

MEMS CLOCK OSCILLATOR

ASDM



ASDM

RoHS/RoHS II Compliant

Life Size

2.5 x 2.0 x 0.85 mm

FEATURES:

- Low Power Consumption
- Exceptional Stability Over Temp. at -40°C to +85°C
- 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	
Supply Voltage (Vdd):		+1.8 ~ +3.3			V	See options
Supply Current (no load):	1.0 to 39.9999MHz	-----	7	15	mA	Vdd=3.3V No load RL=∞ T=25°C
	40.0 to 79.9999MHz	-----	8	15		
	80.0 to 124.9999MHz	-----	9	15		
	125.0 to 150MHz	-----	10	15		
Output Voltage:	V _{OH}	0.8*V _{dd}	-----	-----	V	15pF
	V _{OL}	-----	-----	0.2*V _{dd}		
Rise Time:	Tr	-----	1.3	3.0	ns	15pF; T=25°C 20%/80%*VDD
Fall Time:	Tf	-----	1.3	3.0		
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:		-----	-----	15	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:		-----	60	-----	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		

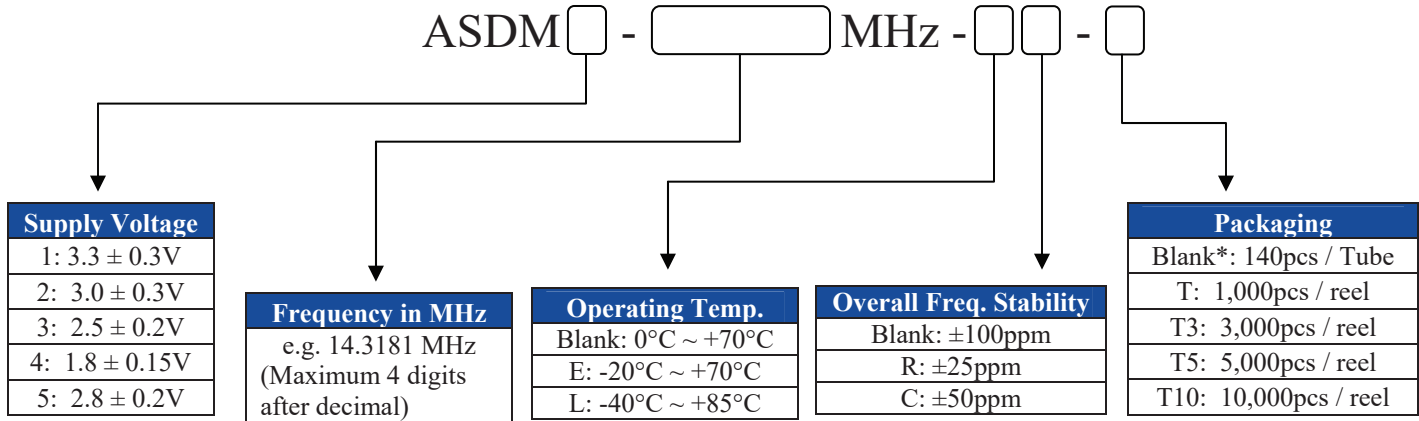
REVISED: 1.4.2021

ABRACON IS
ISO9001-2015
CERTIFIED



OPTIONS AND PART IDENTIFICATION:

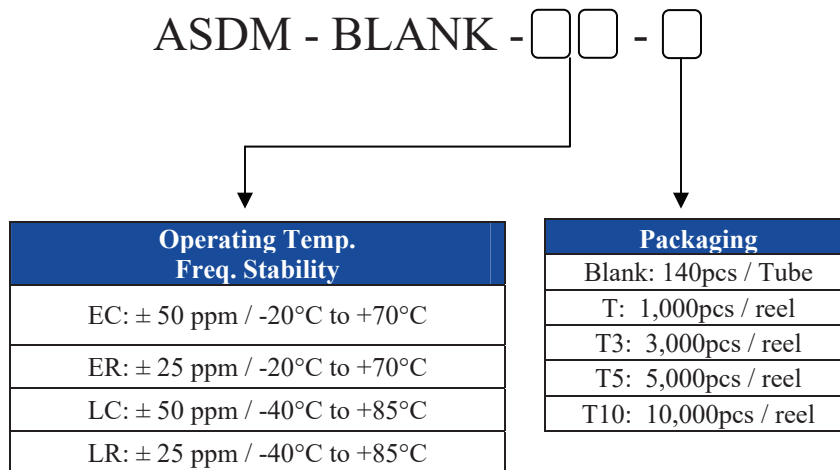
Programmed Orders (Quantity > 1,000pcs)



* 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:

Recommended Land Pattern

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

Dimension : mm (Inches)

No	Pin Terminal
1	Standby
2	GND
3	Output
4	VDD

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

REFLOW PROFILE:

FEEDING (PULL) DIRECTION →

Tube: 140 ncs/tube

Unit orientation in tube:

Dimension : Inches (mm)

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.

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