

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

ASSVP SERIES



RoHS / RoHS II Compliant



7.0 x 5.0 x 1.4mm

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
- Digital camera
- Wireless LAN
- Mobile phone
- Printer
- 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	±0.25 typ. ~ ±2.0 typ.			%	See table 3 for options
	Down Spread	-0.5 typ. ~ -4.0 typ.				
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 Stability*:		-50		+50	ppm	See options
Supply Voltage (Vdd):	V _{dd} = 3.3V	2.97	3.3	3.63	V	Standard
	V _{dd} = 2.5V	2.25	2.5	2.75	V	Option 1
Input Current:	13.000 to 49.999MHz		10	20	mA	V _{dd} = 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 _{dd} = 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	%	@ 1/2Vdd, CL=15pF
Rise and Fall Time (Tr/Tf)**:	13.000 to 49.999MHz		2.0	5.0	ns	V _{dd} = 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 _{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	pF	CMOS
Output Voltage:	VOH	0.9*Vdd			V	
	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

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

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ISO9001:2008
CERTIFIED



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RoHS / RoHS II Compliant



7.0 x 5.0 x 1.4mm

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

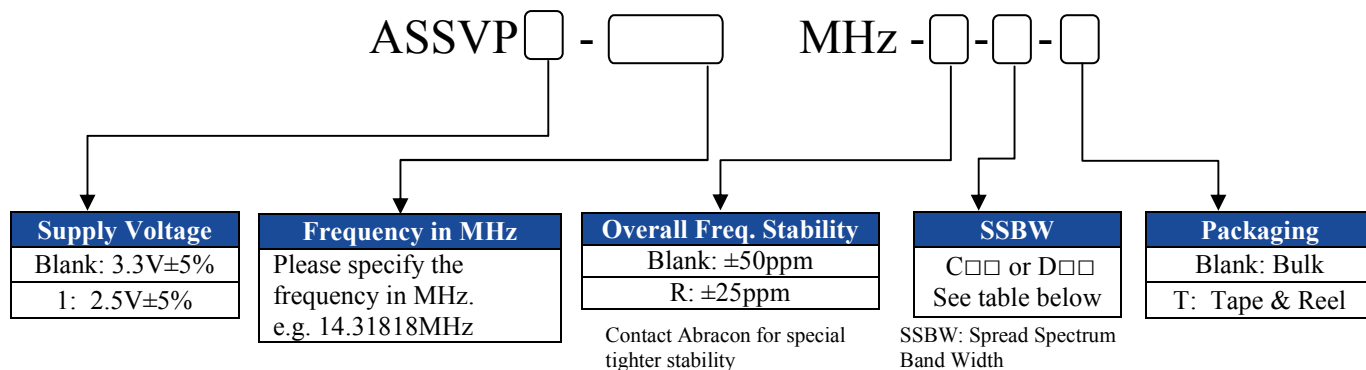


Table: SPREAD SPECTRUM BANDWIDTH SELECTION TABLE

SPREAD SPECTRUM BAND WIDTH OPTIONS *			
Center 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

7.0 x 5.0 x 1.4mm

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0.055 max.
(1.4 max.)

$$\frac{0.2 \pm 0.008}{(5.08 \pm 0.2)}$$
$$\frac{0.102 \pm 0.004}{(2.6 \pm 0.1)}$$
$$\frac{0.047}{(1.2)}$$
$$\frac{0.05}{(1.4}$$

Bottom view

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

Technical drawing of a pin assembly. The drawing shows a side view of a pin with a complex profile. Key dimensions and labels include:

- FEEDING (PULL) DIRECTION**: Indicated by an arrow pointing to the right.
- 0.35±0.005**: Dimension for the top flange thickness.
- 1.75±0.1**: Dimension for the top flange width.
- 2.0±0.1**: Dimension for the distance between the first two pins.
- 4.0±0.1**: Dimension for the distance between the last two pins.
- 2.0±0.1**: Dimension for the bottom flange width.
- 7.9±0.1**: Dimension for the total height of the pin.
- 5° MAX**: Angle of the bottom flange taper.
- Pin 1**: Label for the first pin.
- Ø1.5**: Diameter of the pin holes.
- Ø1.7**: Diameter of the pin holes.
- 8±0.1**: Dimension for the distance between the first and second pins.
- 5.4±0.1**: Dimension for the distance between the last two pins.
- 7.5±0.1**: Dimension for the height of the pin body.
- 16.0±0.3**: Total height of the assembly.

