

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: 5715S6-100.000G50DTVA

MODEL 产品型号: OCXO 14.4x9.5mm SMD, Sine Wave, 5.0V

NOMINAL FREQUENCY 频率: 100.000MHz

ISSUE DATE 日期: 2022 / 06 / 18

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
<i>MB.</i>	<i>J Jiang</i>

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Revision	Description / ECN	Prepared	Approved	Date
1	Initial release	<i>MB</i>	<i>James Jiang</i>	2022-06-18
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	100.000			MHz	—
2	Operating supply voltage range	V_{CC}	4.75	5.0	5.25	V_{DC}	
3	Output load resistance	R_L		50		Ω	Sine wave output
4	Operating temperature range	T_{OP}	-40	+25	+85	$^{\circ}C$	
5	Storage Temperature Range	T_{ST}	-40		+90	$^{\circ}C$	—

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

2. ELECTRICAL PARAMETER LIMITS

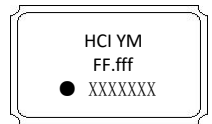
	PARAMETER	SYMB.	MIN	TYP	MAX	Unit	Conditions / Remarks
1	Initial Frequency Accuracy	$\Delta f/F_N$	-100		+100	ppb	Offset from nominal at +25 $^{\circ}C$
2	Frequency stability over T_{OP}	$\Delta f/F_{OP}$	-50		+50	ppb	Over T_{OP} Note 1
3	Short Term Stability (in still air)				0.01	ppb/s	After power on 1h
4	Warm-up Time				5.0	min	Within ± 0.02 ppm of final frequency with reference after 1 hour on @+25 $^{\circ}C$
5	Frequency VS voltage changes	$\Delta f/F_V$	-10		+10	ppb	$V_{CC} \pm 5\%$ at +25 $^{\circ}C$
6	Frequency VS load changes	$\Delta f/F_L$	-10		+10	ppb	CL $\pm 10\%$ at +25 $^{\circ}C$
7	Aging per day	$\Delta f/F_{Ad}$	-2		+2	ppb	Aging after 30 days of operation
8	Aging first year	$\Delta f/F_{A1}$	-200		+200	ppb	
9	Output level	V_{P-P}	7.0			dBm	Sine wave
10	Harmonic level				-35	dBc	
11	Spurious				-75	dBc	
12	Phase noise	L_{RMS}		-100	-95	dBc/Hz	at 10Hz offset / at +25 $^{\circ}C$
				-130	-125		at 100Hz offset / at +25 $^{\circ}C$
				-158	-153		at 1kHz offset / at +25 $^{\circ}C$
				-170	-165		at 10kHz offset / at +25 $^{\circ}C$
				-175	-170		at 100kHz offset / at +25 $^{\circ}C$
13	Operating Current	I_{CC}			550	mA	During warm up
					150	mA	At steady state, @25 $^{\circ}C$
14	Control Voltage Range	V_C	0	2.0	4.0	V_{DC}	
15	Frequency tuning range	ARP			-1.0	ppm	$V_C=0V$
			-100		+100	ppb	$V_C=2V$
			+1.0			ppm	$V_C=4V$
16	Linearity				10	%	NA
17	Input Impedance		100			K Ω	NA

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

Note 2: Until frequency is within ± 0.5 ppm in reference to nominal frequency.

