

产品规格书

Product Specification

CUSTOMER 客户: _____

CUSTOMER PN 客户 PN: _____

HANG CRYSTAL P/N 杭晶物料编码: 5725H7-38.400X33DTVAL

MODEL 产品型号: OCXO 25x22, SMD 7PAD, CMOS, 3.3V

NOMINAL FREQUENCY 频率: 38.400MHz

ISSUE DATE 日期: 2023 / 03 / 14

CUSTOMER'S APPROVAL

客户确认

(PLEASE RETURN A COPY WITH APPROVAL)
(请将确认的复印件返回我司)

APPROVED

QA

MB.

J Jiang

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Revision	Description / ECN	Prepared	Approved	Date
1	Initial release	MB	James Jiang	2023-03-14
2	Not issued			
3	Not issued			
4	Not issued			

1. NOMINAL AND MAXIMUM RATINGS, OPERATING AND STORAGE CONDITIONS

	PARAMETER	SYMB.	MIN	TYP	MAX	Unit	Conditions / Remarks
1	Nominal frequency	F _N	38.400			MHz	--
2	Operating supply voltage range	V _{CC}	3.135	3.30	3.465	V _{DC}	
3	Output load	R _L		15		pF	CMOS Level
4	Operating temperature range	T _{OP}	-40	+25	+85	°C	Note 1
5	Storage Temperature Range	T _{ST}	-55		+90	°C	--

Note 1: over the whole range, the unit stays within all relevant parameter limits as specified under point 2.

2. ELECTRICAL PARAMETER LIMITS

	PARAMETER	SYMB.	MIN	TYP	MAX	Unit	Conditions / Remarks
1	Initial Frequency Accuracy	$\Delta f/F_N$	-200		+200	ppb	Offset from nominal at +25°C
2	Frequency stability over T _{OP}	$\Delta f/F_{OP}$	-2.0		+2.0	ppb	Over T _{OP} Note 1
3	Short Term Stability (in still air)				0.05	ppb/s	Max, after power on 1h
4	Warm-up Time				3.0	min	Within ± 100 ppb of final frequency with reference after 1 hour on@+25°C
5	Frequency VS voltage changes	$\Delta f/F_V$	-2.0		+2.0	ppb	V _{CC} $\pm 5\%$ at +25°C
6	Frequency VS load changes	$\Delta f/F_L$	-2.0		+2.0	ppb	CL $\pm 10\%$ at +25°C
7	Aging per day	$\Delta f/F_{Ad}$	-0.5		+0.5	ppb	Aging after 30 days of operation
8	Aging first year	$\Delta f/F_{A1}$	-50		+50	ppb	
9	Aging 10 years	$\Delta f/F_{A10}$	-0.3		+0.3	ppm	
10	Output voltage level HIGH	V _{OH}	2.4	2.8		V _{DC}	HCMOS level 90%V _{CC} MIN
11	Output voltage level LOW	V _{OL}			0.4	V _{DC}	HCMOS level 10%V _{CC} MAX
12	Output amplitude rise/fall time	t _R t _F			5.0	ns	15pF / +25°C
13	Output amplitude symmetry	DC	45		55	%	15pF / +25°C
14	Phase noise	L _{RMS}			-80	dBc/Hz	at 1Hz offset / at +25°C
					-110		at 10Hz offset / at +25°C
					-130		at 100Hz offset / at +25°C
					-140		at 1kHz offset / at +25°C
					-150		at 10kHz offset / at +25°C
					-150		at 100kHz offset / at +25°C
15	Operating Current	I _{CC}			1200	mA	During warm up
					400		At steady state,@25°C
16	Control Voltage Range	V _C	0	1.65	3.3	V _{DC}	
17	Reference Voltage	V _{REF}				V _{DC}	NA
18	Frequency tuning range	F _{-PULL}	± 0.5			ppm	Positive Slope

19	Linearity				10	%	
20	Input Impedance		100			KΩ	

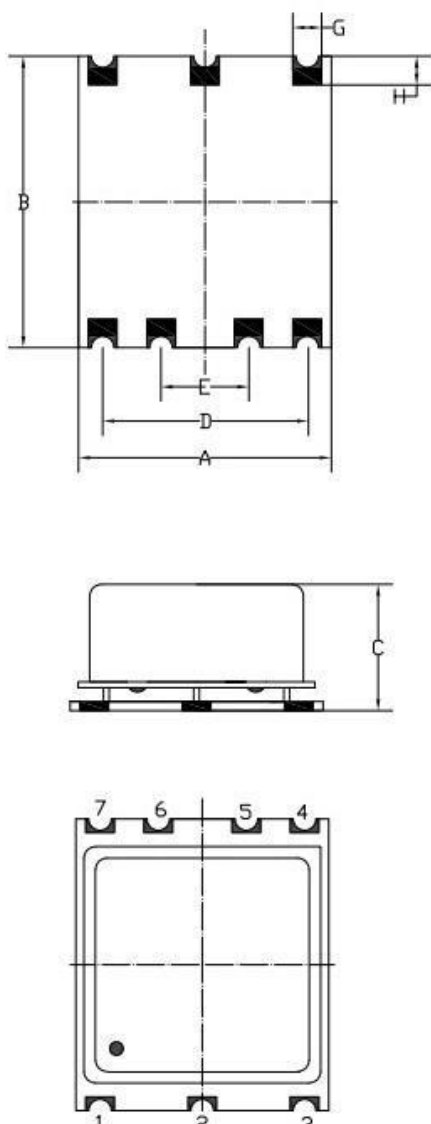
Note 1: Referenced to midpoint between minimum and maximum frequency over specified temperature range.

