

LOW JITTER PIN CONFIGURABLE DUAL CMOS OUTPUT ULTRA MINIATURE PURE SILICON™ SMD CLOCK OSCILLATORS

ASDMDC



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Moisture Sensitivity Level – MSL 1



RoHS/RoHS II

2.5 x 2.0 x 0.85 mm

FEATURES:

- Two Simultaneous CMOS Outputs:
- Low RMS Phase Jitter: <1 ps (typ)
- High Stability: ± 25 , ± 50 ppm
- Wide Temperature Range
- High Supply Noise Rejection: -50dBc
- High Shock & Vibration Immunity
- High Reliability
- Supply Range of 2.25 to 3.6V
- Lead Free & RoHS Compliant

APPLICATIONS:

- Consumer Electronics
- Camera and Imaging Modules
- Home Automation
- Industrial and Power Conversion
- Mobile Communications, Internet and Sensor Devices
- Solid State, HardDrive, and Flash Drive Storage

[Click here for more details](#)

STANDARD SPECIFICATIONS: (unless specified, otherwise T=25°C, V_{DD}=3.3V)

Parameters	Minimum	Typical	Maximum	Units	Notes
Configurable frequency range	2.3		170	MHz	Commercial, Industrial temp range
	2.3		100		Automotive temp range
Operating Temperature	-20		+70	°C	See options
Storage Temperature	-55		+150	°C	
Overall Frequency Stability ^{*1}	-50		+50	ppm	See options
Supply Voltage (V _{dd})	+2.25		+3.6	V	
Startup Time			5	ms	
Enable Time			20	ns	
Disable Time			5	ns	
Tri-state Function (Standby/Disable)	"1" (V _{IH} ≥ 0.75*V _{dd}) or Open: Oscillation "0" (V _{IL} < 0.25*V _{dd}) : Hi Z			V	40kΩ pull-up resistor embedded
Aging	-5.0		+5.0	ppm	First year
Supply Current (I _{dd})		25	28	mA	CL=15pF, 25MHz
Output Logic Level	V _{OH}	0.9*V _{dd}		V	I=±6mA
	V _{OL}		0.1*V _{dd}		
Rise Time	Tr	1.1	2.0	ns	CL=15pF 20%/80%
Fall Time	Tf	1.4	2.0	ns	
Duty Cycle		45	55	%	
Period Jitter RMS (J _{PER})		3.0		ps	F01=F02= 25MHz
Integrated Phase Jitter (J _{PH})		0.30	2	ps	200kHz ~ 20MHz, @25MHz
		0.38	2		100kHz ~ 20MHz, @25MHz
		1.70	2		12kHz ~ 20MHz, @25MHz

*1. Frequency stability includes frequency variations due to initial tolerance, temp. and power supply voltage



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ABSOLUTE MAXIMUM RATINGS

Item	Minimum	Maximum	Unit	Condition
Supply Voltage	-0.3	+4.0	V	
Input Voltage	-0.3	$V_{dd}+0.3$	V	
Junction Temp.		+150	°C	
Storage Temp.	-55	+150	°C	
Soldering Temp.		+260	°C	40sec max
ESD			V	
HBM		4,000		
MM		400		
CDM		1,500		

PART IDENTIFICATION:

ASDMDC - [] - [] - [] - []

Frequency Combination (See table below)
1: Cfg. 1
2: Cfg. 2

Operating Temp.
Blank: -20°C ~ +70°C
L: -40°C ~ +85°C
X: -40°C ~ +105°C
Z: -55°C ~ +125°C

Overall Freq. Stability
Blank: ±50ppm
R: ±25 ppm

Packaging
Blank**: Tube (140pcs / Tube)
T: Tape & Reel (1kpcs / reel)
T3: Tape & Reel (3kpcs / reel)
T5: Tape & Reel (5kpcs / reel)
T10: Tape & Reel (10kpcs / reel)

** 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.

Ordering Information	CLK1 (MHz)	CLK2 (MHz)
Configuration 1	127.000	127.0000
Configuration 2	25.000	125.0000
Custom Configuration	Contact Abracon for customized configurations	



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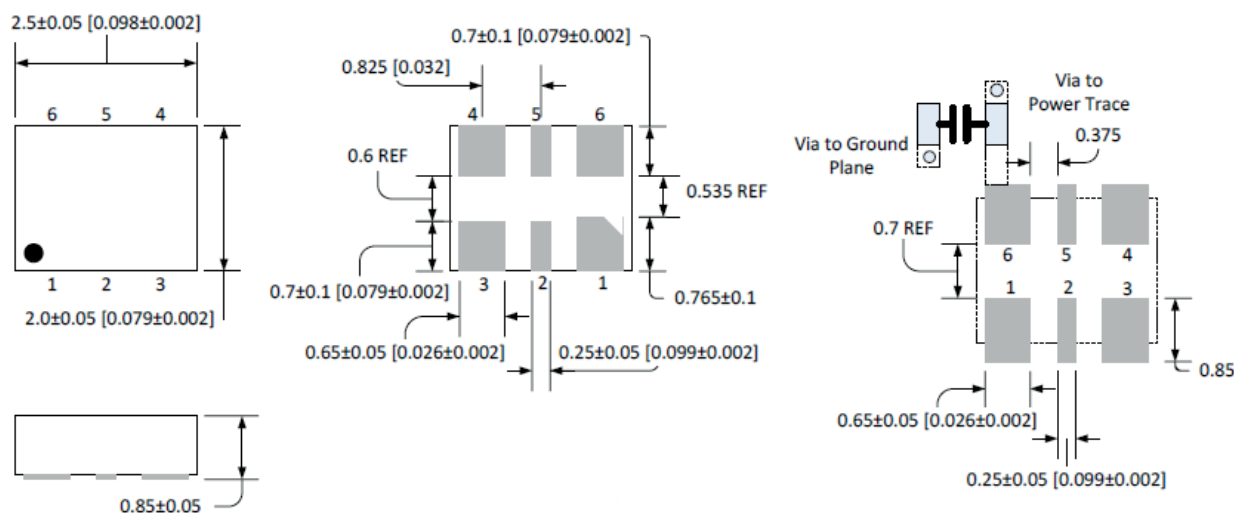
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2.5 x 2.0 x 0.85 mm

