



A Product Line of
Diodes Incorporated



PRODUCT SPECIFICATION

NOMINAL FREQUENCY	25.000000 MHz
PRODUCT TYPE	TYPE JC 2.5X2.0 VOLTAGE CONTROLLED TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR
SPEC. NO. (P/N)	JC25250002
ISSUE DATE	July 5, 2021
VERSION	A

Diodes Incorporated

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*Pb-free
*RoHS Compliant
*HF-Halogen Free
*REACH Compliant
*MSL: Level 1

JC25250002

VER. A

5-Jul-21

VERSION HISTORY

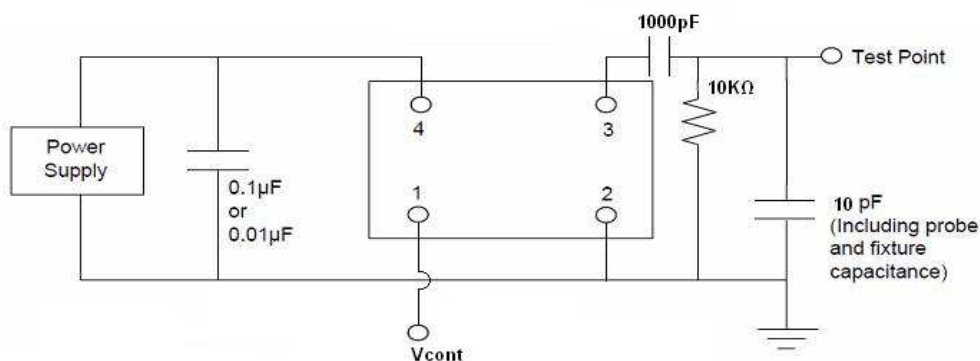
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ELECTRICAL SPECIFICATIONS**SRe Part Number : JC25250002**

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fo	25.000000	MHz	
Operating Temperature Range	TR	-40 to +85	°C	
Storage Temperature Range		-40 to +85	°C	
Supply Voltage	V _{DD}	+3.3 ± 5.0%	V	
Frequency Stability	FT	± 2.5	ppm	vs. Temperature (Refer to the mid-point between minimum and maximum frequency values over the specified temperature range)
Frequency Stability		± 0.2	ppm	vs. Load varied 10pF//10kΩ±10%
Frequency Stability		± 0.1	ppm	vs. Supply Voltage varied V _{dd} ±5% at 25°C
Frequency Tolerance		± 2.0	ppm	Max. After 2 times reflow (Refer to nominal frequency)
Static Temperature Hysteresis		± 0.6	ppm	Max.
Aging		±1	ppm	Max, 1st year at 25°C
Logic Type	LT	Clipped Sinewave		
Supply Current	I _{DD}	1.5	mA	Max. **See Note
Start Up Time v.s Output Level		2.0	msec	Max, 90% of specified output level
Output Voltage		0.8 to 1.4	Vp-p	
Output Load Resistance		10	KΩ	9KΩ Min / 11KΩ Max
Output Load Capacitance		10	pF	9pF Min / 11pF Max
Harmonics		-8	dBc	Max.
Phase Noise		-135	dBc/Hz	Typ, at 1kHz offset
Frequency Control Range		±10 / ±15	ppm	Min. / Typ., V _{cont} =0.65V to 2.65V
Linearity		10	%	Max
Input Resistance		500	KΩ	Min
Modulation Bandwidth		10	KHz	Min

✖ This product doesn't include harmful substance that stipulated by SONY SS-00259 Level 1 and S-AT2-001 Level 1 standard. RoHS Compliant (Pb - Free).

** Note: This is the static current and there is a transient current of 5mA max while V_{DD} startup.

TEST CIRCUIT**RELIABILITY SPECIFICATIONS****1. Initial**

- 1.1 Physical Dimensions: Mil Std 883 M2016
- 1.2 Gross/Fine Leak: JESD22-A109, Mil Std 883 M1014
- 1.3 Electrical Characterization: Per Specification/Datasheet
- 1.4 Electrical Test: Per Specification/Datasheet

