

3.3Vdc HCMOS SMD Crystal Clock Oscillator



7.0 x 5.08 x 1.8 mm

ASV 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

FEATURES:

- HCMOS, 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 μ 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			15	pF	See options
Output Voltage	V _{OH}	0.9 x Vdd		V	
	V _{OL}		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" ($V_{IH} \geq 0.7 \cdot V_{DD}$) or Open: Oscillation "0" ($V_{IL} < 0.3 \cdot V_{DD}$): Hi Z				
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			10	uA	
Enable Time		3.5	5	ms	
Disable Time			100	ns	

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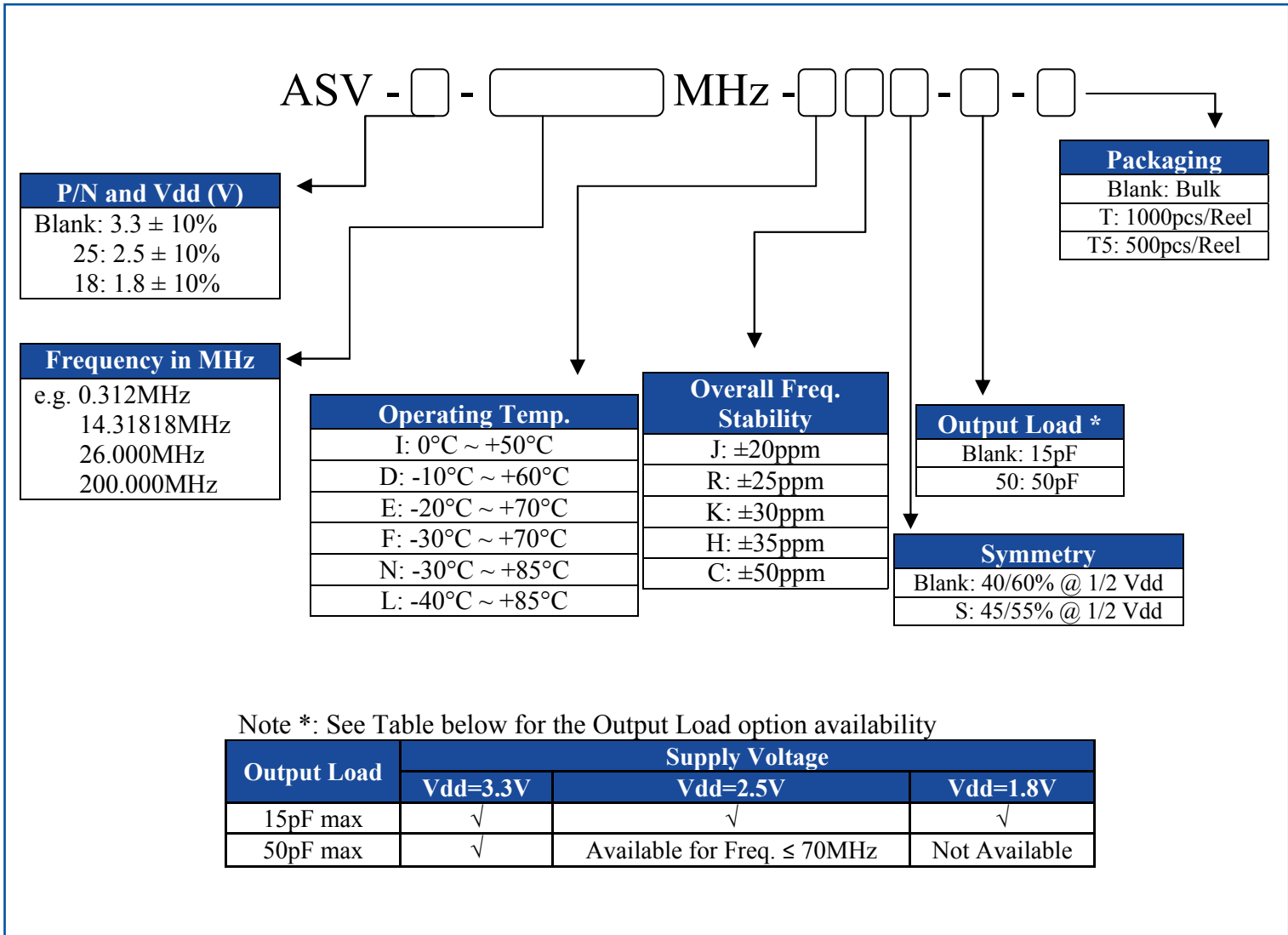
7.0 x 5.08 x 1.8 mm