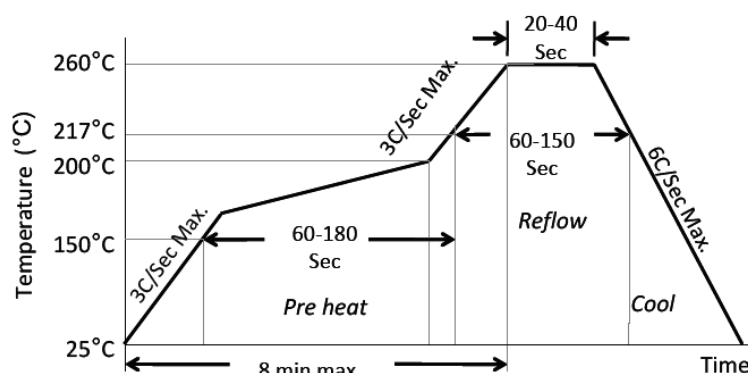
OUTLINE DIMENSIONS:



Pin No.	Pin Name	Description
1	Enable	Enables outputs when high and disables (tri-state) them when low
2	NC	Leave unconnected or grounded
3	GND	Ground
4	CLK0	CMOS output 1
5	CLK1	CMOS output 2
6	VDD	Power Supply

Dimensions: mm (inches)

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.

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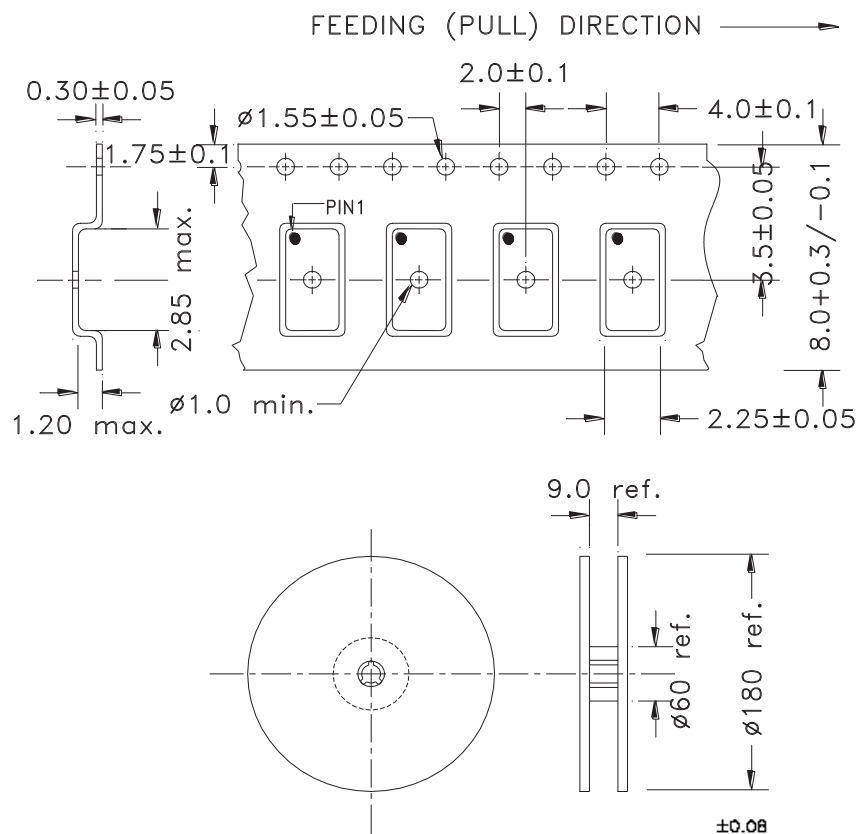
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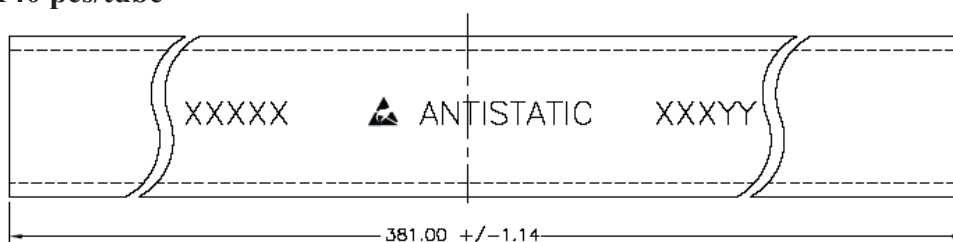
2.5 x 2.0 x 0.85 mm

TAPE & REEL:

T= 1,000pcs/reel (D=180mm)
T3= 3,000pcs/reel (D=180mm)
T5= 5,000pcs/reel (D=330mm)
T10= 10,000pcs/reel (D=330mm)



Tube: 140 pcs/tube



Unit orientation in tube:



Dimensions: mm

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