2. Mechanical

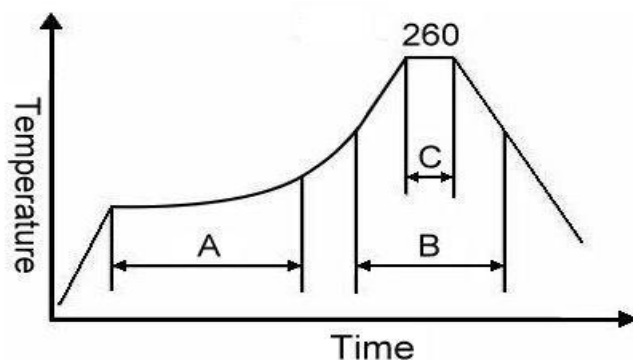
- 2.1 Mechanical Shock: JESD22-B104
- 2.2 Vibration Variable Frequency: JESD22-B103
- 2.3 Solderability: JESD22-B102-D

3.Environmental

- 3.1 Highly Accelerated Stress Testing: JESD22-A110/A118
- 3.2 Temp Cycle: JESD22-A104
- 3.3 Resistance to Solder Heat: J-STD-020C
- 3.4 Low Temperature Storage: JESD22-A108
- 3.5 High Temperature Storage Life / Bake: JESD22-A103
- 3.6 Temperature Bias and Operating Life: JESD22-A108
- 3.7 ESD Testing: JESD22-A114/A115/C101
- 3.8 Latch Up test: JESD78

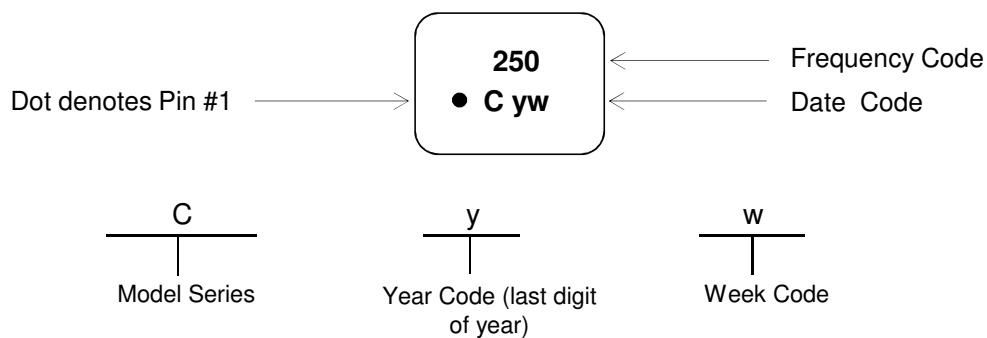
SUGGESTED IR REFLOW PROFILE

*As per IPC-JEDEC J-STD-020D



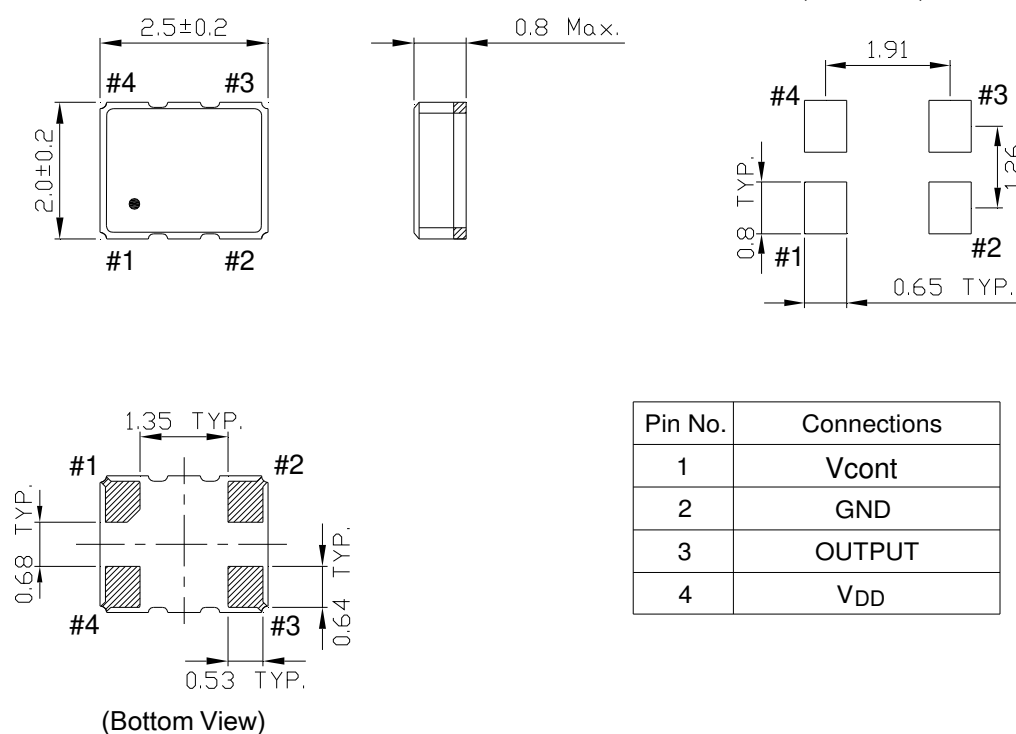
Note:

