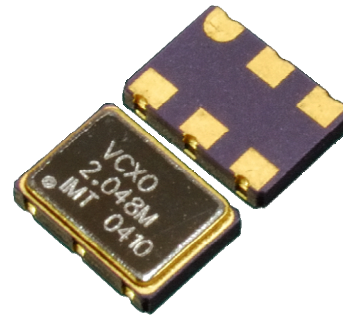


► Features

- Voltage Controlled Crystal Oscillator
- HCNOS Output LVPECL output
- 3.3V operation
- SMD 5mm X 7mm Package
- AT-Cut Crystal
- Fund Oscillation Mode.
- 20to70°C, -40to85°C OPT Range.
- Low RMS Phase Jitter
- RoHS Compliant (pb-Free)



Dimensions(mm) 5.0 x 7.0 x 1.8max

► Typical Applications

- Switching
- Base Station
- Test Equipment
- SONET
- Ethernet
- Fiber Channel
- Any application requiring an VCXO

► Standard Frequency

- 2.048, 10, 13, 16.384, 32.768, 38.880, 51.840,
- 61.440, 64.000, 74.1758, 74.250, 77.760, 80.000,
- 100.000, 122.880, 125, 155.520, 156.250, 184.320,
- 245.760, 312.5, 491.520, 622.080, 625Mhz

Absolute Maximum Ratings *(For user guidelines only)*

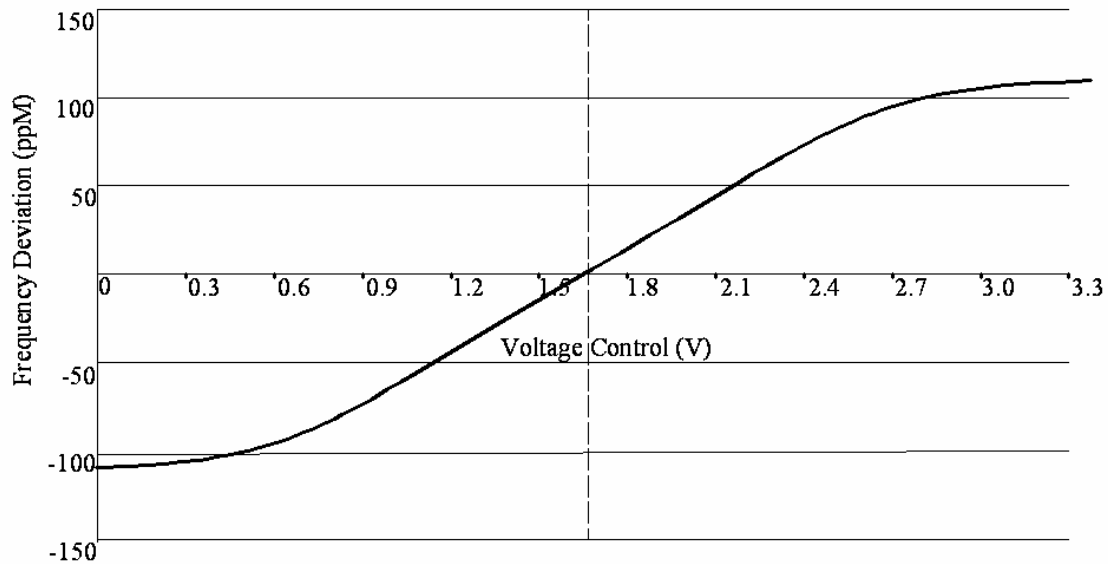
Parameter	Maximum Value	Units	Condition
Supply voltage(Vdd)	5	Vdc	
Operating Temperature	-40 to 85	°C	
Storage Temperature	-50 to 120	°C	Max
ESD Sensitivity	1	kV	HBM

Supply Voltage & Consumption.

