

# 3.3Vdc HCMOS/TTL COMPATIBLE SMD Crystal Clock Oscillator



7.0 x 5.08 x 1.8 mm

ASV SERIES



RoHS  
Compliant

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

## FEATURES:

- HCMOS/Compatible, 3.3Vdc, 2.5Vdc, & 1.8Vdc options
- Suitable for RoHS reflow
- Seam sealed package assures high reliability
- High output drive capability (up to 50pF)

## APPLICATIONS:

- Clock signaling for  $\mu$ Processors, PC Motherboards & Graphic Cards

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	0.312		200	MHz	
Operating Temperature	-10		+70	°C	See options
Storage Temperature	-55		+125	°C	
Overall Frequency Stability	-100		+100	ppm	See options
Supply Voltage (Vdd)	+2.97	3.3	+3.63	V	See options
Supply Current (Idd)		2.0	10.0	mA	0.312 ~ 14.9 MHz
		3.6	15.0		15.0 ~ 29.9 MHz
		5.6	20.0		30.0 ~ 39.9 MHz
		7.2	25.0		40.0 ~ 49.9 MHz
		13.3	30.0		50.0 ~ 59.9 MHz
		19.0	35.0		60.0 ~ 79.9MHz
		20.2	45.0		80.0 ~ 99.9 MHz
		23.7	50.0		100.0 ~ 125.0MHz
		27.2	65.0		125.1 ~ 165 MHz
Symmetry @ 1/2Vdd	40	50	60	%	See options
Rise and Fall Time (Tr/Tf)		3.0	5.0	ns	0.312 ~ 14.9 MHz
		2.8	4.0		15.0 ~ 29.9 MHz
		2.6	4.0		30.0 ~ 39.9 MHz
		2.4	4.0		40.0 ~ 49.9 MHz
		2.2	4.0		50.0 ~ 59.9 MHz
		2.2	4.0		60.0 ~ 79.9MHz
		2.0	4.0		80.0 ~ 99.9 MHz
		1.8	4.0		100.0 ~ 125.0MHz
		1.5	4.0		125.1 ~ 165 MHz
Output Load (10TTL)		15		pF	See options
Output Voltage	V <sub>OH</sub>	0.9 x Vdd		V	
	V <sub>OL</sub>		0.4	V	

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Continued:-

Parameters	Minimum	Typical	Maximum	Units	Notes
Start-up Time		0.4	4.0	ms	0.312 ~ 14.9 MHz
		0.4	4.0		15.0 ~ 29.9 MHz
		2.0	4.0		30.0 ~ 39.9 MHz
		1.5	4.0		40.0 ~ 49.9 MHz
		2.9	5.0		50.0 ~ 59.9 MHz
		1.5	5.0		60.0 ~ 79.9MHz
		1.3	5.0		80.0 ~ 99.9 MHz
		1.8	5.0		100.0 ~ 125.0MHz
		2.7	5.0		125.1 ~ 165 MHz
Tri-state function	"1" (VIH≥0.7*Vdd) or Open: Oscillation "0" (VIL<0.3*Vdd) : Hi Z				See options
Period Jitter One Sigma (RMS):		2.5		ps	0.312 ~ 14.9 MHz
		3.2			15.0 ~ 29.9 MHz
		3.2			30.0 ~ 39.9 MHz
		3.2			40.0 ~ 49.9 MHz
		3.2			50.0 ~ 59.9 MHz
		3.2			60.0 ~ 79.9MHz
		3.0			80.0 ~ 99.9 MHz
		2.9			100.0 ~ 125.0MHz
		2.9			125.1 ~ 165 MHz
Aging at 25°C (first year)	-5		+5	ppm	
Disable Current	with Power Down		10	uA	Option A
	without Power down		200		
Enable Time	with Power Down	3.5	5	ms	Option A
	without Power down		100	ns	
Disable Time	with Power Down		100		ns
	without Power down		100		

