

5.0Vdc • HCMOS/TTL COMPATIBLE • J-LEADED • PLASTIC MOLDED • SURFACE MOUNT

## CRYSTAL CLOCK OSCILLATORS

# ASM



### FEATURES:

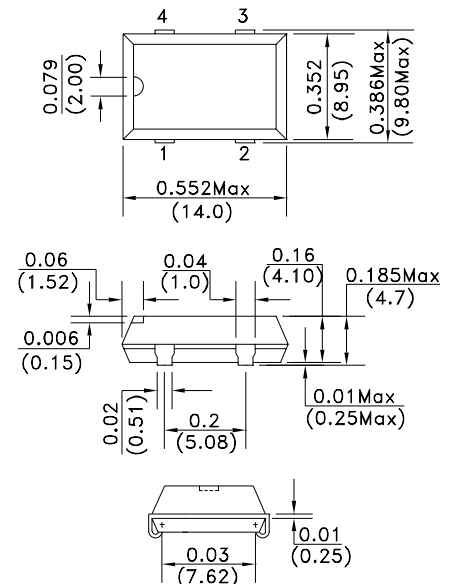
- Industry standard J-leaded terminals.
- HCMOS and TTL compatible.
- Extended temperature -40°C to +85°C option.
- Plastic molded SMD.
- Tristate Enable/Disable.

### APPLICATIONS:

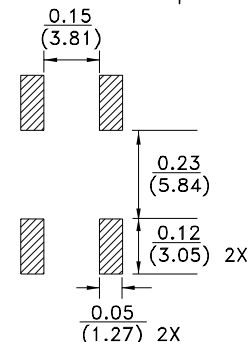
- Wide range of applications in dialing communication equipment, AV / OA equipment, Measuring equipment.

## STANDARD SPECIFICATIONS

PARAMETERS	SPECIFICATIONS
Frequency Range ( $F_0$ )	1.00MHz - 70.000MHz
Operating Temperature ( $T_{OPR}$ )	0°C to +70°C (See Options)
Storage Temperature ( $T_{STO}$ )	-40°C to +85°C
Frequency Stability ( $\Delta F / F_0$ )	±100ppm max. (See Options)
Supply Voltage ( $V_{DD}$ )	5Vdc ±10%
Input Current ( $I_{DD}$ )	25mA max. ( $F < 30$ MHz); 35mA max. ( $F \geq 30$ MHz)
Duty Cycle or Symmetry	45/55% max. for $F \leq 10$ MHz 40 / 60% max. for $F > 10$ MHz (See Options & Note 1)
Rise and Fall Times ( $T_R / T_F$ )	8ns max. ( $F \leq 40$ MHz); 6ns max. ( $F > 40$ MHz)
Output Load	10TTL max., 50pF max. ( $F \leq 50$ MHz); 15pF ( $F > 50$ MHz)
Output Voltage ( $V_{OH}$ )	2.4Vdc min. (TTL) ; 0.9*Vdd min.(HCMOS)
( $V_{OL}$ )	0.4Vdc max. (TTL) ; 0.1*Vdd max.(HCMOS)
Start-up Time ( $T_{OSC}$ )	10 ms max.
Output Disable / Enable	100 ns max. "1" or Open: Oscillation $V_{IH} \geq 2.0V$ "0": Output disabled in high impedance (HiZ) $V_{IL} < 0.8V$
Disabled current ( $I_{DIS}$ )	28mA max
Aging	±5ppm / Year max.



Recommended land pattern



Dimensions: Inches (mm)

PIN NUMBER	FUNCTION
1	Tristate E/D
2	GND / Case
3	Output
4	Vdd

**Note 1:** Option -S (Symmetry level measured at 1/2 Vdd for HCMOS, and at 1.4 Vdc for TTL.

**Note 2:** Pin 1 has internal pull-up resistor which allows pin 1 to be left floating (enable high) Connect a By-Pass capacitor 0.01  $\mu$ F between Vdd and GND.

Test circuit, waveforms, see appendix B. Recommended handling, see appendix F.

Environmental and mechanical specifications, see appendix C. Group 2.

Marking, see appendix G. Tape and Reel, see appendix H.(1,000 pcs./ reel).

Application notes, see appendix, A. Reflow profile, see appendix E.

## ORDERING OPTIONS

ASM - Frequency - Temperature - Frequency Stability - Duty Cycle - Packaging

XX.XXXXX MHz	-D for -10°C to +60°C -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	-S for 45/55% @ 1/2 Vdd -S1 for 45/55% @ 1.4 Vdc	-T (Tape & Reel)
	-R for ± 25ppm max. -K for ± 30ppm max. -H for ± 35ppm max. -C for ± 50ppm max.		

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

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ISO 9001 / QS 9000  
CERTIFIED

29 Journey • Aliso Viejo, CA 92656 • USA  
(949) 448-7070 • FAX: (949) 448-8484

E-MAIL: [abinfo@abracon.com](mailto:abinfo@abracon.com) • INTERNET ADDRESS: [www.abracon.com](http://www.abracon.com)

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