## **ISM91** Series



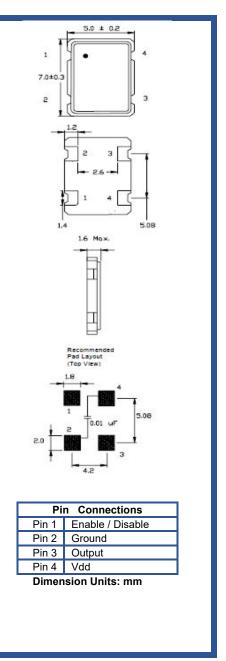
#### **Product Features:**

Low Jitter, Non-PLL Based Output CMOS/TTL Compatible Logic Levels Compatible with Leadfree Processing

## **Applications:**

Fibre Channel Server & Storage Sonet /SDH 802.11 / Wifi T1/E1.T3/E3 System Clock

Frequency	ency 1 MHz to 170.000 MHz			
Output Level				
HC-MOS	'0' = 0.1 Vcc Max., '1' = 0.9 Vcc Min.			
TTL	'0' = 0.4 VDC Max., '1' = 2.4 VDC Min.			
Duty Cycle	Specify 50% ±10% or ±5% See Table in Part Number Guide			
Rise / Fall Time	5 nS Max. @ Vcc = +3.3 VDC, 10 nS Max. @ Vcc = +5 VDC ***			
Output Load	Fo < 50 MHz = 10 TTL, Fo > 50 MHz = 5 LSTTL See Table in Part Number Guide			
Frequency Stability	See Frequency Stability Table (Includes room temperature tolerance and stability over operating temperature)			
Start-up Time	10 mS Max.			
Enable / Disable Time	100 nS Max.			
Supply Voltage	See Input Voltage Table, tolerance ±5 %			
Current	70 mA Max. ***			
Operating	See Operating Temperature Table in Part Number Guid			
Storage	-55° C to +125° C			
Jitter: RMS(1sigma)				
1 MHz-75 MHz	5 pS RMS (1 sigma) Max. accumulated jitter (20K			
76 MHz-170 MHz	adjacent periods) 3 pS RMS (1 sigma) Max. accumulated jitter (20K adjacent periods)			
Max Integrated				
1 MHz-75 MHz	1.5 pS RMS (1 sigma -12KHz to 20MHz)			
76 MHz-170 MHz	1 pS RMS (1 sigma -12KHz to 20MHz)			
Max Total Jitter				
1 MHz-75 MHz 76 MHz-170 MHz	50 pS p-p (100K adjacent periods)			
	30 pS p-p (100K adjacent periods)			



Part Nun	Part Number Guide Sample Part Number: ISM91 - 3251BH - 20.000								
Package	Input Voltage	Operating Temperature	Symmetry (Duty Cycle)	Output	Stability (in ppm)	Enable / Disable	Frequency		
	5 = 5.0 V	1 = 0° C to +70° C	5 = 45 / 55 Max.	1 = 10TTL / 15 pF HC-MOS	**D = ±15	H = Enable			
ISM91 -	3 = 3.3 V	6 = -10° C to +70° C	6 = 40 / 60 Max.	5 = 50 pF HC-MOS (<40 MHz)	**D = ±15	O = N/C			
	7 = 3.0 V	3 = -20° C to +70° C		6 = 30 pF	**F = ±20		- 20.000MHz		
	2 = 2.7 V	4 = -30° C to +75° C			A = ±25				
	6 = 2.5 V	2 = -40° C to +85° C			B = ±50				
	1 = 1.8 V*				C = ±100				

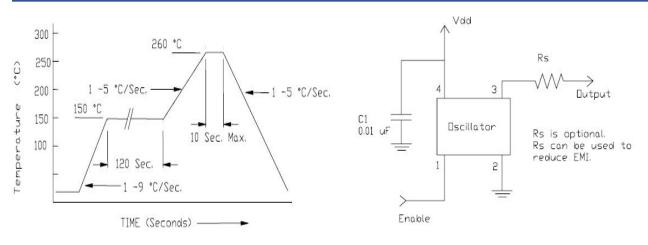
NOTE: A 0.01 µF bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise. \* Not available at all frequencies. \*\* Not available for all temperature ranges. \*\*\* Frequency, supply, and load related parameters.

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### Pb Free Solder Reflow Profile:



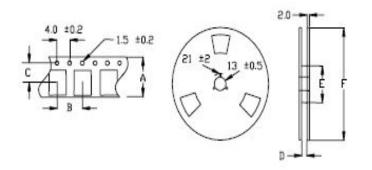


\*Units are backward compatible with 240C reflow processes

#### Package Information:

MSL = N.A. (package does not contain plastic, storage life is unlimited under normal room conditions). Termination = e4 (Au over Ni over W base metallization).

### **Tape and Reel Information:**



Quantity per Reel	1000		
Α	16 ± 0.3		
В	8 ± 0.2		
С	7.5 ± 0.2		
D	17.5 ± 1		
E	50 / 60 / 80		
F	180 / 250		