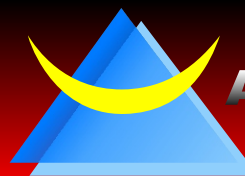


# OP SERIES

- Plastic J-Lead SMD Oscillator
- 5.0, 3.3 Volt
- HCMOS/TTL Output
- RoHS Compliant



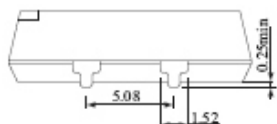
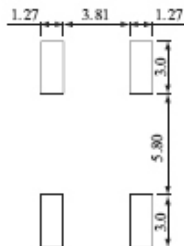
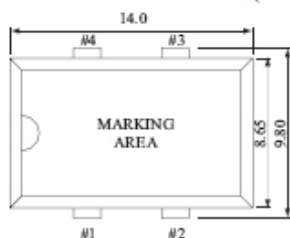
**ASCEND**

FREQUENCY DEVICES

## Electrical Specifications

Frequency Range:	5.0V and 3.3V	1.000MHz to 155.520MHz
Temperature Stability:	-	±100ppm, ±50ppm (Inclusive of Temperature, Load, Voltage and Aging)
Operating Temperature Range:	-	0°C to +70°C, or -40°C to +85°C (Optional)
Storage Temperature Range:	-	-55°C to +125°C
Supply Voltage (Vdd):	±5%	5.0Vdc ±5%, 3.3Vdc ±5%
Supply Current:	Vdd = 5.0V Vdd = 3.3V	40mA Maximum (30mA typical) 30mA Maximum (20mA typical)
Output Voltage HCMOS:	Logic 0 Logic 1	10% Vdd Maximum 90% Vdd Minimum
Duty Cycle:	50% of waveform	40%/60% Maximum or 45%/55% Maximum (Optional)
Load Drive Capability:	5.0V (< 50MHz) 5.0V (> 50MHz) 3.3V (< 50MHz) 3.3V (> 50MHz)	10TTL Gates or 50pF 10TTL Gates or 15pF 10TTL Gates or 30pF 10TTL Gates or 15pF
Rise/Fall Time:	-	4nSec Maximum
Start Up Time:	-	10mSec Maximum
RMS Phase Jitter	12KHz to 20MHz offset freq	1pSec Maximum
Pin 1, tri-state function		Pin 1=H or open...Output active at pin 3 Pin 1=L...high impedance at pin 3

## Mechanical Dimensions



ALL DIMENSIONS  
IN MILLIMETERS

Pad	FUNCTION
1	Tri-State (E/D)
2	Ground / Case
3	Output
4	Supply Voltage

Line	Marking
1	Frequency
2	Date Code

## Part Numbering Guide

**OP 3H B 3 A - 33.000M - TR**

**Series**  
Plastic J-Lead SMD

**Supply Voltage**  
5H = 5.0V (HCMOS)  
3H = 3.3V (HCMOS)

**Freq. Toler/Stab.**  
A = ±100PPM  
B = ±50PPM

**Packaging**  
Blank = Bulk  
-TR = Tape and Reel

**Frequency**

**Duty Cycle**  
A = 40% / 60%  
B = 45% / 55%

**Temperature Range**  
1 = 0°C to +70°C  
3 = -40°C to +85°C