	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

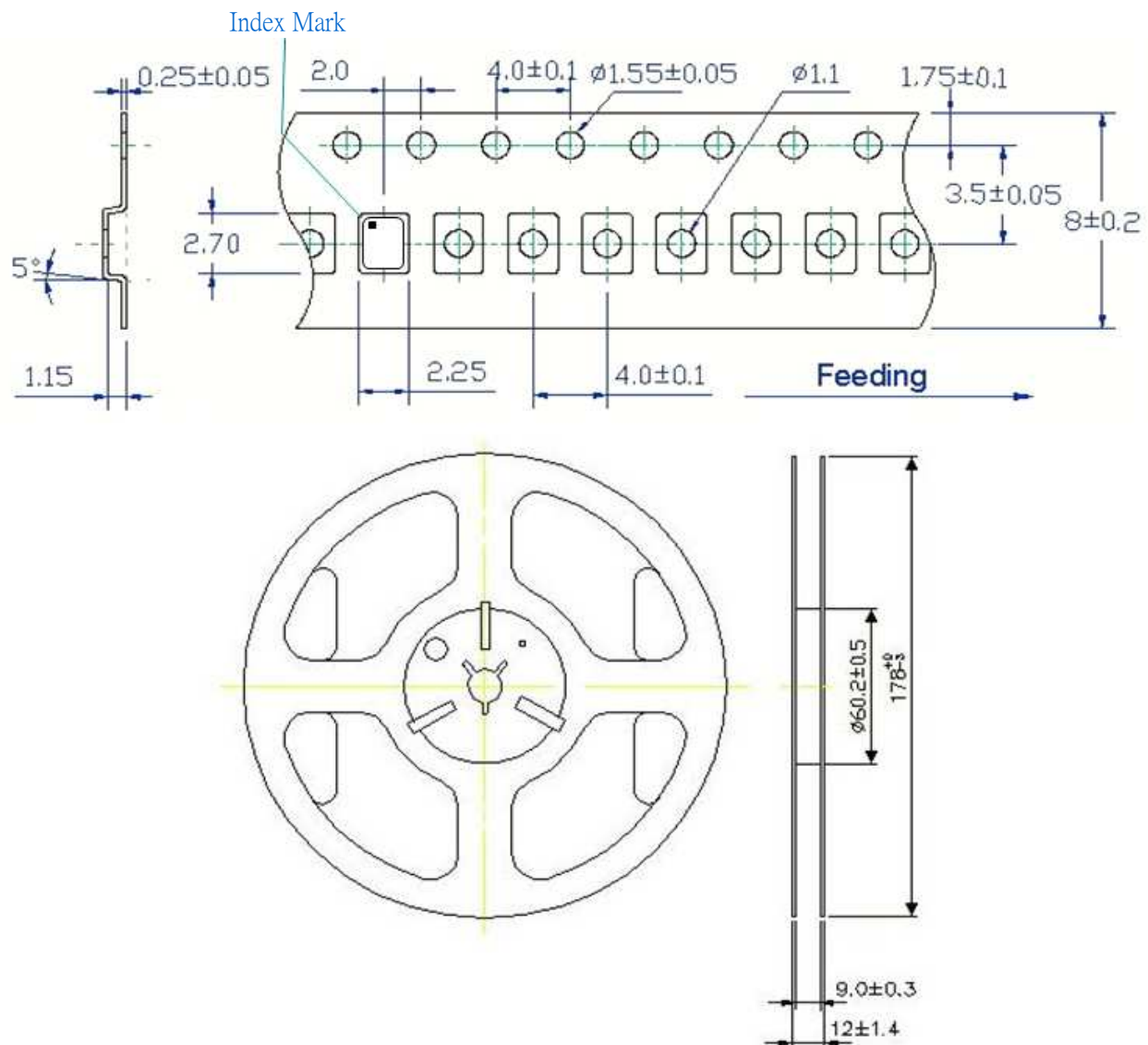
MARKING**MECHANICAL DRAWINGS** (Scale: None. Dimensions are in mm.)

Recommended Land Pattern

(TOP VIEW)



Pin No.	Connections
1	Vcont
2	GND
3	OUTPUT
4	VDD

TAPE&REEL

1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

PACKING

