



**THE DATASHEET OF  
ASV-133.333MHZ-EC-T**



# 3.3Vdc HCMOS SMD Crystal Clock Oscillator



7.0 x 5.08 x 1.8 mm

ASV SERIES

ESD Sensitive

Pb

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  $\mu$ 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			15	pF	See options
Output Voltage	V <sub>OH</sub>	0.9 x Vdd		V	
	V <sub>OL</sub>		0.4	V	

# 3.3Vdc HCMOS SMD Crystal Clock Oscillator



7.0 x 5.08 x 1.8 mm

ASV SERIES



RoHS/RoHS II compliant

(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	

# 3.3Vdc HCMOS SMD Crystal Clock Oscillator



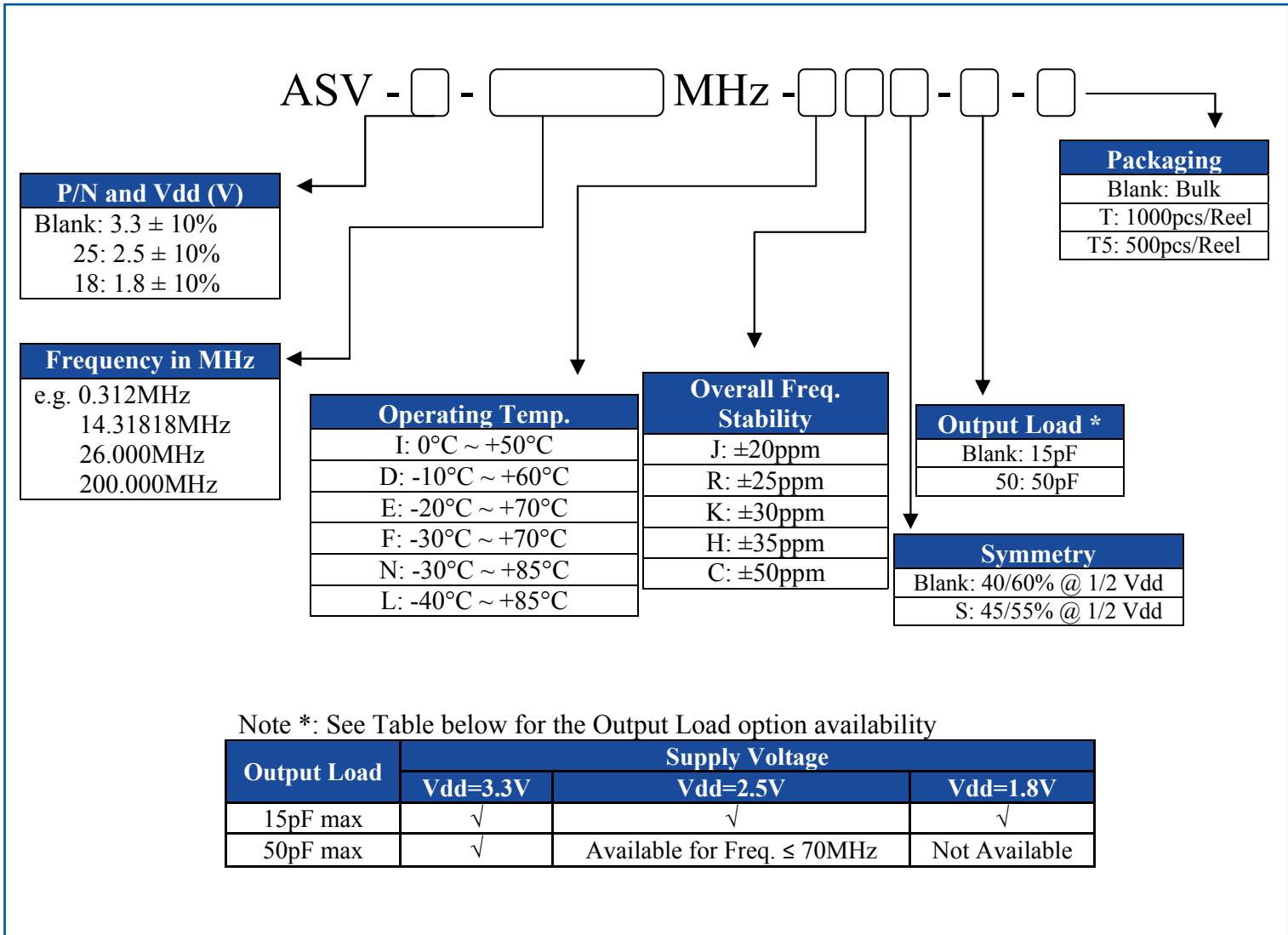
7.0 x 5.08 x 1.8 mm

**ASV SERIES**

**ESD Sensitive**

**RoHS/RoHS II compliant**

➤ **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

# 3.3Vdc HCMOS SMD Crystal Clock Oscillator



7.0 x 5.08 x 1.8 mm

ASV SERIES

ESD Sensitive

RoHS/RoHS II compliant

## OUTLINE DIMENSION:

Top view shows pins 1, 2, 3, and 4. Dimensions include a width of  $0.275 \pm .008$  (7.0+0.2) and a height of  $0.2 \pm .008$  (5.08±0.2).

