

# 2.5V / 3.3Vdc PROGRAMMABLE SPREAD SPECTRUM LOW EMI CLOCK OSCILLATOR



7.0 x 5.0 x 1.4mm

## ASSVP SERIES



**RoHS**  
Compliant

### FEATURES:

- Spread Spectrum LOW EMI Oscillator
- 7.0 x 5.0 x 1.4mm Ceramic package
- Tri-state function
- Suitable for RoHS reflow profile
- Seam sealed ceramic package assures high reliability.

### APPLICATIONS:

- Laptop computer
- PDA
- LCD
- Digital camera
- Wireless LAN
- Mobile phone
- Printer
- Flat TV

**Quick Turn Delivery!**  
**<5 Days for small quantities!**

### STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range:		10	-----	160	MHz	
Spread Spectrum Type	Center Spread	±0.125	-----	±2.0	%	See table 3 for options
	Down Spread	-0.25	-----	-4.0		
EMI Reduction (Reduction is applied to the entire frequency spectrum)	100MHz at C02	-7	-----	-----	dBc	Refer to the dB level when no modulation.
	100MHz at C04	-9	-----	-----		
	100MHz at C22	-12	-----	-----		
Operating Temperature:		-40	-----	+85	°C	See options
Storage Temperature:		-55	-----	+125	°C	
Overall Frequency Stability*:		-50	-----	+50	ppm	See options
Supply Voltage (V <sub>dd</sub> ):	V <sub>dd</sub> = 3.3V	2.97	3.3	3.63	V	Standard
	V <sub>dd</sub> = 2.5V	2.25	2.5	2.75	V	Option 1
Input Current:	13.000 to 49.999MHz	-----	10	20	mA	V <sub>dd</sub> = 2.5V
	50.000 to 79.999MHz	-----	15	20		
	80.000 to 99.999MHz	-----	20	25		
	100.0 to 160.0MHz	-----	25	30		
	13.000 to 49.999MHz	-----	15	20	mA	V <sub>dd</sub> = 3.3V
	50.000 to 79.999MHz	-----	20	25		
	80.000 to 99.999MHz	-----	25	30		
	100.0 to 160.0MHz	-----	30	40		
Symmetry:		45	50	55	%	@ 1/2V <sub>dd</sub> , CL=15pF
Rise and Fall Time (Tr/Tf)**:	13.000 to 49.999MHz	-----	2.0	5.0	ns	V <sub>dd</sub> = 2.5V
	50.000 to 79.999MHz	-----	2.0	4.0		
	80.000 to 99.999MHz	-----	1.5	3.0		
	100.0 to 160.0MHz	-----	1.5	3.0		
	13.000 to 49.999MHz	-----	3.0	10.0	ns	V <sub>dd</sub> = 3.3V
	50.000 to 79.999MHz	-----	2.5	8.0		
	80.000 to 99.999MHz	-----	2.0	5.0		
	100.0 to 160.0MHz	-----	1.5	4.0		
Output Load:		-----	-----	15	pF	CMOS
Output Voltage:	VOH	0.9*V <sub>dd</sub>	-----	-----	V	
	VOL	-----	-----	0.1*V <sub>dd</sub>	V	
Start-up Time:		-----	2.0	10.0	ms	
Tri-state function (Stand-by) :		"1" (VIH≥0.7*V <sub>dd</sub> ) or Open: Oscillation "0" (VIH<0.3*V <sub>dd</sub> ) : Hi Z				
Modulation carrier frequency (Dither rate)		Programmable dependant ( 30kHz to 40kHz )				
Aging:		-3.0	-----	+3.0	ppm	@+25°C First year

\* Frequency stability includes initial tolerance, temperature characteristics, load variation, and supply voltage variation.