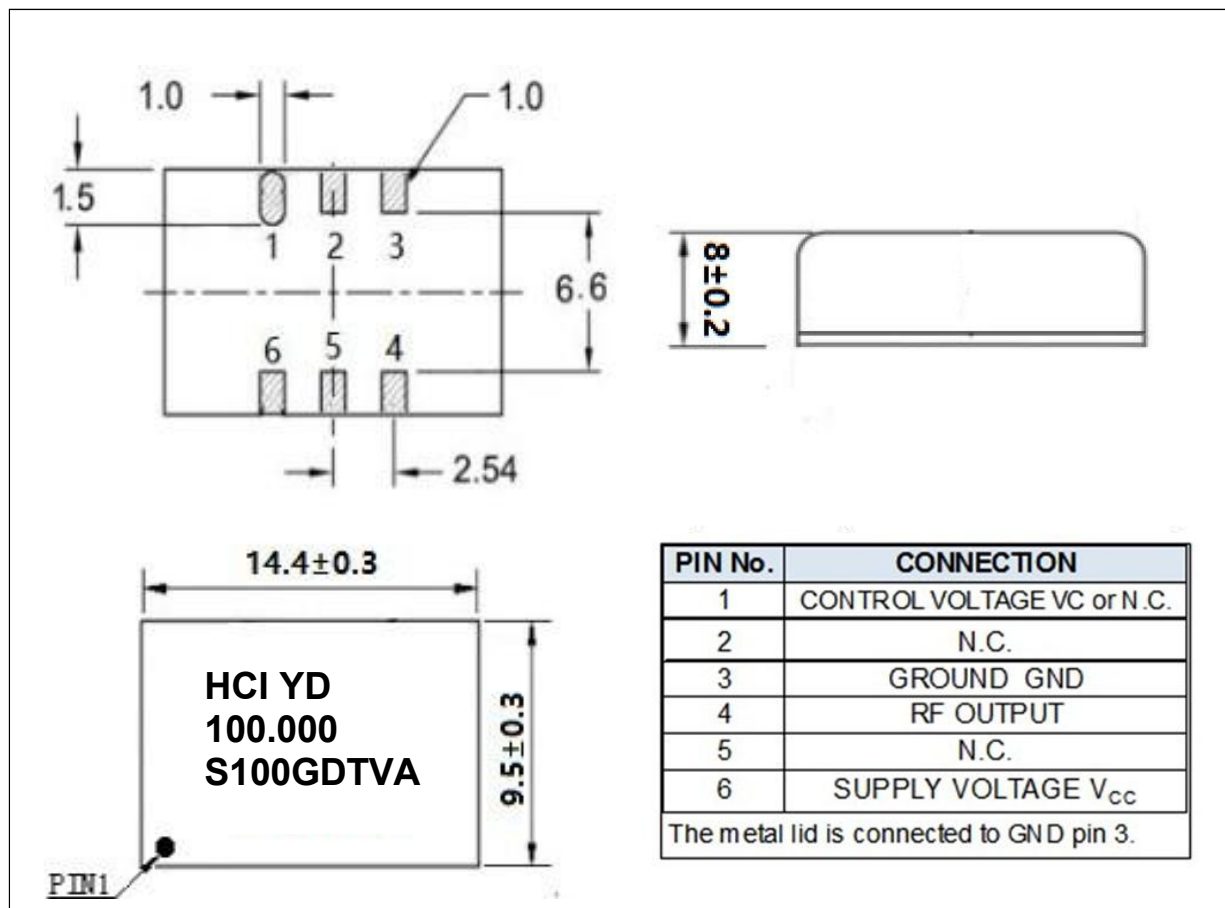
3. PRODUCT MARKING

1	FF.fff	Nominal frequency in MHz (three digits after decimal point)										HCI YM FF.fff ● XXXXXXXX					
2	HCI	Company logo															
3	Y	Year code of manufacturing (see table below)															
	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025				
	Code	O	P	Q	R	S	T	U	V	W	X	Y	Z				
4	M	Month code of manufacturing (see table below)															
	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
	Code	A	B	C	D	E	F	G	H	J	K	L	M				