Parameter	Value	Units	Condition
Supply Voltage(Vdd)	3.3V ±5%	DC	
Current Consumption	30	mA Max	HCNOS
	80	mA Max	LVPECL
Start up Time(Ts)	10	mS	Max

Frequency Tuning(Vc), Input--pin #1

Parameter	Typical Value	Units	Condition
Vc. Turning Range	0V to Vdd	V	
Pulling	±100	ppM min	
Linearity	±10.0	%	Max
NorminalCenterVoltage	50%of Vdd ¹	V	
Modulation Bandwidth	10	Khz	Min
Input impedance	10	Kohm	Min
Tuning slope	Positive		

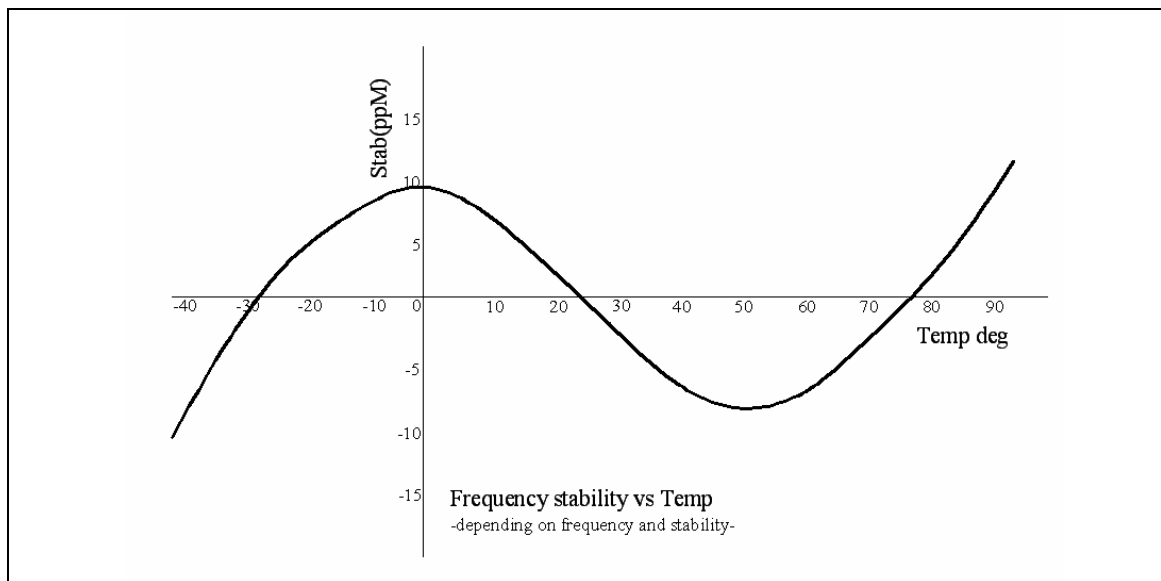


Typical Tuning Slope for iVHD7F3

Frequency Stabilities¹

Parameter	Typical Value	Units	Condition
Vs. Temperature	±15	ppM max	-20to70℃
	±30	ppM max	-40to85℃
Vs. Calibration @25℃	±10	ppm max	±2℃
Vs. Vdd	±2	ppm max	±5% of Vdd
Vs. Load	±0.3	ppM max	±5% change
Aging 1 st year	±2	ppM max	

¹ Vc. condition is 50% of Vdd.

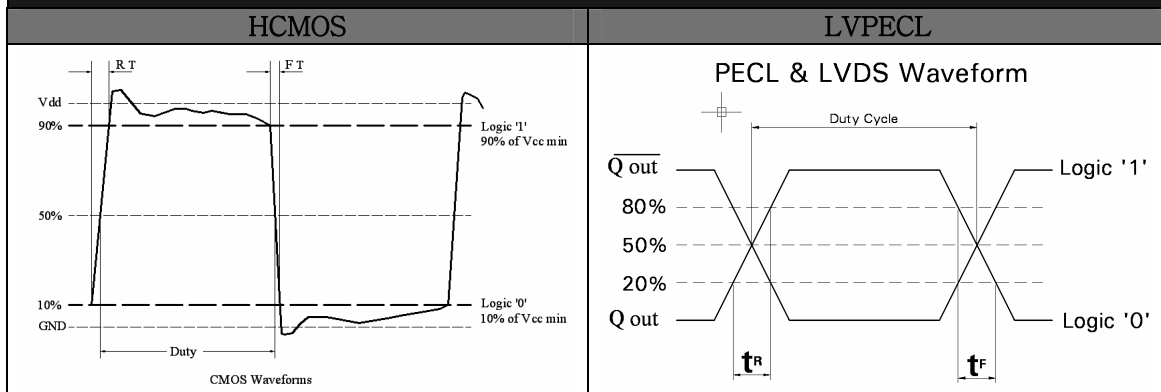


RF output¹

Parameter		Typical Value	Units	Condition
HCMOS	Output Load	15	pF	
	Rise(Tr),Fall(Tf) time	5	nS max	10to 90%
	Symmetry	50±10	%	50% of Vdd
LVPECL	Output Load	50 ohm into Vdd-2.0Vdc	Ohm	
	Rise(Tr),Fall(Tf) time	1	nS max	20to 80%
	Symmetry	50±5	%	50% of Vdd