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**Revised: 03.28.11**

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7.0 x 5.0 x 1.4mm

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASSVP  -  MHz -   -

Supply Voltage
Blank: 3.3V±5%
1: 2.5V±5%

Frequency in MHz
Please specify the frequency in MHz. e.g. 14.31818MHz

Overall Freq. Stability
Blank: ±50ppm
R: ±25ppm

Contact Abracon for special tighter stability

SSBW
C <input type="text"/> or D <input type="text"/>
See table below

SSBW: Spread Spectrum Band Width

Packaging
Blank: Bulk
T: Tape & Reel

**Table 3: SPREAD SPECTRUM BANDWIDTH SELECTION TABLE**

SPREAD SPECTRUM BAND WIDTH OPTIONS			
Center Spread (%)		Down Spread (%)	
C01	±0.125	D01	-0.25
C02	±0.250	D02	-0.50
C03	±0.375	D03	-0.75
C04	±0.50	D04	-1.00
C05	±0.625	D05	-1.25
C06	±0.750	D06	-1.50
C07	±0.875	D07	-1.75
C08	±1.000	D08	-2.00
C09	±1.125	D09	-2.25
C10	±1.250	D10	-2.50
C11	±1.375	D11	-2.75
C12	±1.500	D12	-3.00
C13	±1.625	D13	-3.25
C14	±1.750	D14	-3.50
C15	±1.875	D15	-3.75
C16	±2.000	D16	-4.00

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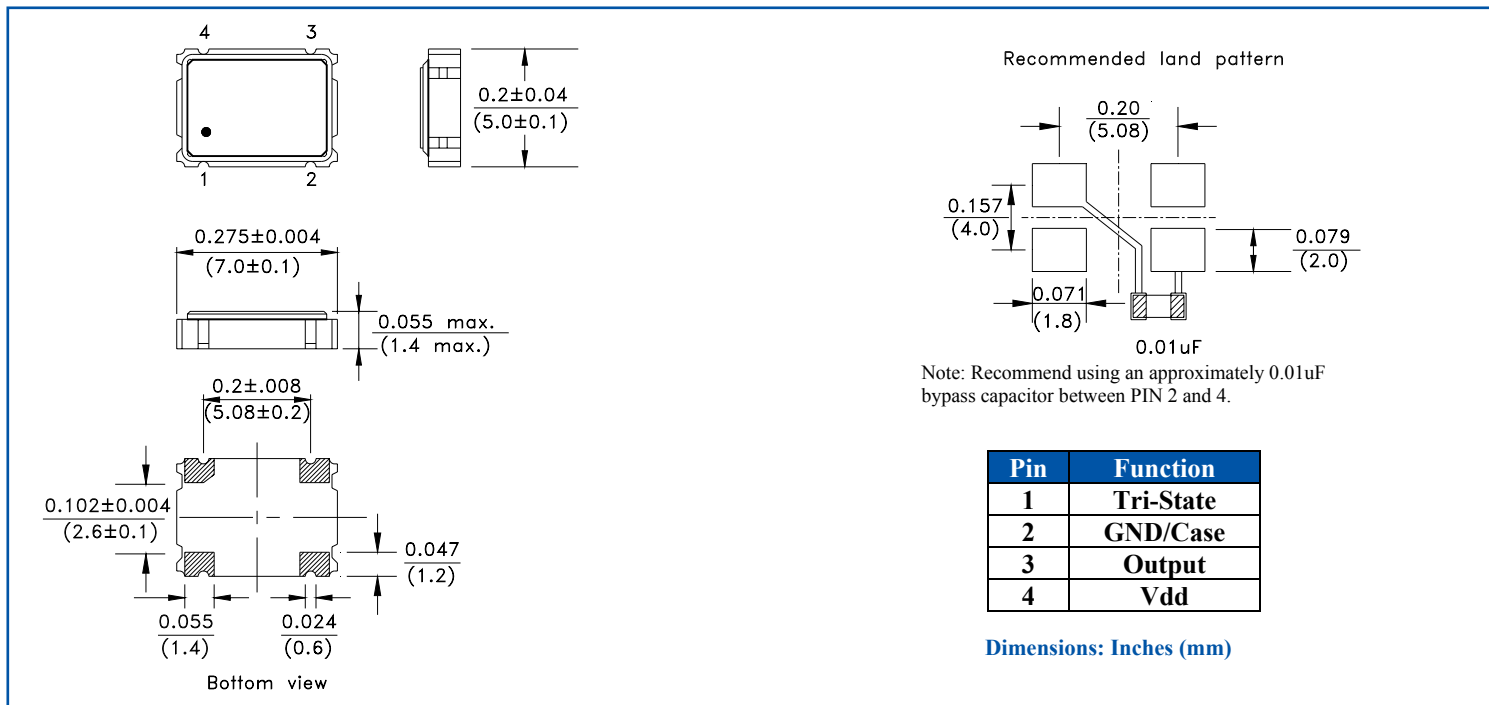
7.0 x 5.0 x 1.4mm

