



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# HCMOS SMD Crystal Oscillator



2.5 X 2.0 X 1.0 mm

ASD SERIES



ESD Sensitive



RoHS/RoHS II compliant

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

For Vdd=3.3V & 2.5V and custom frequencies between 8.00MHz & 200.000MHz, or carrier frequency > 60.0MHz, please consider Abracon's [ASG2-C series](#) of XO and VCXO's

## FEATURES:

- Low height 1.0mm max
- Low current consumption
- Tri-state function
- Suitable for RoHS compliant reflow
- Tight stability option
- Seam sealed package assures high reliability

## APPLICATIONS:

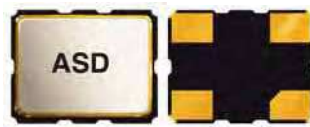
- CCD clock for VTR Camera
- Equipment connected to PC or PC cards
- Thin equipment

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes	
Frequency Range	0.750		60	MHz		
Operating Temperature	-20		+70	°C	STD temp. Option code E (See options)	
Storage Temperature	-55		+100	°C		
Overall Frequency Stability	-100		+100	ppm	See options	
Supply Voltage (Vdd)	+3.135	+3.3	+3.465	V	ASD (Standard)	
	+2.85	+3.0	+3.15		ASD1	
	+2.375	+2.5	+2.625		ASD2	
	+1.71	+1.8	+1.89		ASD3	
	+0.95	+1.0	+1.05		ASD6	
Input Current (Idd)	ASD (3.3V)		2.5	mA	0.750~15.999 MHz	
			4		7	16.000~39.999 MHz
			9		13	40.000~60.000 MHz
	ASD1 (3.0V)		2.5	4	mA	0.750~15.999 MHz
			3.5	6		16.000~39.999 MHz
			8	12		40.000~60.000 MHz
	ASD2 (2.5V)		2	3.5	mA	0.750~15.999 MHz
			3	5		16.000~39.999 MHz
			7	10		40.000~60.000 MHz
	ASD3 (1.8V)		1	2.5	mA	0.750~15.999 MHz
			2	4		16.000~39.999 MHz
			4	7		40.000~60.000 MHz
ASD6 (1.0V)		1.0	2.5	mA	25.000 MHz	
Symmetry @ 1/2Vdd	40		60	%	STD (See option)	
Output Load:			15	pF	CMOS	
Output Voltage (VOH):	0.9* Vdd			V		
Output Voltage (VOL):			0.1* Vdd	V		



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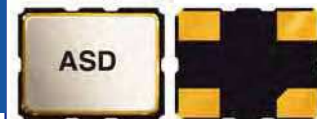
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Parameters		Minimum	Typical	Maximum	Units	Notes
Rise and Fall Time (Tr/Tf):	ASD (3.3V)		3	7	ns	0.750~15.999 MHz
			2.5	6		16.000~39.999 MHz
			2	4		40.000~60.000 MHz
	ASD1 (3.0V)		3	7	ns	0.750~15.999 MHz
			2.5	6		16.000~39.999 MHz
			2	4		40.000~60.000 MHz
	ASD2 (2.5V)		4	8	ns	0.750~15.999 MHz
			3	7		16.000~39.999 MHz
			2.5	5		40.000~60.000 MHz
	ASD3 (1.8V)		5	10	ns	0.750~15.999 MHz
			3.5	8		16.000~39.999 MHz
			3	6		40.000~60.000 MHz
ASD6 (1.0V)		1.9	6.0	ns	25.000 MHz	
Start-up Time:	ASD (3.3V)		6	10	ms	0.750~15.999 MHz
			6	10		16.000~39.999 MHz
			5	10		40.000~60.000 MHz
	ASD1 (3.0V)		6	10	ms	0.750~15.999 MHz
			6	10		16.000~39.999 MHz
			5	10		40.000~60.000 MHz
	ASD2 (2.5V)		6	10	ms	0.750~15.999 MHz
			6	10		16.000~39.999 MHz
			5	10		40.000~60.000 MHz
	ASD3 (1.8V)		6	10	ms	0.750~15.999 MHz
			6	10		16.000~39.999 MHz
			5	10		40.000~60.000 MHz
ASD6 (1.0V)		2.0	10	ms	25.000 MHz	
Tri-state function (Stand-by) :		"1" (VIH≥0.7*Vdd) or Open: Oscillation; "0" (VIH<0.3*Vdd) : No oscillation/Hi Z				
Phase Jitter (12kHz to 20MHz)	ASD (3.3V)		0.4	1.0	ps	0.750~15.999 MHz
			0.4	1.0		16.000~39.999 MHz
			0.3	1.0		40.000~60.000 MHz
	ASD1 (3.0V)		0.4	1.0	ps	0.750~15.999 MHz
			0.4	1.0		16.000~39.999 MHz
			0.3	1.0		40.000~60.000 MHz
	ASD2 (2.5V)		0.5	1.0	ps	0.750~15.999 MHz
			0.5	1.0		16.000~39.999 MHz
			0.5	1.0		40.000~60.000 MHz
	ASD3 (1.8V)		0.5	1.0	ps	0.750~15.999 MHz
			0.5	1.0		16.000~39.999 MHz
			0.5	1.0		40.000~60.000 MHz
ASD6 (1.0V)		0.3	1.0	ps	25.000 MHz	
Period Jitter RMS	ASD (3.3V)		3.0	5.0	ps	0.750~15.999 MHz
			3.0	5.0		16.000~39.999 MHz
			3.0	5.0		40.000~60.000 MHz
	ASD1 (3.0V)		3.0	5.0	ps	0.750~15.999 MHz
			3.0	5.0		16.000~39.999 MHz
			3.0	5.0		40.000~60.000 MHz
	ASD2 (2.5V)		3.0	5.0	ps	0.750~15.999 MHz
			3.0	5.0		16.000~39.999 MHz
			3.0	5.0		40.000~60.000 MHz
	ASD3 (1.8V)		3.0	5.0	ps	0.750~15.999 MHz
			3.0	5.0		16.000~39.999 MHz
			3.0	5.0		40.000~60.000 MHz
ASD6 (1.0V)		4.8	6.0	ps	25.000 MHz	
Aging at 25°C/year		-5		+5	ppm	
Disable Current:				20	µA	



