

LOW VOLTAGE HCMOS SURFACE-MOUNT CRYSTAL CLOCK OSCILLATOR



2.5 X 2.0 X 0.8mm

ASD SERIES

* RoHS COMPLIANT

FEATURES:

- LEAD-FREE
- Compact and low in height
- Low current consumption
- Tri state function
- Suitable for high density SMT., Reflow capable
- Tight stability option
- Glass sealed package

APPLICATIONS:

- CCD clock for VTR camera
- Equipment connected to PC or PC cards
- Thin equipment

STANDARD SPECIFICATIONS:

PARAMETERS	
Frequency Range	1.000 MHz to 60 MHz
Operating Temperature	-10°C to + 60°C (See Options)
Storage Temperature	- 40°C to + 85°C
Overall Frequency Stability	± 100 ppm max. (see options)
Supply Voltage (Vdd)	See table 1
Input Current	See Table 2 (depending on F and Vdd)
Symmetry	40/60 % max.@ 1/2Vdd (see options)
Rise and Fall Time (Tr/Tf)	See Table 3
Output Load	15 pF (3TTL)
Output Voltage	VOH = 0.9* Vdd min. VOL = 0.1* Vdd max.
Start-up Time	10ms max.
Tristate Function (stand-by)	"1" (VIH >= 0.7* Vdd) or open: Oscillation "0" (VIL < 0.3* Vdd) : No oscillation/Hi Z
Aging at 25°C/year	± 5ppm max.
Disabled Current	15µA max.

P/N	Vdd (V)
ASD	3.3±0.3
ASD1	3.0±0.3
ASD2	2.7±0.2

F	I @ Vdd typ.
20MHz	5mA@3.0V
50MHz	8mA@3.0V

Freq. (MHz)	Tr/Tf (ns max)
1.0 ~ 34.99	10ns
35.0 ~ 60.0	5ns

PIN	FUNCTION
1	Enable/Disable(STBY)*
2	GND/Case
3	Output
4	Vdd

*"H" or "open": Oscillation
"L": Oscillation stops/Hi impedance

Note: Decoupling capacitor shall be connected between Vdd and GND for best performance and stability.

MARKING:

- XX.X R (XX.X First 3 digits of frequency)
- A1 ZYW (Z: month A to L; Y: year 4 for 2004
W: Traceability code (A-Z))
(1 for ASD1, 2 for ASD2, None for ASD)

OPTIONS AND PART IDENTIFICATION (Left blank if standard):

ASDX - Frequency - Temperature - Overall Frequency Stability - Duty cycle - Packaging

Vdd options:

Blank (3.3Vdc±0.3V), 1 (3.0Vdc±0.3V), 2 (2.7Vdc±0.2V)
(See table 1)

Symmetry option:

- S for 45/55% at 1/2Vdd

Packaging option: T for Tape and Reel (1,000pcs/reel, Dia. 180mm)

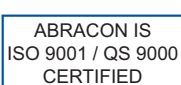
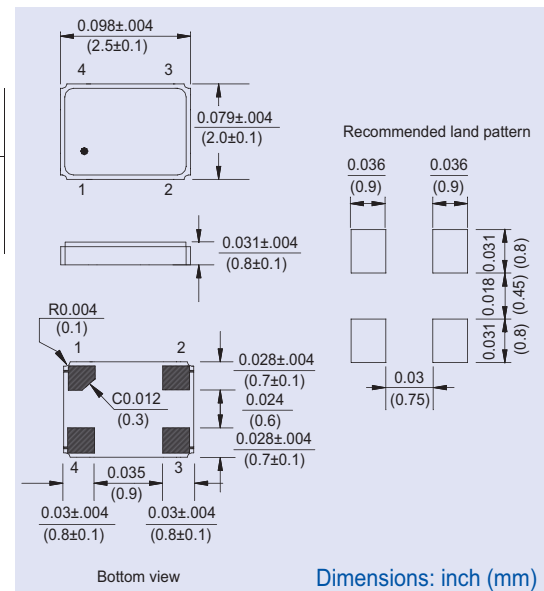
Temperature options:

- 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

Overall Frequency stability options:

- R for ± 25 ppm max. (standard op. Temp. only -10°C to +60°C)
- K for ± 30 ppm max. (standard op. Temp. only)
- H for ± 35 ppm max. (standard op. Temp. only)
- C for ± 50 ppm max.

OUTLINE DRAWING:



rev.1.9/04