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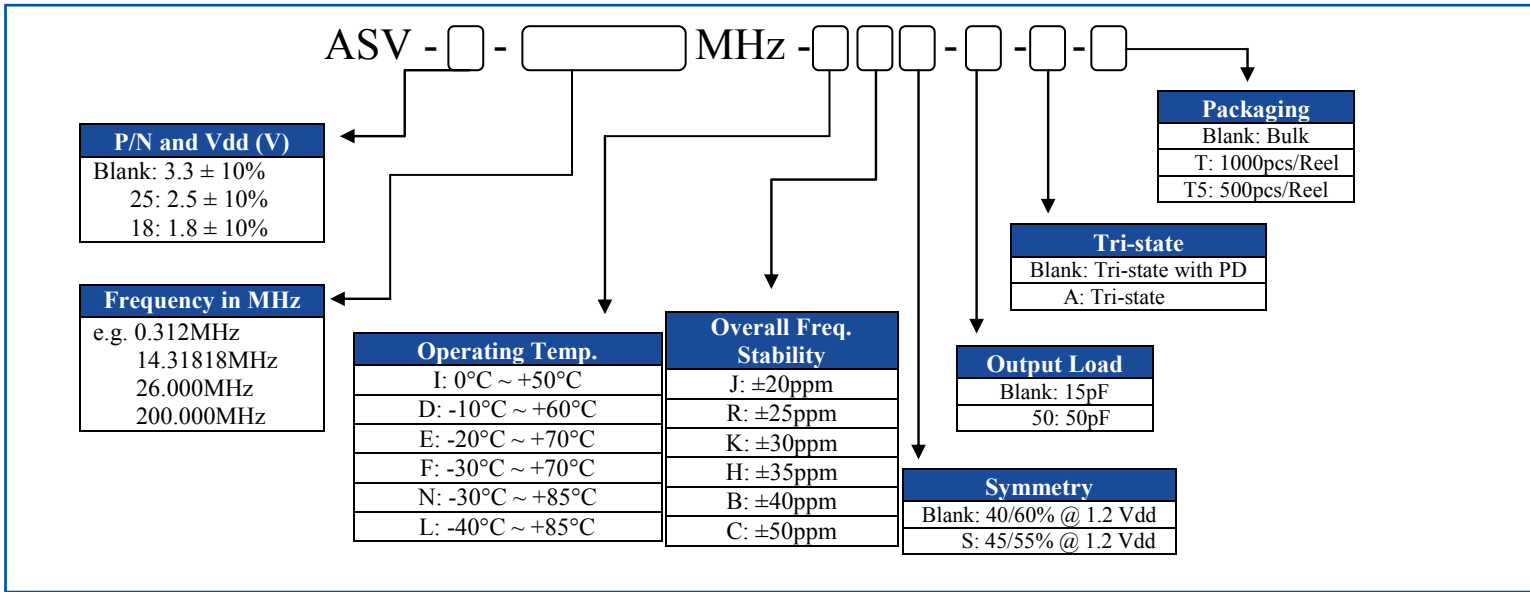
7.0 x 5.08 x 1.8 mm

