MtronPTI ...when timing matters

1703 E. Highway 50 Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtronpti.com

SPECIFICATION FOR 14- PIN DIP COMPATIBLE OSCILLATOR
MtronPTI P/N M2014S146

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions/Notes
Frequency of Operation	F_O		25.095000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-50		+50	ppm	Includes initial calibration tolerance and stability over operating temperature.
Aging		-3		+3	ppm	1st Year
RF Output						
Output Type		HCMOS/TTL Compatible				
Output Load				10	LS TTL	
Symmetry (duty cycle)	T_{DC}	45		55	%	Ref. to ½ V_{dd}
Logic "1" Level	V_{OH}	90% V_{dd}			V	
Logic "0" Level	V_{OL}			10% V_{dd}	V	
Rise/Fall Time	T_R/T_F			10	nS	From 10% to 90% V_{DD}
Start-Up Time	T_{SU}			10	mS	
Pull-up (OE pin)	10kΩ resistor from V_{dd} to output enable line					Hard pull-up
Supply Voltage & Power Consumption						
Operating Voltage	V_{dd}	4.75	5.0	5.25	V	
Operating Current	I_{dd}			25	mA	

Environmental Conditions:

Operating Temperature	T_A	-40		+85	°C	Device must operate at –55°C without regard to frequency stability specification.
Storage Temperature	T_S	-55		+125	°C	
Shock	1000 G's, 0.35 ms, ½ sine wave, 3-shocks in each plane.					
Vibration	10-55 Hz, 0.060 D.A., 55 Hz to 2 kHz, 35 G's. for a 12 hr. duration.					
Temperature Cycle	0°C to +120°C, 3 cycles, hrs. max. each. Maximum of ± 5 ppm (ref. to +25°C, ± 2°C) frequency shift allowed					
Humidity	85% R.H. @ +85°C for 250 hrs.					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
Max. Wave Soldering Conditions	+260°C for 10 secs.					
Package Type	14-Pin DIP compatible resistance weld. SnPb (63/37) tinned leads.					

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Dimensions, Marking, and Pin Out Information:

Pad	Function
1	No Connect
2	Ground / Case
3	Output
4	$+V_{DD}$

Part Marking	
Line 1	M2014S146
Line 2	25.095000 MHz
Line 3	M yyww

Legend	
yy	Year
ww	Work Week