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

# LOW EMITCLO





7.0 x 5.0 x 1.4mm

## **ASSVP SERIES**

RoHS / RoHS II Compliant

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

### **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
- Wireless LAN
   Mobile phone
- Mobile phone
- Printer
- Digital camera Flat TV

Quick Turn Delivery! Days for small quantities!

### > STANDARD SPECIFICATIONS:

Key Electrical Specifications (Die IC's Part Number PL671-00-A5)

Parameters			Minimum	Typical	Maximum	Units	Notes
Frequency Range:			10		160	MHz	
Spread Spectrum Type Center Spread Down Spread		Center Spread	$\pm 0.25 \text{ typ.} \sim \pm 2.0 \text{ typ.}$		%	See table 3 for options	
		$-0.5$ typ. $\sim -4.0$ typ.			70	See table 3 for options	
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				
Operating Temperature:		-40		+85	°C	See options	
	Storage Temperature:		-55		+125	°C	
Overall Frequency	/ Stabili	ity*:	-50		+50	ppm	See options
Supply Voltage	$V_{dd} = 3.3V$		2.97	3.3	3.63	V	Standard
(Vdd):	7	$V_{\rm dd} = 2.5 \text{V}$	2.25	2.5	2.75	V	Option 1
	13.00	0 to 49.999MHz		10	20		$V_{dd} = 2.5V$
İ	50.00	0 to 79.999MHz		15	20	1.	
İ		0 to 99.999MHz		20	25	mA	
	100.	0 to 160.0MHz		25	30		
Input Current:	13.000 to 49.999MHz			15	20	mA	$V_{dd} = 3.3V$
	50.000 to 79.999MHz			20	25		
	80.000 to 99.999MHz			25	30		
		0 to 160.0MHz		30	40		
Symmetry:		45	50	55	%	@ 1/2Vdd, CL=15pF	
Symmetry.	13.000 to 49.999MHz			2.0	5.0	ns	$V_{dd} = 2.5V$
	50.000 to 79.999MHz			2.0	4.0		
l	80.000 to 99.999MHz			1.5	3.0		
Rise and Fall Time (Tr/Tf)**:	100.0 to 160.0MHz			1.5	3.0		
	13.000 to 49.999MHz			3.0	10.0	ns	$V_{dd} = 3.3V$
	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	рF	CMOS	
•		VOH	0.9*Vdd			V	
Output Voltage:		VOL			0.1*Vdd	V	
Start-up Time:				2.0	10.0	ms	
Tri-state function (Stand-by):			"1" (VIH≥0.7*Vdd) or Open: Oscillation "0" (VIH<0.3*Vdd) : Hi Z				
Modulation carrier frequency (Dither rate)			Programmable dependant ( 30kHz to 40kHz )				
Aging:			-3.0		+3.0	ppm	@+25°C First year

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





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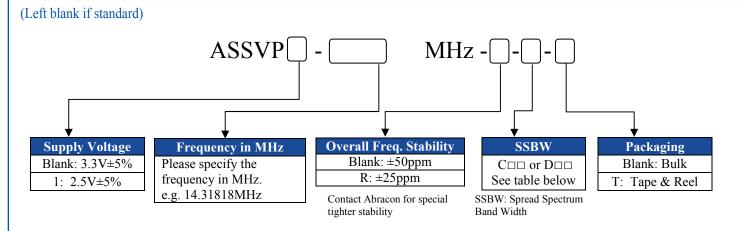








### **OPTIONS & PART IDENTIFICATION:**



### Table: SPREAD SPECTRUM BANDWIDTH SELECTION TABLE

SPREAD SPECTRUM BAND WIDTH OPTIONS *						
Cente	r Spread (%)	Down Spread (%)				
C02	±0.250	D02	-0.50			
C04	±0.50	D03	-0.75			
C08	±1.000	D04	-1.00			
C12	±1.500	D06	-1.50			
C16	±2.000	D08	-2.00			
		D12	-3.00			
		D16	-4.00			

Note \*: All spectrum spread percentage numbers are typical values





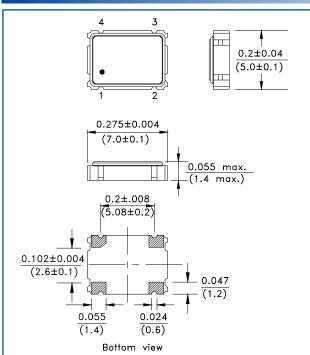
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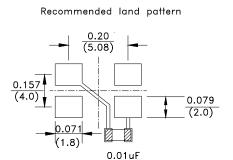
**ASSVP SERIES** 





### **OUTLINE DRAWING:**





Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

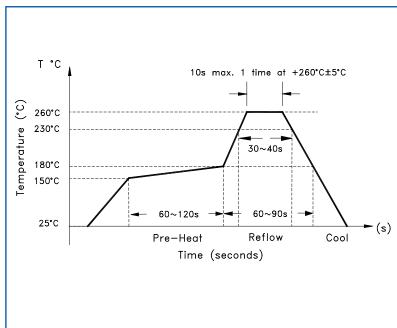
Pin	Function
1	Tri-State
2	GND/Case
3	Output
4	Vdd

**Dimensions: Inches (mm)** 

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

# FEEDING (PULL) DIRECTION 1.75±0.1 2.0±0.1 91.5 Pin 1 91.7 91.7 8±0.1 17.5+2/-0 1.6 913.0±0.5 120° 921.0±1

### **REFLOW PROFILE**





Need a test socket for the ASSVP Series? To view compatible **PRECISION TEST and BURN-IN SOCKETS** for these parts, **click here.**  **ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.





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