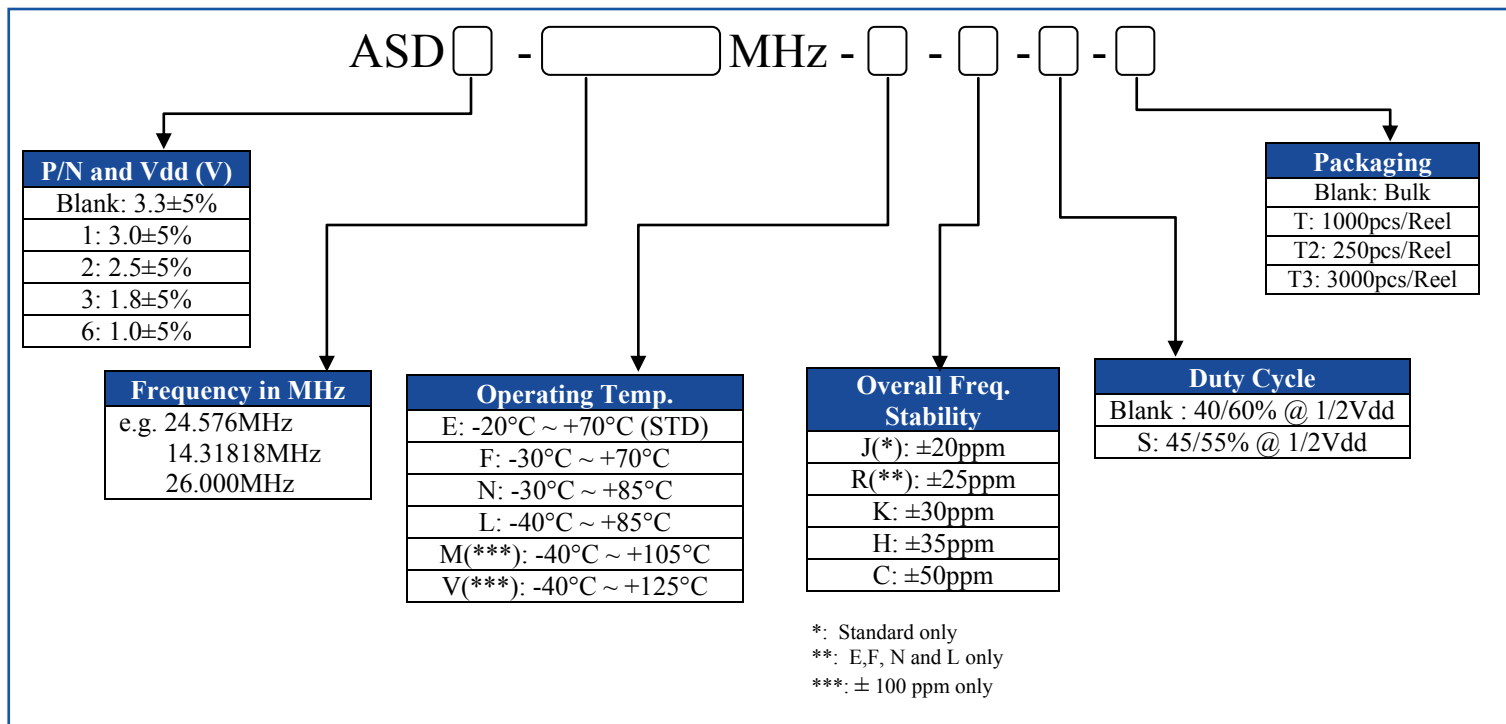
# HCMOS SMD Crystal Oscillator

ASD SERIES

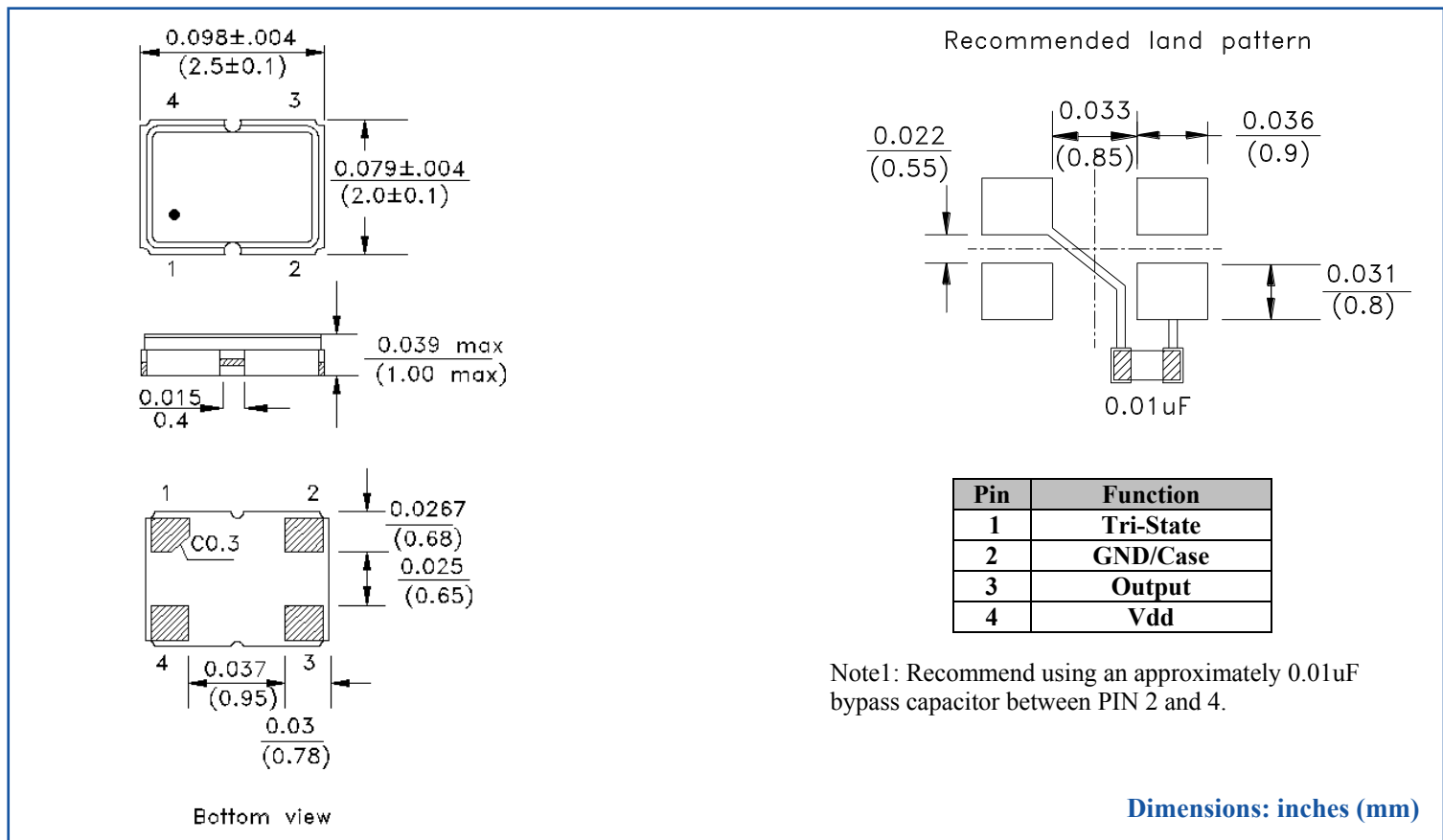


2.5 X 2.0 X 1.0 mm

## OPTIONS AND PART