

Specification Sheet For Approval		Series No: JL20260724k01	
		Date : 2026/07/24	
☒ Quartz Crystal	☐ Quartz Crystal Oscillator	☐ OCXO	☐ VCXO
☐ M.C.F	☐ TCXO / VCTCXO	☐ Others _____	

Customer	Micromodern
Customer P/N	-
Product Type	49/US (Dip --- 11.5 * 5.0 * 3.6 mm)
Nominal Frequency	10.000 MHz
Mercury P/N	HUSG-10.000-18-20/30I

Customer
Approved By
Customer Engineer :
Date : _____
Customer QC :
Date : _____

Vender
Confirmed By
Mercury Engineer :
Date : _____
Mercury QC :
Date : _____

Specification Sheet Contents :

- ☒ Specifications Sheet
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- ☒ Crystal / Oscillator Introduction
- ☒ MSL level1
- ☐ FQC Test Report
- ☐ Temperature Stability Test Report
- ☒ Test Data Of Reliability
- ☒ Lead Free Approved

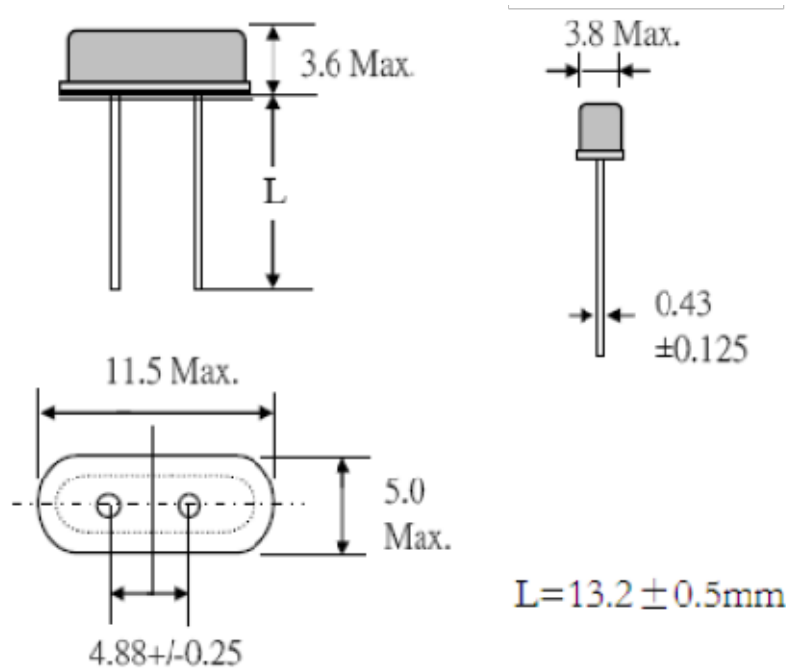
Electrical Specification

Series No. : JL20260724k01

Date : 2026/07/24

	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typical	Max.	Unit	
1	Mercury Part No.		-				HUSG-10.000-18-20/30I
2	Nominal Frequency	FL	10.000000				MHz
3	Holder Type		-				49/US (Dip --- 11.5 * 5.0 * 3.6 mm)
4	Crystal Cut		-				AT-Cut
5	Mode of Oscillation		-				Fundamental Mode
6	Frequency Tolerance	F_use	-20	~	20	ppm	at 25°C ± 3°C
7	Frequency Stability	F_tem	-30	~	30	ppm	Refer at 25°C
8	Spurious Attenuation	SPDB			-4	dB	-100ppm ~ +7000ppm , 250step)
9	Equivalent Series Resistance	ESR			60	Ω	
10	Shunt Capacitance	C0			5	pF	
11	Load Capacitance	CL		18		pF	
12	Drive Level	DL		100		μW	
13	Insulation Resistance	IR	500			MΩ	DC 100V ± 15V
14	MaxR	RLD2			60	Ω	0.01 μW ~ 500 μW , 20 points
15	MaxR-MinR	DLD2			20	Ω	0.01 μW ~ 500 μW , 20 points
16	MaxFR-MinFR	FDDL			10	ppm	0.01 μW ~ 500 μW , 20 points
17	Operating Temperature	T_opr	-40	~	85	°C	
18	Storage Temperature	T_stg	-55	~	125	°C	
19	Aging	F_aging	-5		5	ppm	First year