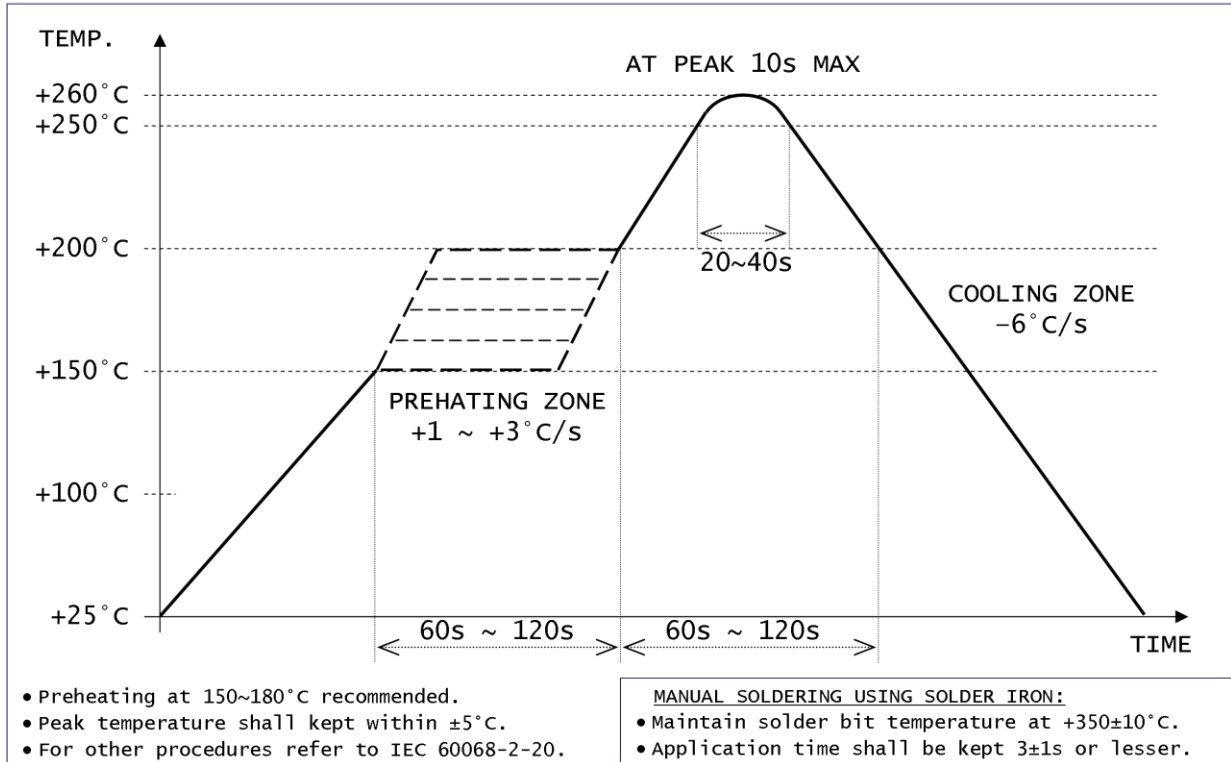
4. OUTLINE DRAWING

	Package description	Package model	Remarks
1	15x10 SMD with 6 pads	OS1510P6h82	–



4. RECOMMENDED SOLDERING INFORMATION

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



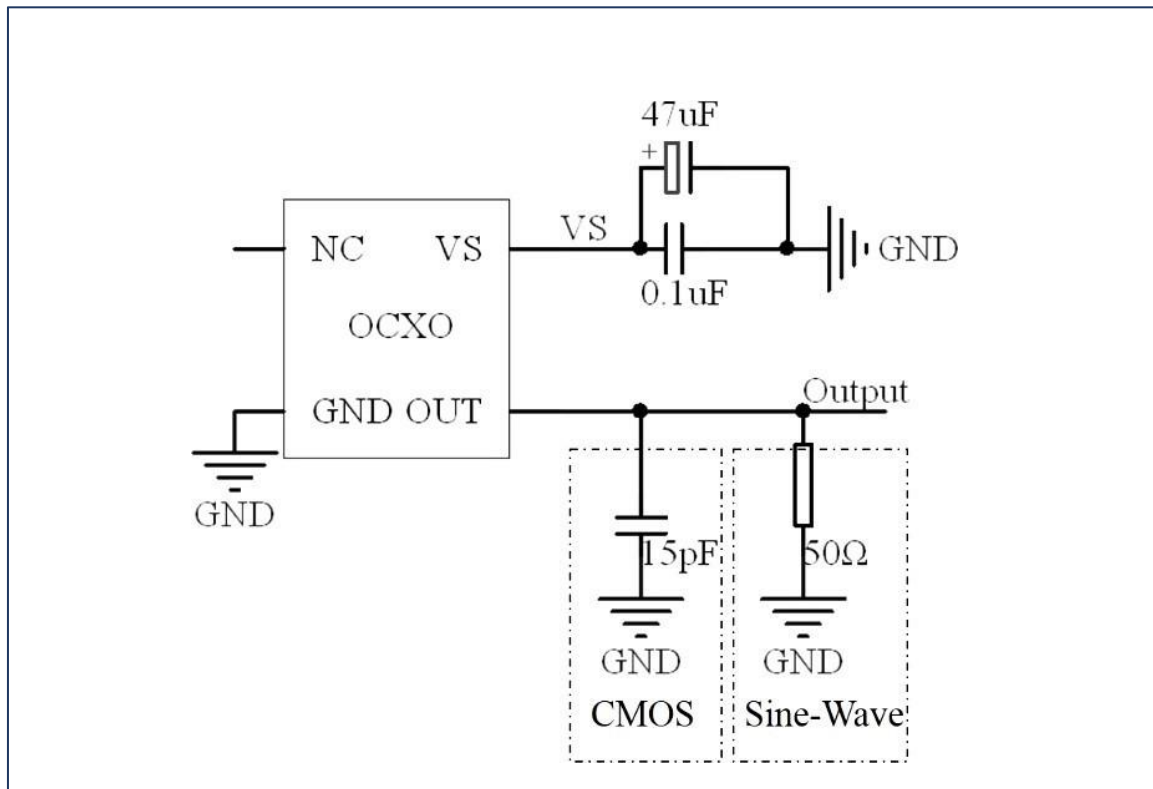
DWG_ReflowProfile_260

HCI QE 2014/10

NO SCALE

Rev.: 1

5. TEST CIRCUIT



6. ENVIRONMENTAL COMPLIANCE INFORMATION

▪ RoHS COMPLIANCE

We can certify herewith that the product is fully RoHS complaint according the “DIRECTIVE 2011/65/EU OF THE EUROPEAN COUNCIL and DIRECTIVE 2015/863 (RoHS 2 or also called RoHS 10) in electrical and electronic equipment (RoHS) and its amendments.

▪ ELECTROSTATIC DISCHARGE (ESD) SENSITIVITY

This product is sensitive to ELECTROSTATIC DISCHARGE (ESD) / HBM 2kV, precautions for handling and storage shall be applied based on suggested internal standards listed below.

(JEITA EIAJ ED-4701 / JSD22 / ANSI-ESD-S20-20 / IEC 61000-4-2)

▪ MOISTURE SENSITIVITY (MSL) CLASSIFICATION [J-STD-020C]

This product in a hermetically sealed package does NOT fall under the classification of moisture sensitivity per above stated standard (standard is for non-hermetically sealed components).

If customer's system requires an entry in this regard we suggest using LEVEL 1.

7. PACKAGING INFORMATION

- T&R packaging in compliance to EIA-481
Reel DIA: 330mm
QTY per reel: 500pcs MAX
- Alternate packaging in antistatic foam trays (may used based on QTY ordered)
Foam tray size: 121x150mm
QTY per tray: 50pcs MAX