IDENTIFICATION:



## OUTLINE DRAWING:



# HCMOS SMD Crystal Oscillator



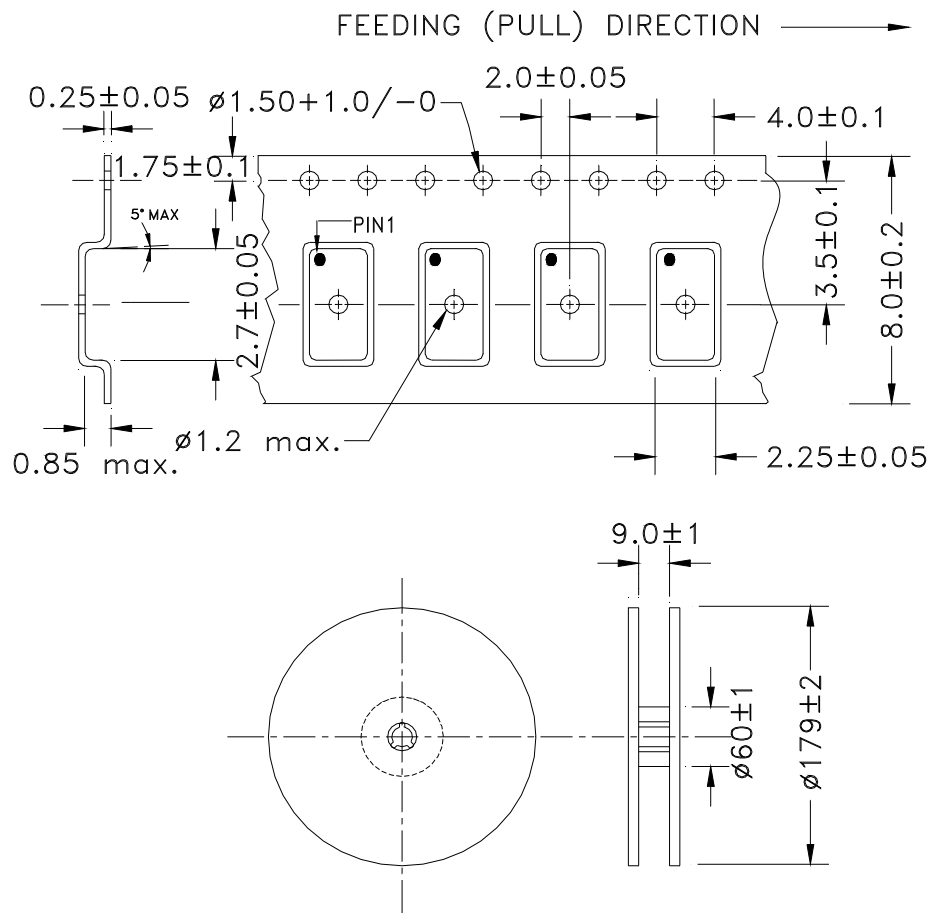
ASD

2.5 X 2.0 X 1.0 mm

ASD SERIES

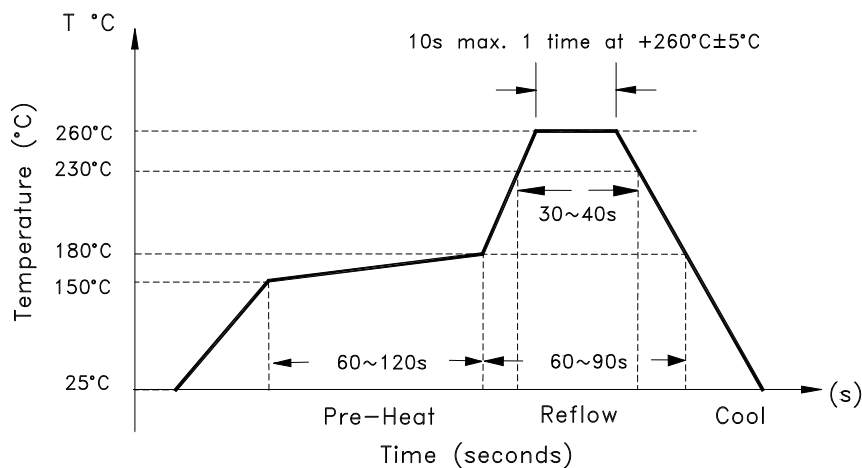
## TAPE & REEL:

T: 1000pcs/reel  
T2: 250pcs/reel  
T3: 3000pcs/reel



Dimensions: mm

## REFLOW PROFILE:



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