

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



5.0 x 3.2 x 1.3 mm

ASSFLP SERIES



RoHS  
Compliant

## 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

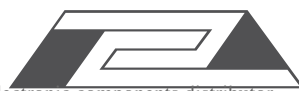
**Quick Turn Delivery!**  
**<5 Days for small quantities!**

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes	
Frequency Range:	13	-----	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	-15	-----	-----		
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	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,.

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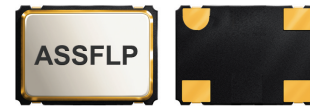
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5.0 x 3.2 x 1.3 mm

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASSFLP  -  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

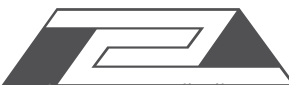
SSBW: Spread Spectrum Band Width

Packaging
Blank: Bulk
T: Tape & Reel

**Table 3 : SPRE AD SPE CTRUM 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	±0.500	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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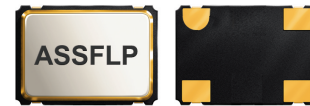


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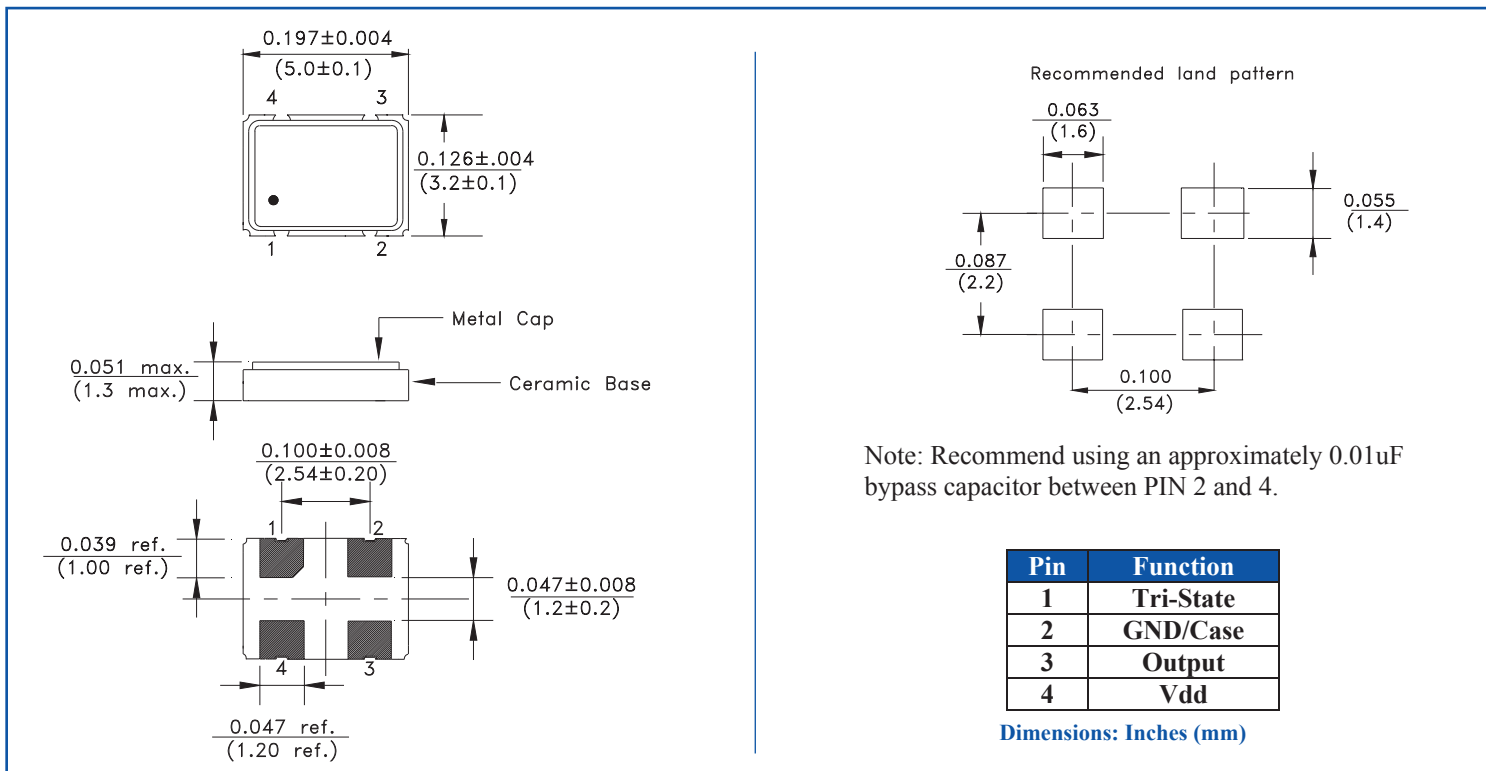