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



Note *: See Table below for the Output Load option availability

Output Load	Supply Voltage		
	Vdd=3.3V	Vdd=2.5V	Vdd=1.8V
15pF max	√	√	√
50pF max	√	Available for Freq. ≤ 70MHz	Not Available

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OUTLINE DIMENSION:

Top view labels: 1, 2, 3, 4

Side view dimensions: $0.2 \pm .008$ (5.08 ± 0.2)

Bottom view dimensions: $0.275 \pm .008$ (7.0 ± 0.2), 0.071 max. (1.8 max.), $0.2 \pm .008$ (5.08 ± 0.2), 0.043 (1.1), 0.055 (1.4), 0.024 (0.6)

Recommended land pattern dimensions: 0.20 (5.08), 0.157 (4.0), 0.071 (1.8), 0.079 (2.0), $0.01 \mu\text{F}$

Pin	Function
1	Tri-State Enable/Disable
2	GND/Case
3	Output
4	Vdd

Dimension: Inches (mm)

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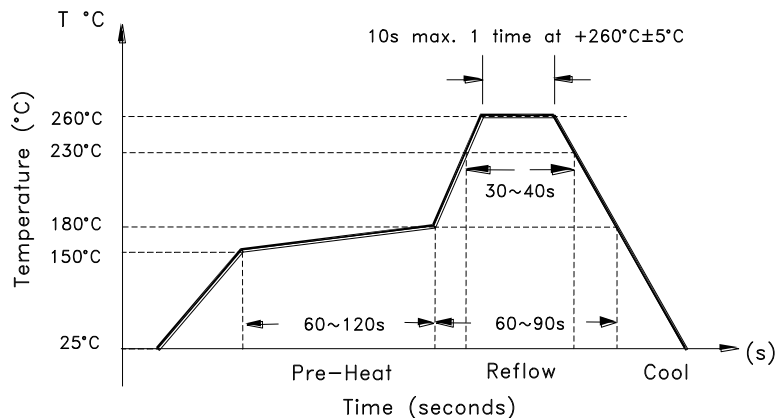
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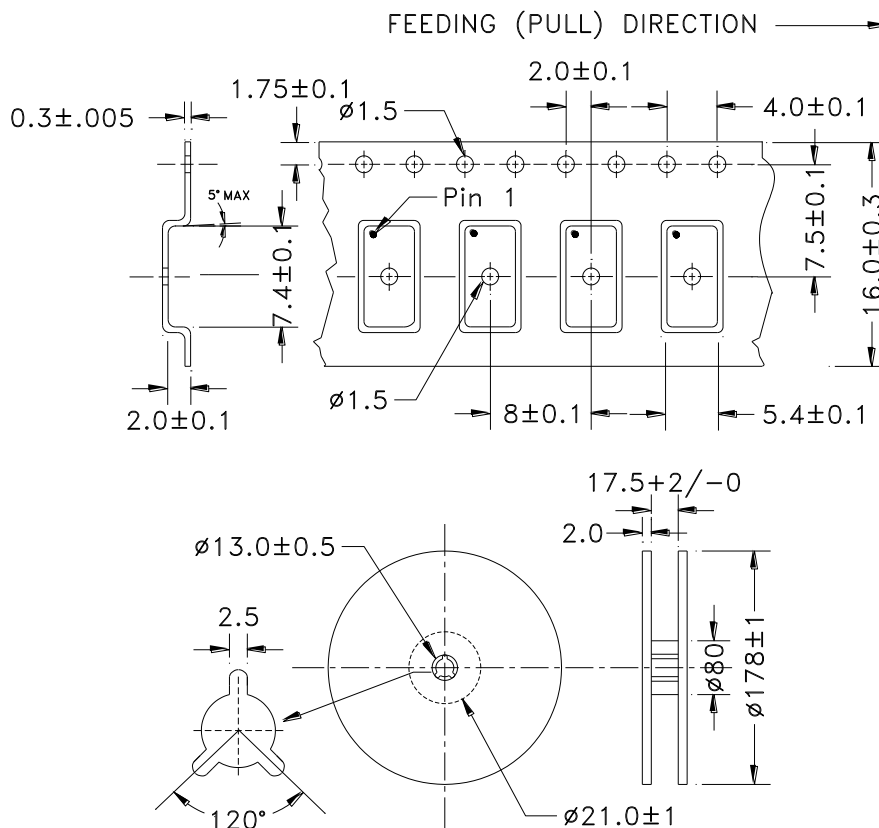
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REFLOW PROFILE:



TAPE & REEL:

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



Dimension: mm

ATTENTION: Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

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