

CRYSTAL CLOCK OSCILLATOR



Type : CH (Half Size Thru Hole)

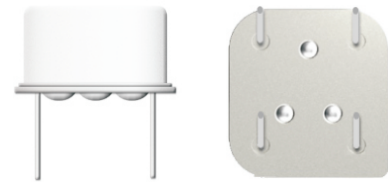
Hong Kong X'tals Ltd. 香港晶体有限公司

MHZ Crystals Units

Frequency Range: 1.00MHz~100.00MHz

Features:

- High Reliability, Low Cost Crystal
- Tight Stability & Extended Temperature Available
- Lead-free Type
- Automotive Applications, please contact our sales representative
- Bent Lead SMD Type available



ISO/TS 16949:2002
SGS CERT. NO. CN04 / 036212

Actual size



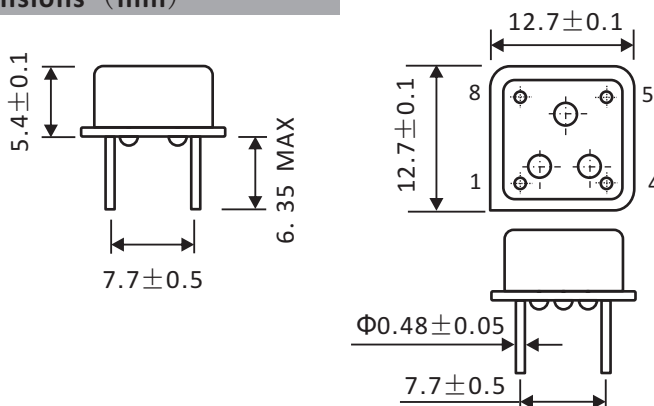
Standard Specification

Output Frequency	F0	1.00~30.00MHz		30.01~75.0MHz		75.01~100.00MHz			
Frequency Stability	$\Delta f/f$	$\pm 50\text{PPM}, \pm 100\text{PPM}$ at operating temperature		$\pm 50\text{PPM}, \pm 100\text{PPM}$ at operating temperature					
Operating Temperature	T_{OPR}	$-10\sim+70^{\circ}\text{C}$	$-40\sim+85^{\circ}\text{C}$	$-10\sim+70^{\circ}\text{C}$	$-40\sim+85^{\circ}\text{C}$				
Operable Temperature	T_{STR}	$-55\sim+125^{\circ}\text{C}$		$-55\sim+125^{\circ}\text{C}$					
Output Type		CMOS Output		TTL Output		CMOS Output		TTL Output	
		Rating	Remark	Rating	Remark	Rating	Remark	Rating	Remark
Operating Voltage	V_{DD}	$3.3\pm 10\%, 5\pm 10\%$		$5\pm 10\%$		$3.3\pm 10\%, 5\pm 10\%$		$3.3\pm 10\%, 5\pm 10\%$	
Current Consumption 1	I_{DD1}	12max		12max		25max		15max	
Current Consumption 2	I_{DD2}	4max		4max		15max pin1"L"		15max pin1"L"	
Duty Cycle	S_{VM}	45/55	At 50% V_{DD}	45/55	At 1.4V	45/55	At 50% V_{DD}	45/55	At 50% V_{DD}
"High" Output Voltage	V_{OH}	$90\%V_{DD}$ min		2.4min		$90\%V_{DD}$ min		2.4 min	
"Low" Output Voltage	V_{OL}	$10\%V_{DD}$ max		0.4max		$10\%V_{DD}$ max		0.4 max	
Output Rise Time	T_{RHL}	20max at 3V,	$10\%\rightarrow 90\%V_{DD}$	7max	0.4V \rightarrow 2.4V		$10\%\rightarrow 90\%V_{DD}$		$10\%\rightarrow 90\%V_{DD}$
Output Fall Time	T_{THL}	7max at 5V	$90\%\rightarrow 10\%V_{DD}$		2.4V \rightarrow 0.4V	4.0 max	$90\%\rightarrow 10\%V_{DD}$	4.0 max	$90\%\rightarrow 10\%V_{DD}$
Output Load		15pF		10TTL+15pF max		15pF		15pF	
"High" Input Voltage	V_{IH}	$90\%V_{DD}$ min		2.4v		$90\%V_{DD}$ min		$90\%V_{DD}$ min	
"Low" Input Voltage	V_{IL}	$10\%V_{DD}$ max		0.4V		$10\%V_{DD}$ max		$10\%V_{DD}$ max	

Note:

1. Manufacturer reserves the right to change the specification and content of this product for improvement without notification.
2. Custom specification is welcome. Please contact our sales representative for further details.
3. If the crystal is intended for applications which have direct impact on human life and properties, and require a high degree of reliability and safety concerns, customers must provide full information such as but not limit to the application, electrical and reliability specification at the inquiry beginning stage.

Dimensions (mm)



Pin	Connection
1	N/C or EN/DIS3-stote
4	GND
5	Output
8	Vcc

Please build and send to us your Inquiry Spec Code. You are welcome to add other custom requirement in written and send to us along with the Inquiry Spec. Code. We will reply with a preliminary Product Code.

Clock Oscillator Inquiry Spec Code Builder

C	H	/	12M	/	50	/	-40+85	/	COMS	/	3.3	/	DAS
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Type	Frequency (M)	Freq. Stability	TC Range	Output Type	Operating Voltage	Application
eg	eg	eg	eg	eg	eg	eg
4M=4.000000MHz	50=+/-50ppm	-10+60	COMS	2.5V	DAS=Dash Board	
20M=20.000000MHz	30=+/-30ppm	-20+70	TTL	3.3V		
		-40+85				