

HCMOS COMPATIBLE SURFACE MOUNT LOW PROFILE (1.4max) CRYSTAL CLOCK OSCILLATOR

ASV2 SERIES



RoHS
Compliant



7.0 x 5.0 x 1.4mm

FEATURES:

- Low height 1.4 mm max.
- HCMOS compatible, 1.8V to 3.3V_{DC}
- Tristate function
- Suitable for RoHS reflow
- Available for -40°C to 85°C extended temperature
- Seam sealed package assures high reliability
- Low stand-by current

APPLICATIONS:

- Clock signaling for μ Processors, PC Motherboards and Graphic Cards
- Wireless communications

STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range	1.8V	0.012	-----	124.999	MHz	
	2.5V	0.012	-----	133		
	3.3V	0.012	-----	133		
Operating Temperature		-10	-----	+70	°C	See options
Storage Temperature		-55	-----	+125	°C	
Overall Frequency Stability		-100	-----	+100	ppm	See options
Supply Voltage (V _{dd})		2.97	3.3	3.63	V	See options
Input Current	Frequency	3.3V	2.5V	1.8V	mA (max)	
	0.012MHz Fo < 0.048MHz	5	5	N/A		
	0.048MHz Fo < 1.5MHz	5	5	5		
	1.5MHz Fo < 20MHz	7	7	5		
	20MHz Fo < 50MHz	20	15	15		
	50MHz Fo < 70MHz	30	20	15		
	70MHz Fo < 125MHz	30	20	20		
Symmetry (@ 1/2V _{dd})	Frequency	3.3V	2.5V	1.8V	ns (max)	Measured between 10% and 90% of V _{dd} with 15pF load
	0.012MHz Fo < 1.0MHz	200	200	N/A		
	1.0MHz Fo < 20MHz	10	10	10		
	20MHz Fo < 50MHz	6	6	6		
	50MHz Fo < 70MHz	3	3	3		
	70MHz Fo < 125MHz	3	3	3		
	125MHz Fo 133MHz	3	3	N/A		
Output Load				15	pF	CMOS (5TTL compatible)
Output Voltage	V _{OH}	0.9*V _{dd}	-----	-----	V	
	V _{OL}	-----	-----	0.1*V _{dd}	V	
Start-up Time		-----	-----	8.0	ms	
Tri-state function (Stand-by) :	V _{dd}	V _{IH}	-----	V _{IL}	V	"1" (V _{IH} ≥ 0.7*V _{dd}) or Open: Oscillation "0" (V _{IH} < 0.3*V _{dd}) : Hi Z
	1.8	1.26	-----	0.5		
	2.5	1.75	-----	0.5		
	3.3	2.0	-----	0.5		
Disable current		-----	-----	10	uA	
Absolute Period jitter (Reference only. Please contact Abracon for each frequencies.):		-----	-----	40.0	ps	
Aging		-5.0	-----	+5.0	ppm	@+25°C First year



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OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASV2 - MHz - - -

P/N and Vdd (V)

ASV2: 3.3 ±10%
ASV21: 2.5 ±10%
ASV22: 1.8 ±10%

Frequency in MHz

e.g. 24.576MHz
14.31818MHz
26.000MHz

Packaging

Blank: Bulk
T: Tape & Reel

Output Load

Blank: 15 pF
L1: 50 pF
L2: 15 TTL
L3: 50 TTL

Operating Temp.

I: 0°C ~ +50°C
D: -10°C ~ +60°C
E: -20°C ~ +70°C
F: -30°C ~ +70°C
N: -30°C ~ +85°C
L: -40°C ~ +85°C

Freq. Stability

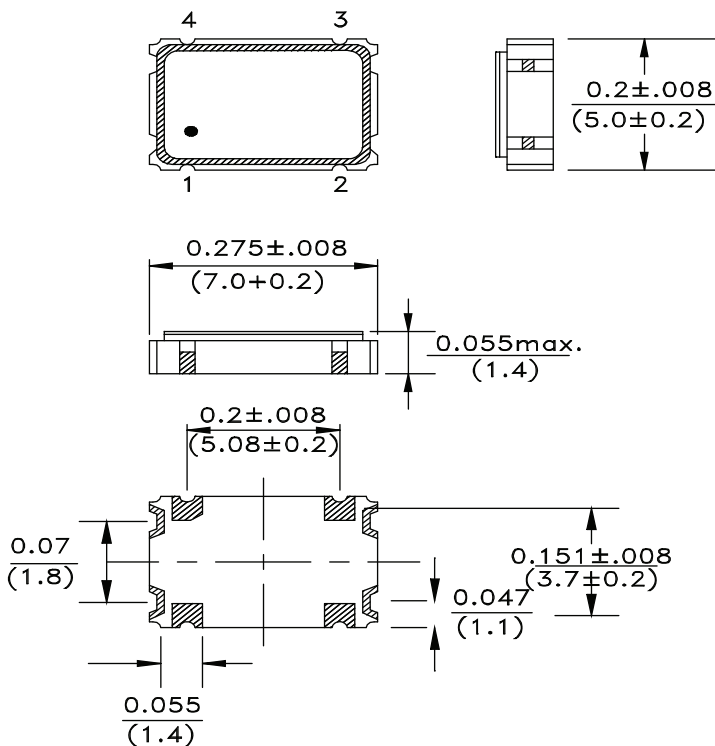
J: ± 20 ppm(*)
R: ± 25 ppm
K: ± 30 ppm
H: ± 35 ppm
C: ± 50 ppm

Symmetry

Blank: 40/60% @1/2Vdd
S: 45/55% @1/2Vdd

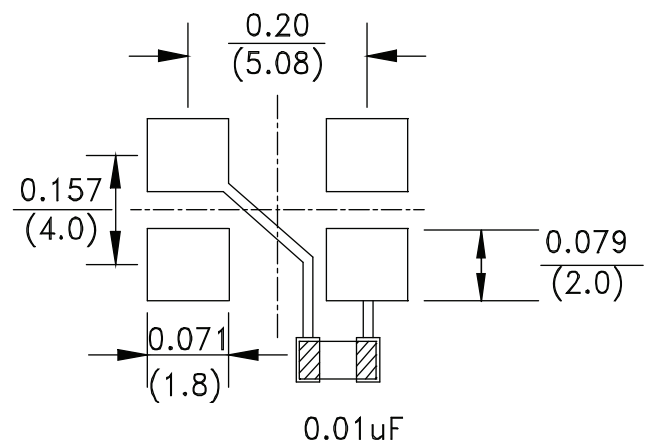
(*) Temp option I, D, E, F, N and -10°C ~ +70°C only.

OUTLINE DRAWING:



Bottom view

Recommended land pattern



Dimensions: mm

PIN	FUNCTION
1	Tristate Enable/Disable
2	GND/Case
3	Output
4	Vdd

Note : It is recommended to use an approximately 0.01uF bypass capacitor between PIN 2 and 4.

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