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ASSFLP SERIES

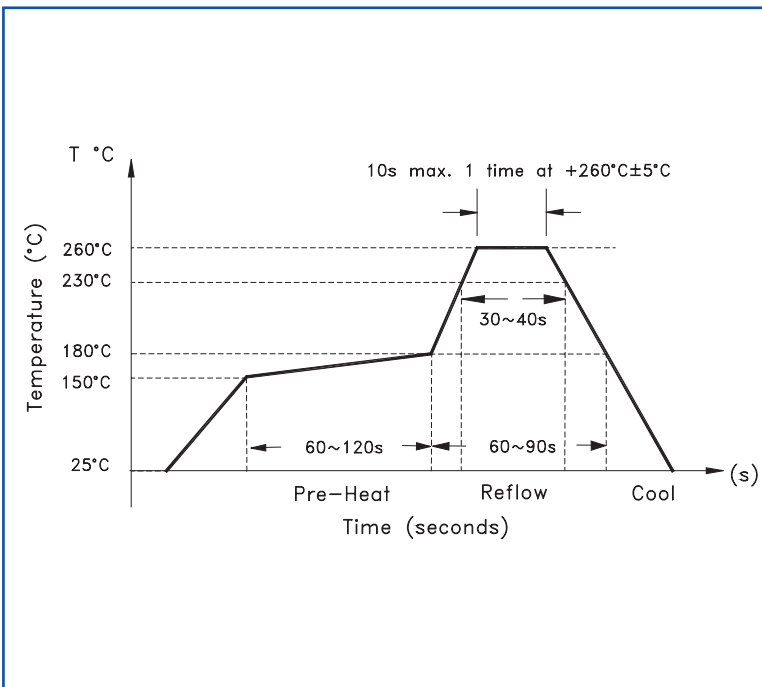
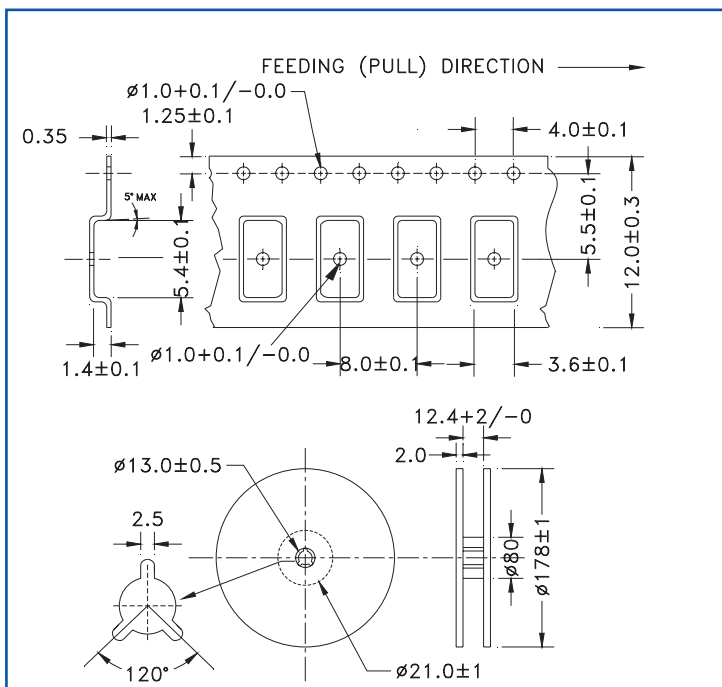
**Pb** RoHS Compliant

## OUTLINE DRAWING:



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

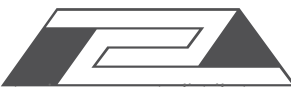
## REFLOW PROFILE



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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