**ASV SERIES**

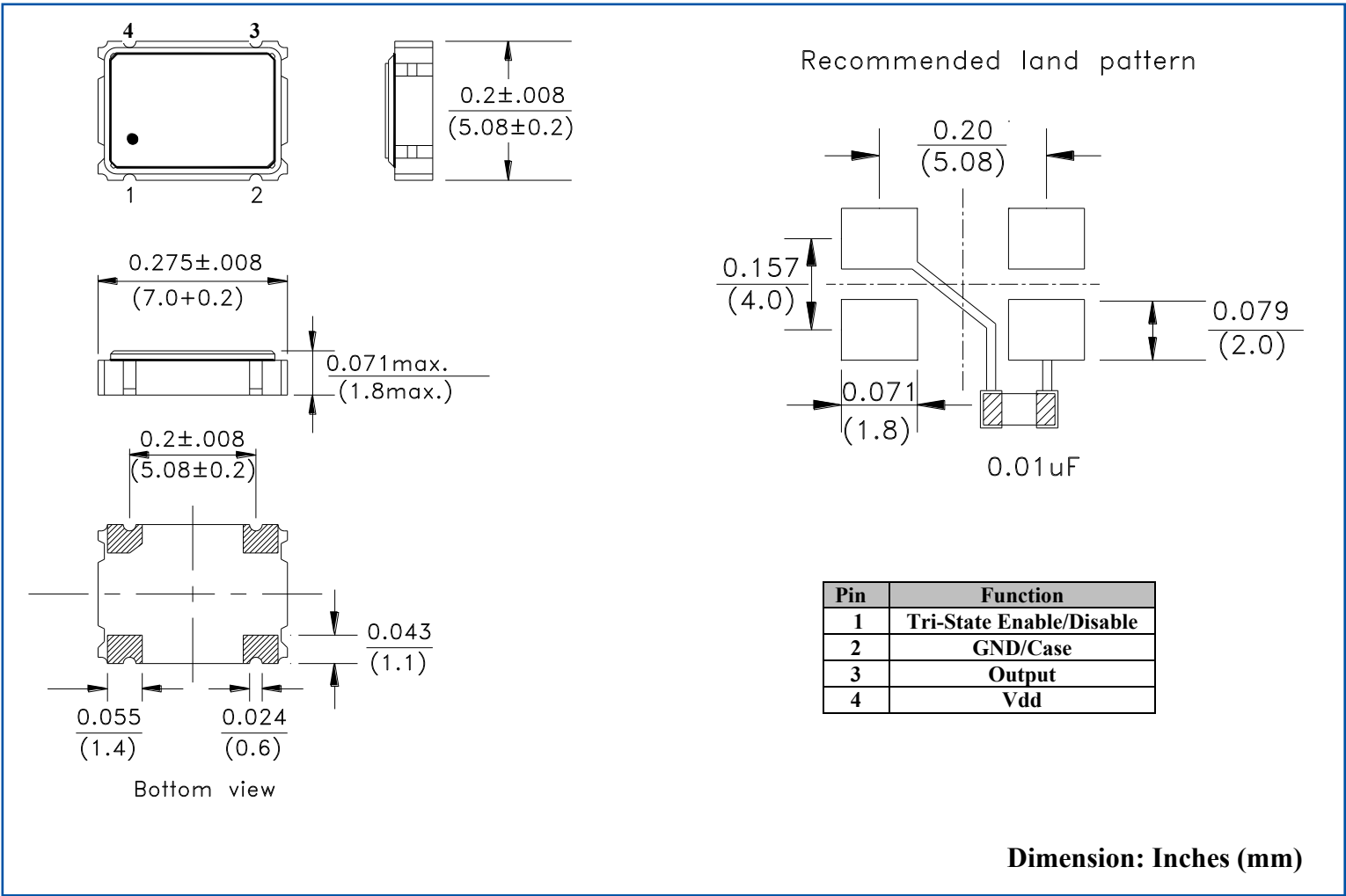


**RoHS  
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## OPTIONS & PART IDENTIFICATION: (Left blank if standard)



## OUTLINE DRAWING:



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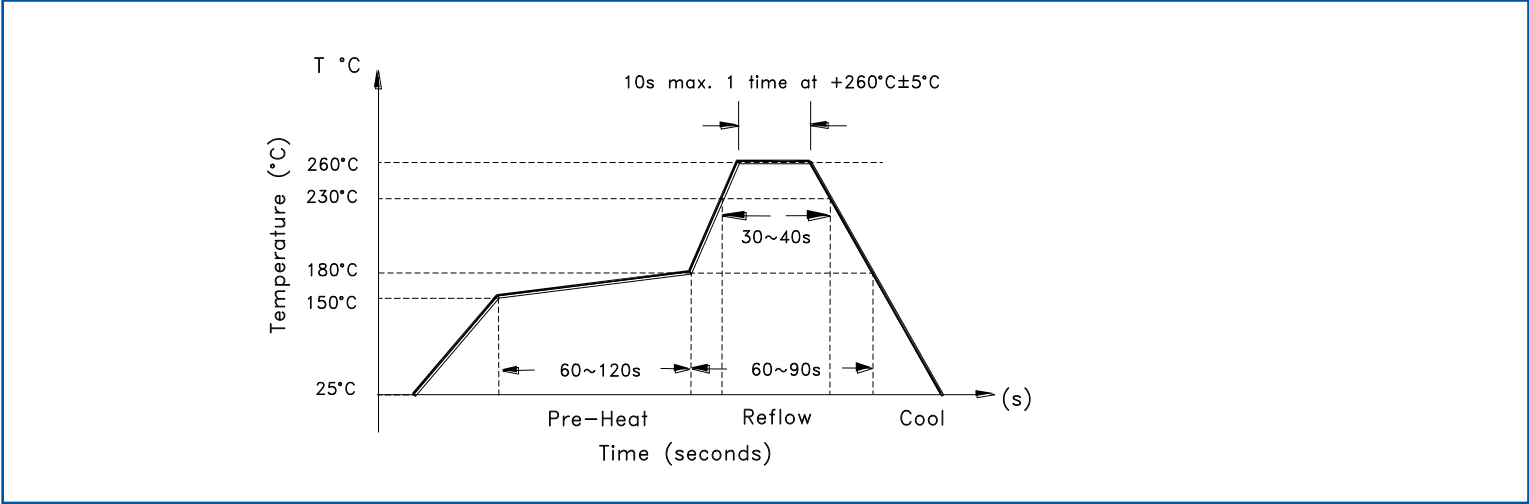