Side view shows a thickness of  $0.071 \text{ max.}$  (1.8max.).

Bottom view shows dimensions of  $0.055$  (1.4) and  $0.024$  (0.6), with a total width of  $0.2 \pm .008$  (5.08±0.2) and a height of  $0.043$  (1.1).

Recommended land pattern shows a square pad with side length  $0.20$  (5.08), a distance of  $0.157$  (4.0) from the pad center to the pin, and a distance of  $0.071$  (1.8) from the pad edge to the pin. A  $0.01 \mu\text{F}$  capacitor is shown connected to the output pin.

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

**Dimension: Inches (mm)**

# 3.3Vdc HCMOS SMD Crystal Clock Oscillator



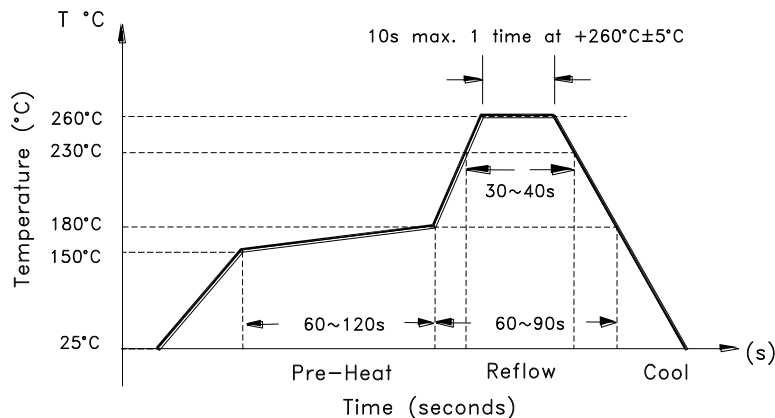
7.0 x 5.08 x 1.8 mm

ASV SERIES

ESD Sensitive

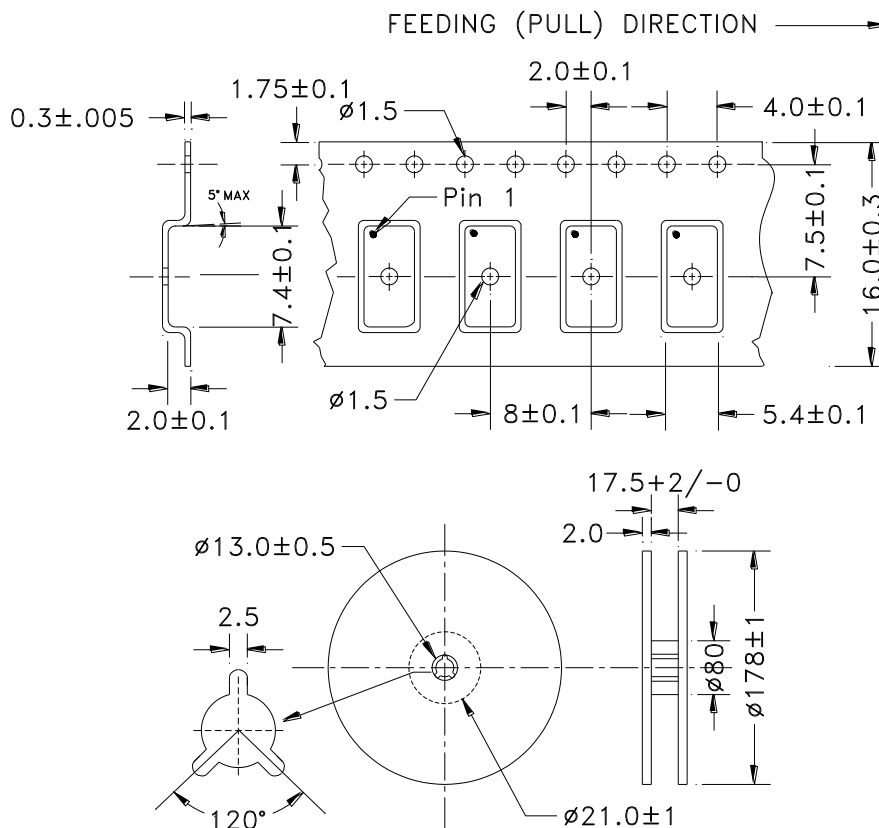
RoHS/RoHS II compliant

## 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.

ABRACON IS  
ISO9001:2008  
CERTIFIED



Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale  
30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)

Revised: 09.02.14

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View ASV-133.333MHZ-EC-T on WIN SOURCE](#)
- ⊖ [Abracon LLC Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management