

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



5.0 x 3.2 x 1.3 mm

ASSFLP SERIES



ESD Sensitive



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
- 5.0 x 3.2 x 1.3mm 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:

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

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range:		8		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	
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:	8.000 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		
	8.000 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)**:	8.000 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		
	8.000 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	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 ( 15kHz to 120kHz )					
Aging:		-3.0		+3.0	ppm	@+25°C First year

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

ABRACON IS  
ISO9001:2008  
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5.0 x 3.2 x 1.3 mm

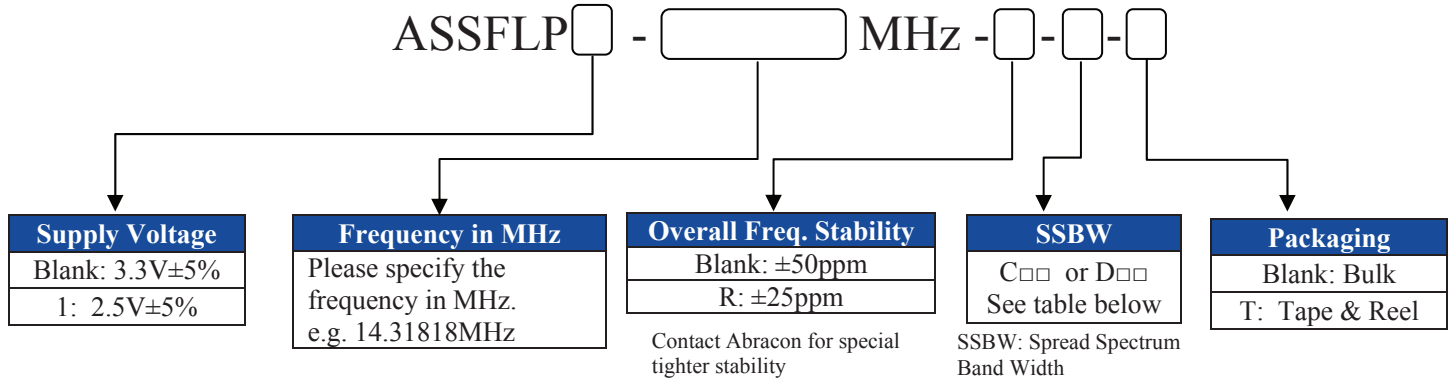
ASSFLP SERIES



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## OPTIONS & PART IDENTIFICATION:

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**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

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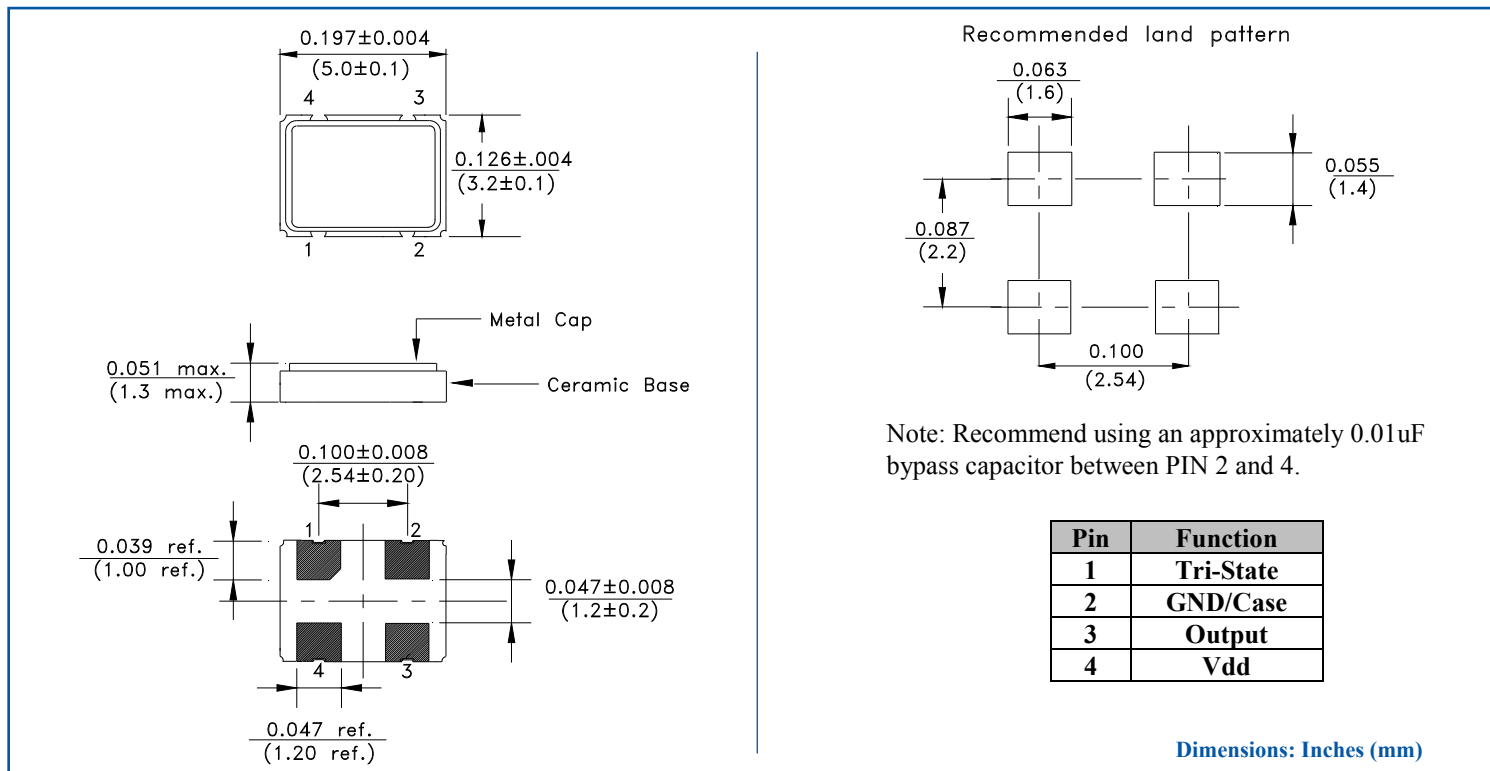