¹ About Test Condition Refer to Wave Form

Wave Form



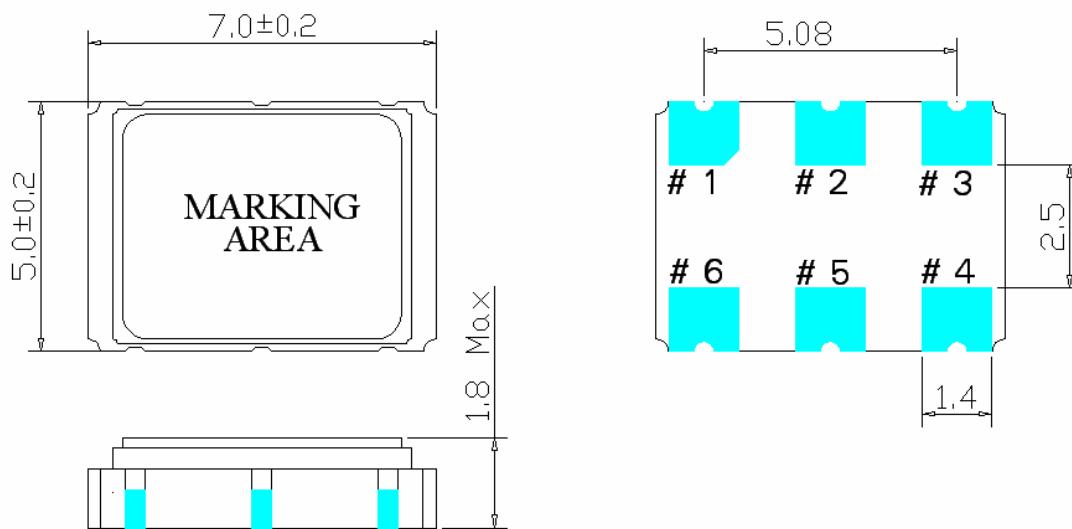
Mechanical Dimensions

D7 6pad for HCMOS

D7 6pad for LVPECL, LVDS

iD7_V

Dimensions :mm



Code:D7_VL Dimensions : 5.0 X 7.0 X 1.8 max

Pin Connections

Pin1 : Voltage Control(Vc)
 Pin2 : N/C or (Tri-State)
 Pin3 : Ground
 Pin4 : Output(Q)
 Pin5 : N/C
 Pin6: supply voltage(Vdd)

Pin Connection

Pin1: Voltage Control (Vc)
 Pin2 : N/C or (Tri-State)
 Pin3 : Ground
 Pin4 : Output(Q)
 Pin5 : Complementary Output(Q̄)
 (for PECL and LVDS)
 Pin6 : supply Voltage(Vdd)

