# **MEMS CLOCK OSCILLATOR**

## **ASFLM**





#### **FEATURES:**

- Low Power Consumption <10mA
- Low Stand by Current < 1uA
- Exceptional Stability Over Temp. at 40 to +85°C
- Available over Extended Temp Range
- Low Cost-Compact QFN Plastic Packaging
- Compact Package design

#### > APPLICATIONS:

- CCD Clock for VTR Camera
- Equipment Connected to PCs
- Low Profile Equipment
- Lower Cost Crystal Oscillator Replacement
- Computers and Peripherals
- Portable Electronics (MP3 Players, Games)
- Consumer Electronics such as TV's, DVR's, etc.
- Vibrant, Shock-Prone & Humid Environments for Industrial Equipment
- Demanding Military & Automotive Electronics

### > STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes	
Frequency Range:		1.0		150	MHz		
Operating Temperature:			0		+70	°C	See options
Storage Temperature:		-55		+150	°C		
Overall Frequency Stability*:		-100		+100	ppm	See options	
Supply Voltage (Vdd):		+1.8 ~ +3.3			V	See options	
Supply Current (no load):	1.0 to 39.9999MHz			3	10	mA	No load RL=∞ T=25°C
	40.0 to 79.9999MHz			4	10		
	80.0 to 124.9999MHz			5	10		
	125.0 to 150MHz			6	10		
Output Voltage:		$V_{\mathrm{OH}}$	$0.8*V_{dd}$				
		$V_{OL}$			0.2*V <sub>dd</sub>	V	15pF
Rise Time:		Tr		1.3	2.0		15pF; T=25°C
Fall Time:		Tf		1.3	2.0	ns	20%/80%*VDD
Output Load:		15pF max / 10kΩ min.			pF	See options	
Symmetry:		45		55	%	@1/2Vdd	
Startup Time:			1.5	3.0	ms		
Disable Time:				20	100	ns	
Disable Stand-by Current:				1	uA		
Tri-state Function (Stand-by):		"1" (VIH≥0.75*Vdd) or Open: Oscillation "0" (VIH<0.25*Vdd) : Hi Z			V		
Cycle to cycle jitter:				95		ps	F=100MHz
Aging:		-5.0		+5.0	ppm	First year	

#### **Absolute Maximum Ratings**

Item	Minimum	Maximum	Unit	Condition
Supply Voltage	-0.3	+4.0	V	
Input Voltage	-0.3	Vdd+0.3	V	
Junction Temp.		+150	°C	
Soldering Temp.		+260	°C	40sec max
ESD			V	
HBM		2,000		
MM		200		
CDM		500		



REVISED: 12.6.2018

ABRACON IS ISO9001-2015 CERTIFIED

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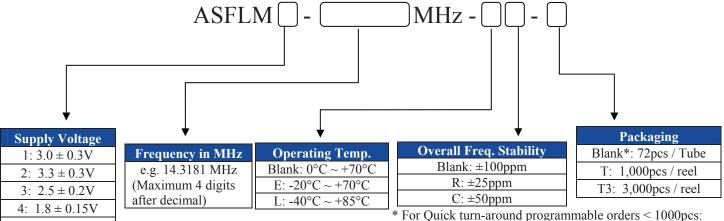
5:  $2.8 \pm 0.2V$ 





#### > PART NUMBER FOR PROGRAMMED ORDER S

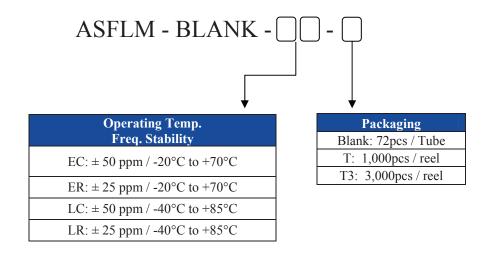
**Programmed Orders (Quantity > 1,000pcs)** 



\* For Quick turn-around programmable orders < 1000pcs: Due to the immediate availability of stock and the qty of the order, the parts may be delivered as BULK: Cut Tape, Loose parts in Antistatic Bag or in Tube(s). The MOQ per the series will still apply for Tube packaging.

#### **Un-Programmed Orders (Quantity < 1,000pcs)**

Blank un-programmed oscillators are available for quick turn engineering requirements. Please call ABRACON for more information.



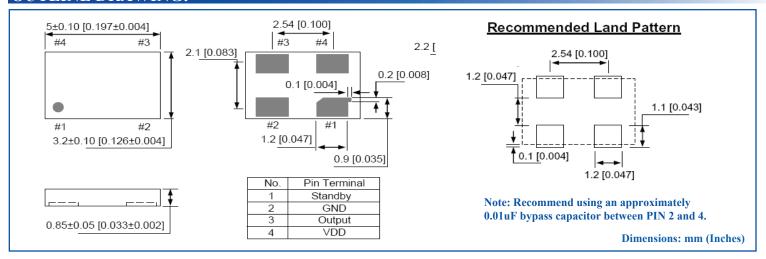
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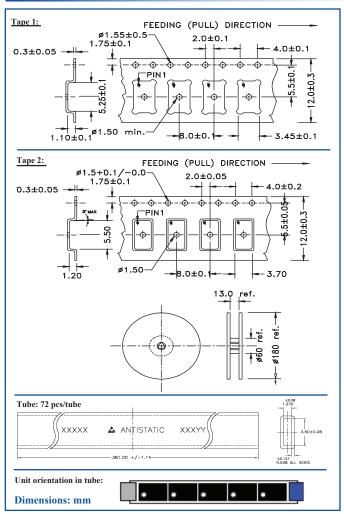


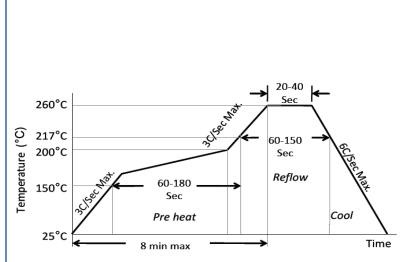
### OUTLINE DRAWING:



## **► TAPE & REEL:**

### **REFLOW PROFILE:**





Ramp-Up Rate (200°C to Peak Temp)	3°C/Sec Max.		
Preheat Time 150°C to 200°C	60-180 Sec		
Time maintained above 217°C	60-150 Sec		
Peak Temperature	255-260°C		
Time within 5°C of actual Peak	20-40 Sec		
Ramp-Down Rate	6°C/Sec Max.		
Time 25°C to Peak Temperature	8 min Max.		



Need a test socket for the ASFLM Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, **click here. P/N: AXS-5032-04-07** 

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