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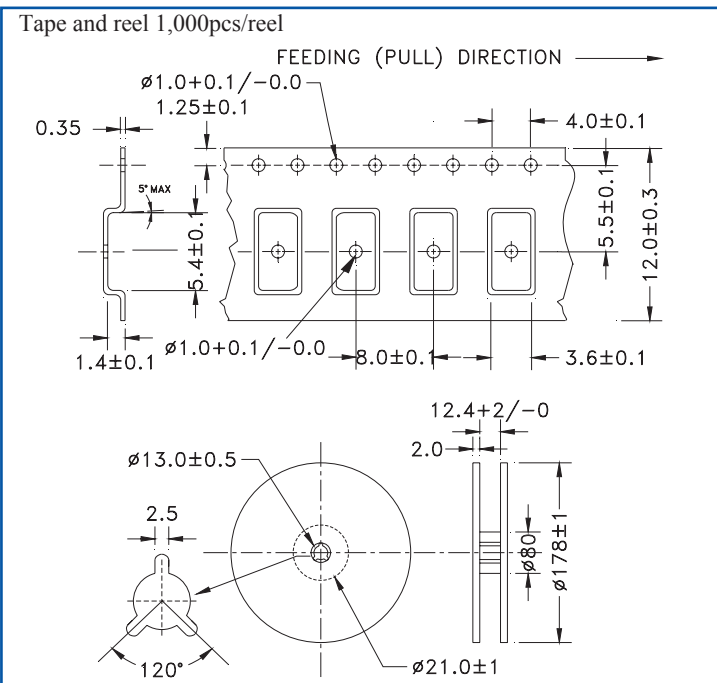
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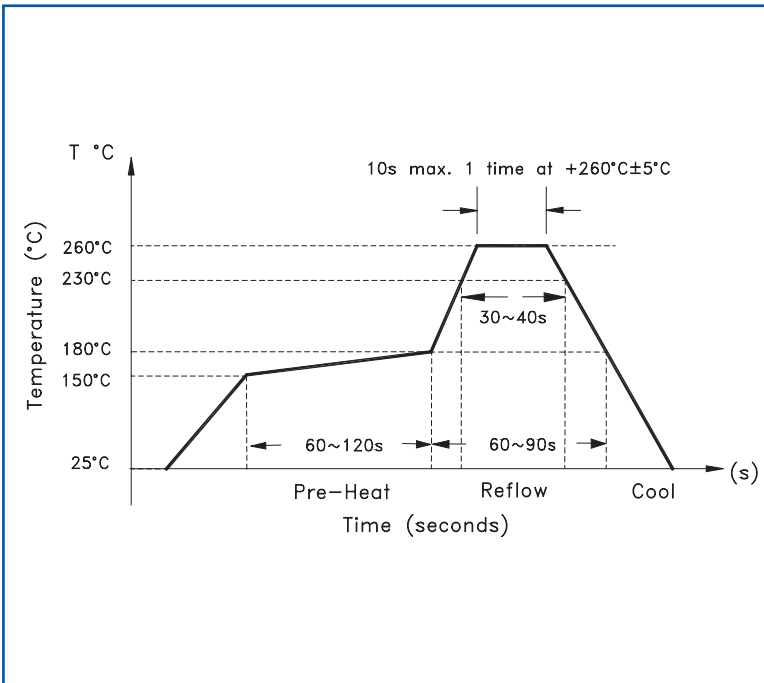
## OUTLINE DRAWING:



## TAPE & REEL:



## REFLOW PROFILE



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

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