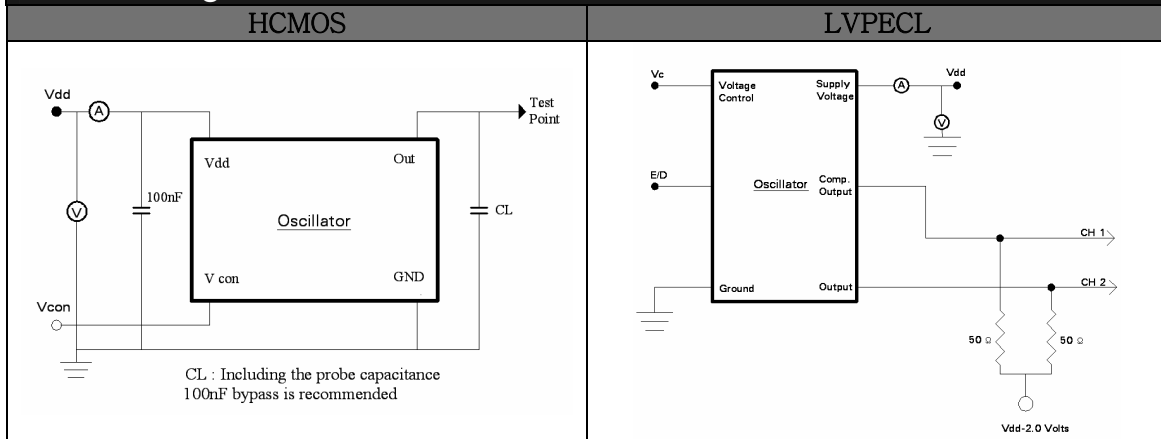
TRUTH TABLE	HCMOS
Pin2	Output
"1"Level	Data
"0"Level	High
N/C	Data
N/C : No Connection	

TRUTH TABLE	LVPECL,LVDS	
Pin2	Q	Q̄
"1"Level	H.I	H.I
"0"Level	Data	Data
N/C	Data	Data
H.I : High impedance		

Marking

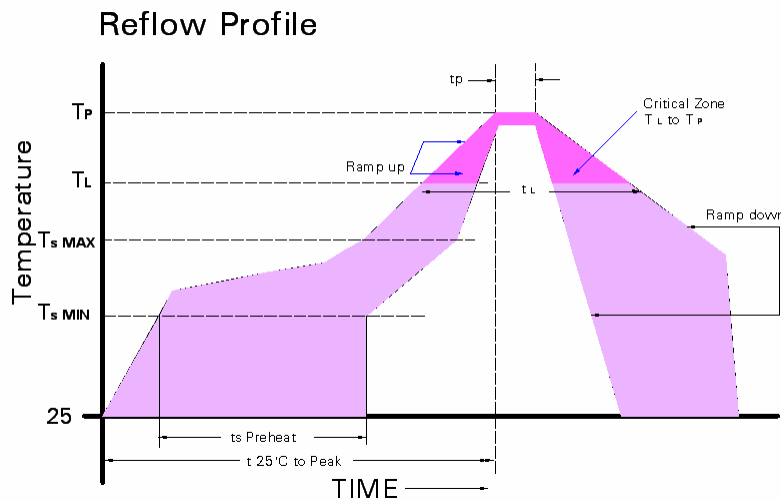
2.048Mhz	-Frequency
iVHD75-CC0	-Part No.
● IMT wyyy	-week/year

Load Configuration



Note : Recommend to add 100nF bypass Capacitors at Vdd and Vc

Recommended Reflow Profile



Note: Temperatures refer to body of device.

Oscillators must be on the top side of the PCB during the reflow process.

Ts max to TL (Ramp-up rate)	3°C/second max
Preheat -Temperature Min(Ts min)	150°C
-Temperature Typical(Ts TYP)	175°C
-Temperature Max(Ts Max)	200°C
-Time(ts)	60-180 Seconds
Ramp-up Rate(TL to TP)	3°C/Second max
Time Maintained Above-Temperature(TL)	217°C
-Time(TL)	60-150 Seconds
Peak Temperature(Tp)	260°C Max for 10 seconds Max
Target Peak Temperature(Tp Target)	250°C
Time within 5°C of actual peak(tp)	20-40 seconds
Ramp-down Rate	6°C/second max
Time 25°C to peak Temperature	8 minutes max

Part Numbering Guide & Code ...iVHD73-CC0-2M048-T

iVHD7 (HCMOS)

iVPD7 (LVPECL)

Logic	Supply voltage	Operating Temperature	Stability	Frequency	Packaging Option
iVHD7	3	C	C0	2M048	T
P: LVPECL H: HCMOS L: LVDS	5:5.0V 3:3.3V	B: 0...70°C C: -20...70°C E: -40...85°C	A0: ±10ppM A5: ±15ppM C0: ±30ppM E0: ±50ppM	155.520Mhz	T: Tape & Reel B: Bulk
Above example, Voltage controlled, HCMOS output, 5 x 7mm package, 3.3V, -20to 70°C Temperature range, Overall ±30ppM, at 2.048Mhz.					