7.0 x 5.08 x 1.8 mm

**ASV SERIES**

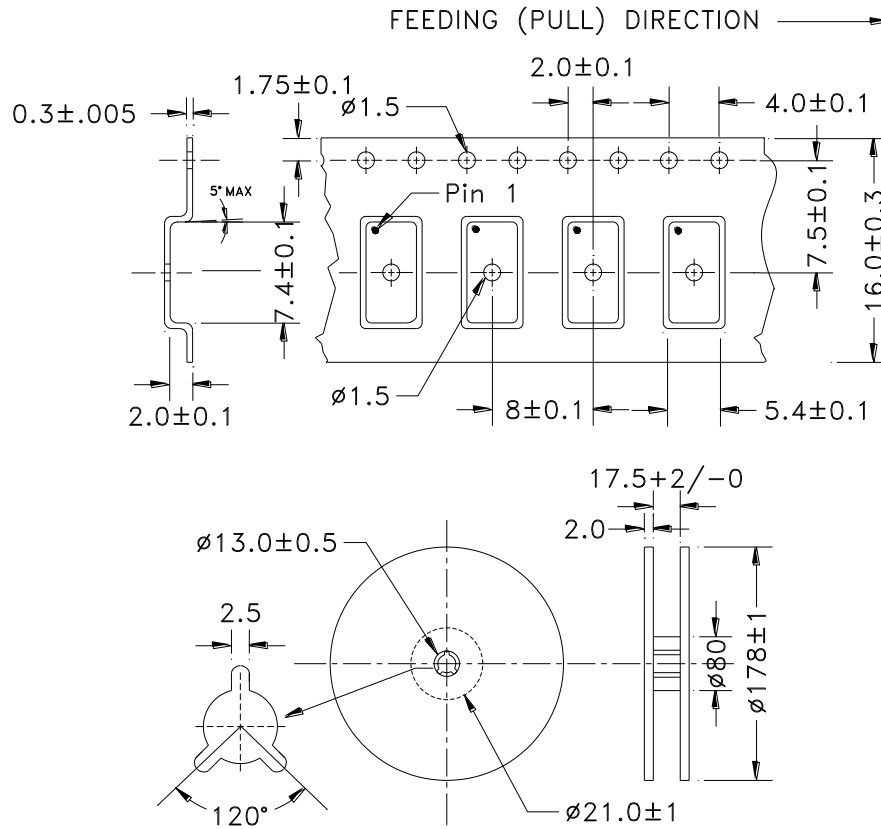
**Pb** **RoHS**  
Compliant

## REFLOW PROFILE:



## TAPE & REEL:

**T: 1000pcs/reel**  
**T5: 500pcs/reel**



**Dimension: mm**

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