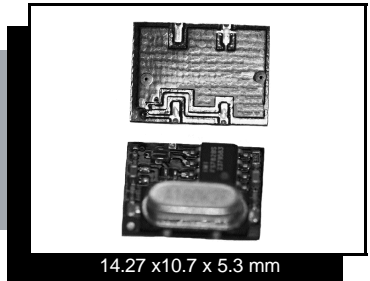


5.0VDC or 3.3VDC • HCMOS/ TTL SPREAD-SPECTRUM • SURFACE-MOUNT  
**ULTRA LOW NOISE CRYSTAL CLOCK OSCILLATORS**  
**ASSM and ASSML**



**FEATURES:**

- Patented spread spectrum technology.
- Standard TTL or HCMOS compatible output.
- Meets clock requirements on all major CISC, RISC, and DSP processors.
- Reduce electromagnetic emissions up to 20dB!
- Meets FCC and EMC Directive for EMI requirements.
- Drop-in replacement for standard plastic SMD crystal oscillators
- Wide frequency range 4.0MHz to 128MHz.

**APPLICATIONS:**

- Telecommunications.
- Consumer electronics, printers.
- Capital equipment.
- Medical equipment.
- Aerospace.

**STANDARD SPECIFICATIONS**

PARAMETERS	ASSM	ASSML
Frequency Range (F <sub>0</sub> )	4.0MHz - 128MHz	
Operating Temperature (T <sub>OPR</sub> )	0°C to +70°C(See Options)	
Storage Temperature (T <sub>STO</sub> )	-65°C to +150°C	
Frequency Stability VS.Temp.(ΔF/F <sub>0</sub> )	±100ppm max. (See Options)	
Supply Voltage (V <sub>dd</sub> )	5.0Vdc ± 5%	3.3Vdc ± 5%
Input Current (I <sub>dd</sub> )	30mA max.	
Duty Cycle (S <sub>YM</sub> )	45/55% max.	
Rise and Fall Times (T <sub>r</sub> / T <sub>f</sub> )	3.5ns max.	
Output Load	10LSTTL or 15pF	
Output Voltage (V <sub>OH</sub> , V <sub>OL</sub> )	V <sub>dd</sub> - 1.0V min. (V <sub>OH</sub> ) ; 0.4Vdc max. (V <sub>OL</sub> )	
Start-up Time (T <sub>osc</sub> )	10ms max. ,5ms typ.	
Aging	±5ppm max./year	
Jitter	250ps typ.	
Bandwidth variations	5% typ. (±2.5% of center frequency)(See Options)	

Test circuit, waveforms, see appendix B. Reflow profile, see appendix E.  
 Environmental and mechanical specifications, Please call Abracon for details.  
 Recommended handling, see appendix F.

**ORDERING OPTIONS**

**ASSMX - Frequency - Temperature - Frequency Stability - Bandwidth - Packaging**

Blank or L XX.XXXX MHz

- E for -20°C to +70°C
- F for -30°C to +70°C
- N for -30°C to +85°C
- L for -40°C to +85°C

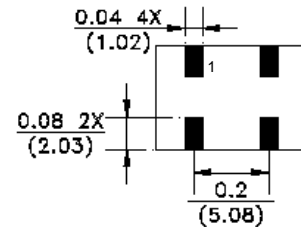
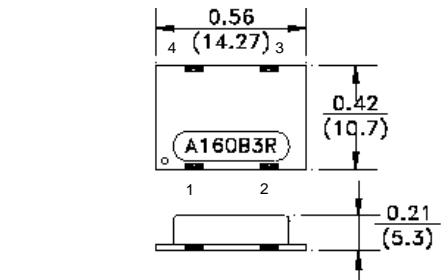
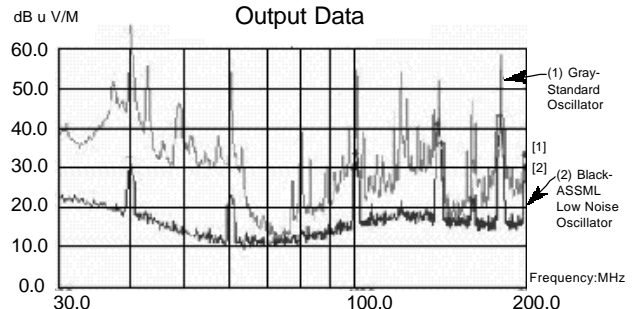
- R for ± 25ppm max
- K for ± 30ppm max
- H for ± 35ppm max
- C for ± 50ppm max

- B1 for 1%(±0.5% of F<sub>0</sub>)
- B2 for 2%(±1% of F<sub>0</sub>)
- B3 for 3%(±1.5% of F<sub>0</sub>)
- B4 for 4%(±2% of F<sub>0</sub>)

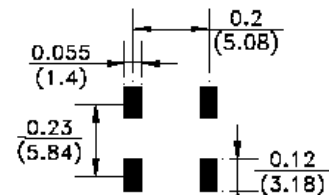
-T for Tape and Reel

PIN NUMBER	FUNCTION
1	NC
2	GND
3	Output
4	V <sub>dd</sub>

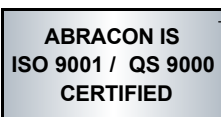
Output Data



Recommended Land Pattern



Dimensions: Inches (mm)



NOTE: Left blank if standard • All specifications and markings subject to change without notice

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