up to 25 MHz	
high/low levels		0.4 to 2.4 V ≤ 3.5 ns		≤ 6 ns > 25MHz	
		≥ 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	≤ ± 25	XB25	≤ ± 50	XB50	≤ ± 100	XB100
	-40 to 85°C	≤ ± 50	XE50	≤ ± 75	XE75	≤ ± 100	XE100
remarks	all types > 70 MHz available with XB50 or XB100 stability/temperature codes						
	stability includes calibration at 25°C, temperature, ageing, Vcc and load changes 1 st yr.						

OPTIONS	CODE	
tight symmetry	R	45/55...55/45 % available up to 25 MHz
tri-state output on pin 1	Z	high or open = enable, low = high Z

ORDERING CODE	type + option code + frequency + stability/temperature code
Example	DFN 14-BZ 16.000 MHz XE75 DFN 4-H 24.576 MHz XB100