

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

ASSFLP SERIES



ESD Sensitive



RoHS / RoHS II Compliant



5.0 x 3.2 x 1.3 mm

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 (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:	8.000 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		
	8.000 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)**:	8.000 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		
	8.000 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	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 (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
CERTIFIED



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LOW EMI CLOCK OSCILLATOR

ASSFLP SERIES



RoHS / RoHS II Compliant



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 or D
See table below
SSBW: Spread Spectrum Band Width

Packaging
Blank: Bulk
T: Tape & Reel

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



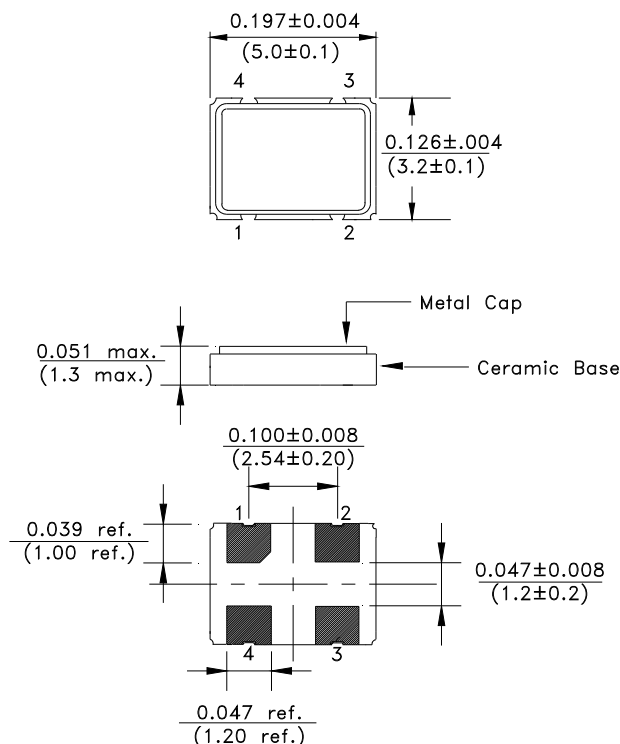
ASSFLP SERIES



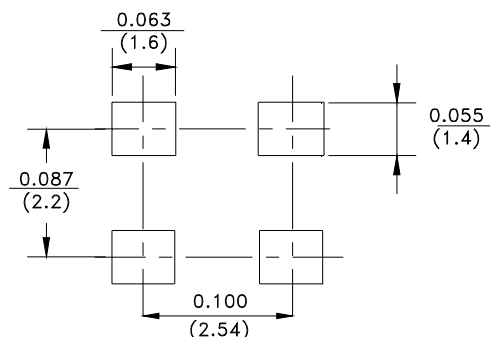
RoHS / RoHS II Compliant

5.0 x 3.2 x 1.3 mm

OUTLINE DRAWING:



Recommended land pattern



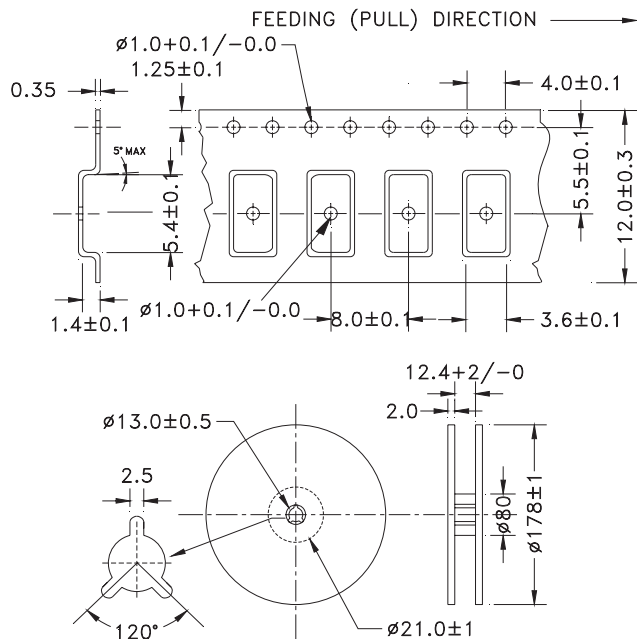
Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

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

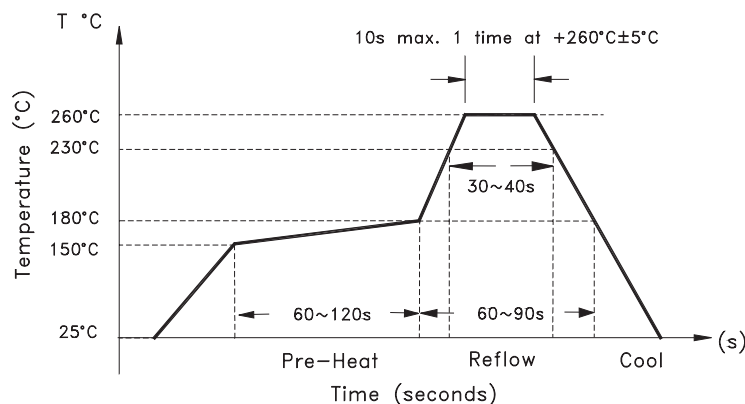
Dimensions: Inches (mm)

TAPE & REEL:

Tape and reel 1,000pcs/reel



REFLOW PROFILE



Need a test socket for the ASSFLP 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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