3. PRODUCT MARKING

To be defined.

4. OUTLINE DRAWING

	Package description	Package model	Remarks
1	25x22 SMD type with 7 pads	2522-7P	--

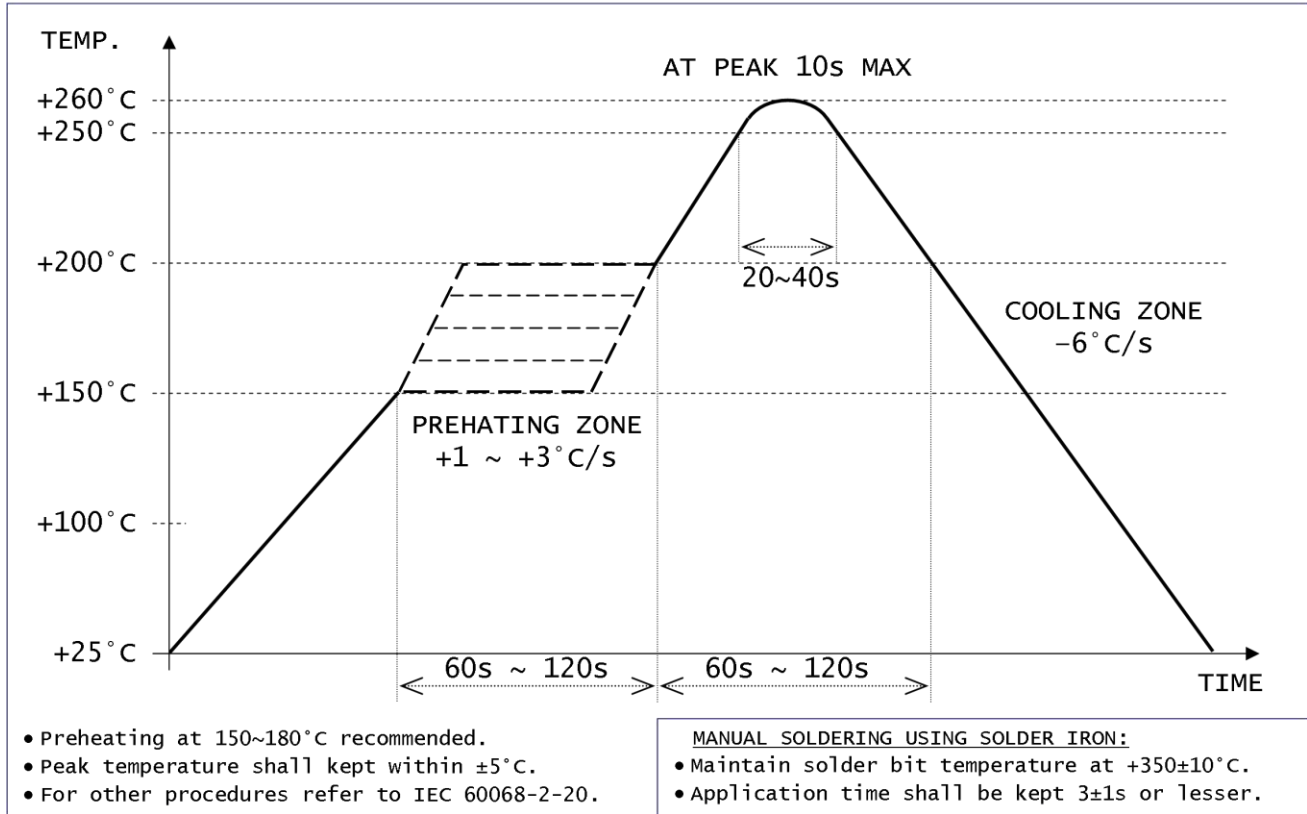


Pin 管脚号	Pin Function 管脚功能
1	VC 压控
2	NC 悬空
3	VS 电源
4	OUTPUT 输出
5	NC 悬空
6	NC 悬空
7	GND 接地

Symbol 代号	Size (mm) 尺寸	
	Min 最小值	Max 最大值
A	21.8	22.2
B	25.2	25.6
C		12.0
D	17.7	17.9
E	7.5	7.7
G	2.4	2.6
H	2.4	2.6

5. RECOMMENDED SOLDERING INFORMATION

RECOMMENDED REFLOW SOLDER PROFILE - PEAK TEMPERATURE UP TO +260°C



DWG_ReflowProfile_260

HCI QE 2014/10

NO SCALE

Rev.: 1