



A Product Line of  
Diodes Incorporated



# SPECIFICATION FOR APPROVAL

CUSTOMER \_\_\_\_\_

NOMINAL FREQUENCY 25.000000 MHz

HOLDER TYPE TYPE GB 49S QUARTZ CRYSTAL

SPEC. NO. ( P/N ) GB2500065

CUSTOMER P/N \_\_\_\_\_

ISSUE DATE October 3, 2017

VERSION E

APPROVED	PREPARED	QA

## Diodes Incorporation

No.2, Ziqiang 5th Rd., Zhongli Industrial Park,  
Zhongli Dist., Taoyuan City 32063, Taiwan (R.O.C.)  
TEL: 886-3-451-8888  
FAX: 886-3-461-3865  
<http://www.diodes.com>

\*RoHS Compliant  
\*HF-Halogen Free  
\*REACH Compliant

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**GB2500065**

VER. E 3-Oct-17

## VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Dec.31,2007			Initial Release	
B	Feb.26,2009			Revise Format	
C	Jul.7,2010			Changed Logo	
D	Apr.1,2011			Updated Suggested IR Reflow Profile & Format	
E	Oct.3,2017			Updated logo & packing	



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### ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	25.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	12	pF	
Calibration Tolerance	FL	±30	ppm	at 25°C±3°C
Operating Temperature Range	TR	-10 to +85	°C	
Frequency Stability (Frequency Deviation over the Operating Temperature Range)	F/T	±30	ppm	Reference to the Frequency at 25°C
Operating Drive Level		100	μW	
Maximum Drive Level		500	μW	
Equivalent Series Resistance	ESR	20	Ω	Max
Shunt Capacitance	C0	5	pF	Max
Aging at 25°C		±3	ppm	Max, 1st year
Storage Temperature		-55 to +125	°C	
Insulation Resistance		500	MΩ	Min

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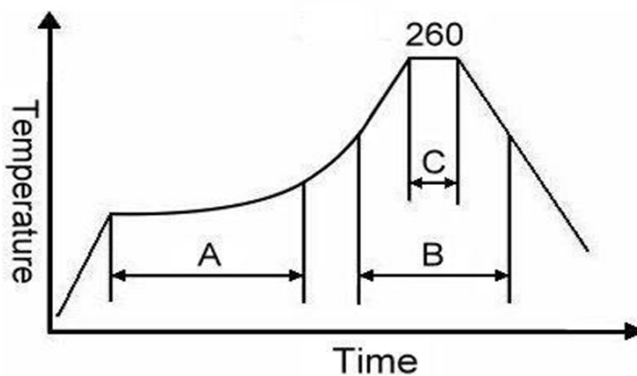
## RELIABILITY SPECIFICATIONS

### MECHANICAL AND ENVIRONMENTAL RATINGS:

- a) FINE LEAK TEST: JESD22-A109 (Condition 1A)
- b) GROSS LEAK TEST: JESD22-A109 (Condition C)
- c) MOISTURE RESISTANCE: JESD22-A113
- d) SHOCK: JESD22-B104 (Condition B)
- e) SOLDERABILITY : (RoHS version): J-STD-002
- f) VIBRATION: JESD22-B103
- g) SOLVENT RESISTANCE: JESD22-B107
- h) RESISTANCE TO SOLDERING HEAT (RoHS version): J-STD-020D Table 5.2 Pb free devices (3 cycles max)

## SUGGESTED IR REFLOW PROFILE

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



Note:

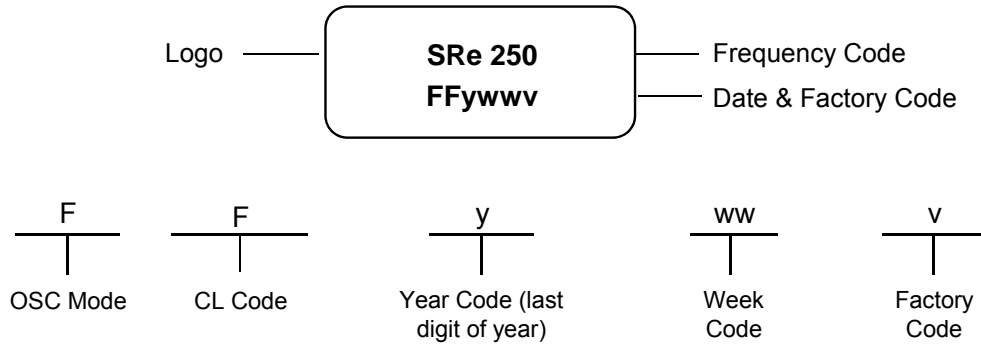
	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

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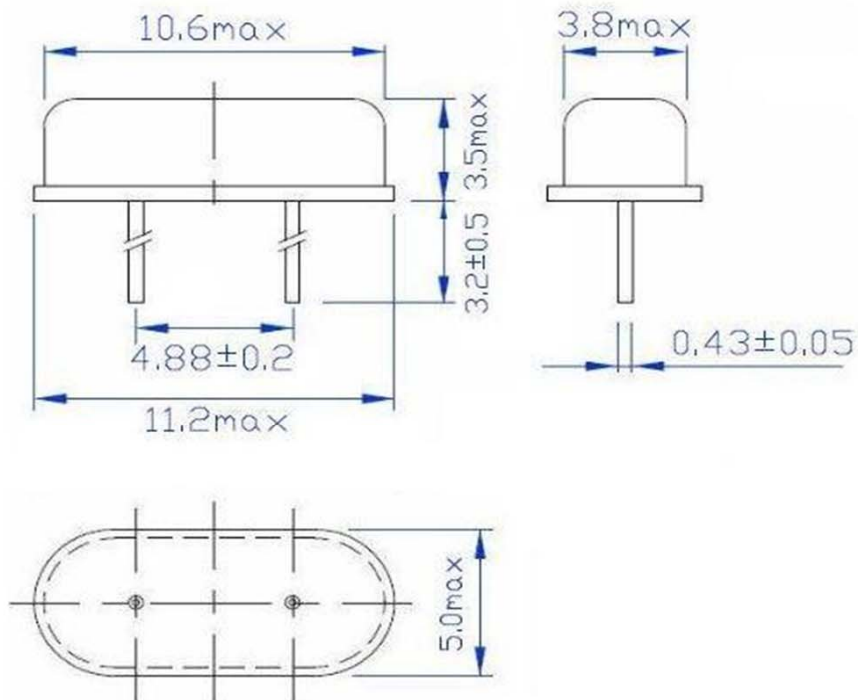
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### MARKING



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



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## PACKING