Package Dimension (Unit : mm)



Marking

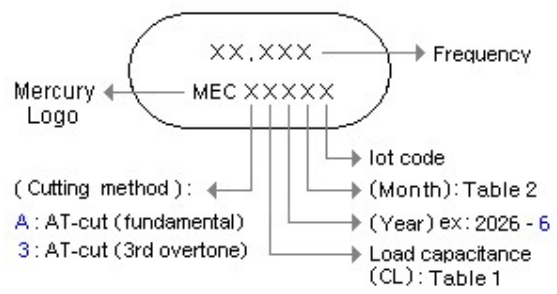


Table 1

CL	<10	10	11	12	13	14	15	16	17	18	19	20
Code	A	B	C	D	E	F	G	H	I	J	K	L

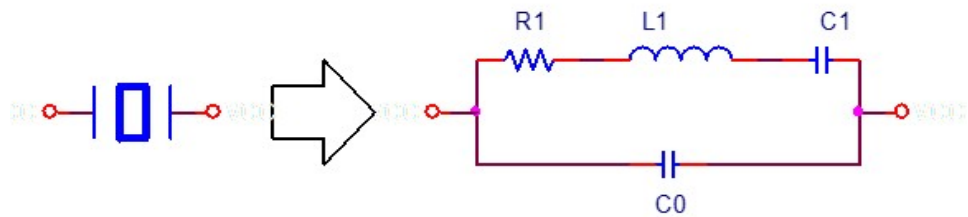
CL	21	22	23	24	25	26	27	28	29	30	31	32
Code	M	N	O	P	Q	R	S	T	U	V	W	X

CL	33	34	>34	Series
Code	Y	Z	a	b

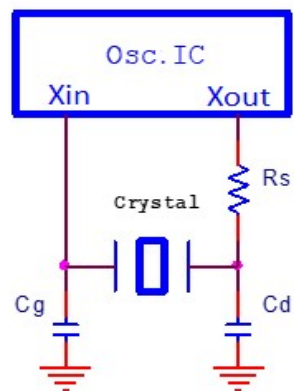
Table 2

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Code	A	B	C	D	E	F	G	H	I	J	K	L

Equivalent Circuit of crystal



Oscillation circuit



Environmental Specification

1. Temperature Test

*Temperature Cycling Test

Conditions:	Steps of cycle	(1)Extreme Cold Temp: -55°C (+0/-10°C) / 15±3min
		(2)Extreme Hot Temp: +125°C (+15/-0°C) / 15±3min
	Number of	10 cycles min
Results:	Frequency and wave form of tested products must remain within specifications.	

*Thermal Shock Test

Conditions:	Temperature -55(+0/-10)°C to 125(+10/-0)°C	Duration of cycle 15 times(min)
	ExTotal Transfer Time < 10 seconds	
	Total Dwell time > 2minutes	
	Specified Temp reached in < 5 minutes	
Results:	Frequency and wave form of tested products must remain within specifications.	

*Low Temperature Test

Conditions:	Temperature -50°C ±5°C	Duration of test 168hours(min)
Results:	Frequency and wave form of tested products must remain within specifications.	

2. Accelerated Life Test(Aging Biased)

Conditions:	Temperature +85 °C±5 °C	Duration of test 168hours±6hours
Results:	DC Power supply	
	Frequency and wave form of tested products must remain within specifications.	

3. Salt Spray Test

Conditions	Temperature 35 °C	Duration of test 24 hours
	NaCl 5%	
Results:	There Should be no rust on surface of products	

4. Humidity Test

Conditions:	Temperature: 85°C ±5°C	Relative humidity:85%±5°C	Duration of test:168 hours(min)
Results:	Frequency and wave form of tested products must remain within specifications.		

Mechanical Specification Sheet		
1.Vibration Test		
Conditions:	Freq. range: 20~2000Hz Peak to Peak	
	amplitude:1.52mm Peak acceleration:20G(98m/s2)	
	3direction(X,Y,Z),each 20min, 4cycles	
Results:	Frequency and wave form of tested products must remain within specifications.	
2.Drop Test		
Conditions:	Method of drop	Free drop
	Dropping floor	Hard wood board
	Height	75 cm +1/-0cm
	Number of drops	3 times
Results:	Frequency and wave form of tested products must remain within specifications.	