ASSVP SERIES

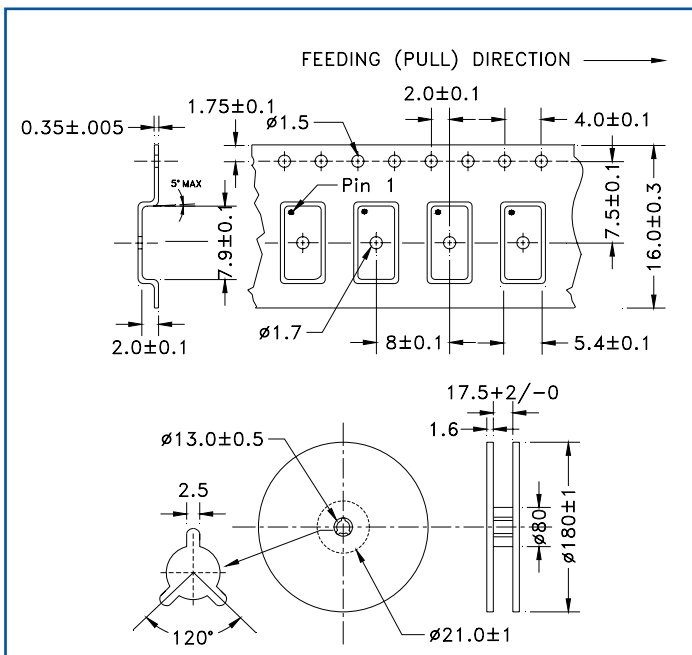


RoHS  
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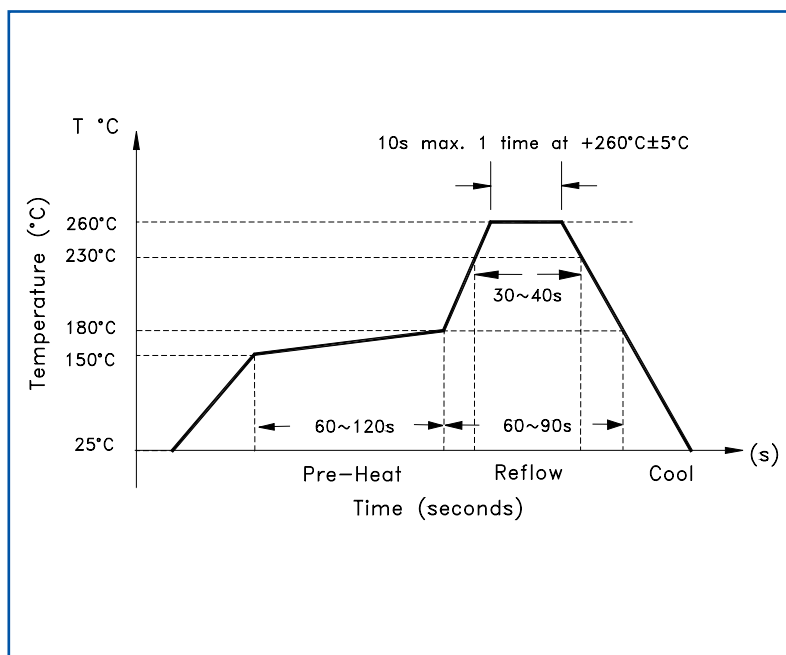
## OUTLINE DRAWING:



## TAPE & REEL: Tape and reel 1,000pcs/reel



## REFLOW PROFILE



Need a test socket for the ASSVP Series?  
To view compatible **PRECISION TEST and BURN-IN SOCKETS** for these parts, [click here](#).

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