



ASAAIG



2.0 x 1.6 x 0.8mm  
 RoHS/RoHS II Compliant  
 MSL = N/A: Not Applicable

## Features

- Ultra Miniature size and low profile
- AEC-Q200 qualified
- Seam sealed ceramic package assures high precision and reliability.
- Extended temperature -40°C to +105°C for automotive/industrial applications
- Suitable for RoHS reflow profile

## Applications

- Automotive electronics
- Industrial electronics

## Electrical Specifications

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range		4.0		50	MHz	
Operating Temperature		-40		+105	°C	See options
Storage Temperature		-40		+105	°C	
Overall Frequency Stability*		-100		+100	ppm	See options
Supply Voltage (Vdd)		2.97	3.3	3.66	V	Standard
		2.25	2.5	2.75		Option "1"
		1.62	1.8	1.98		Option "2"
Supply Current (I <sub>dd</sub> ) into 15pF Load	Vdd = 3.3 V		2.0	5.0	mA	4MHz ≤ F ≤ 20 MHz
			4.0	10.0		20 MHz < F ≤ 50 MHz
	Vdd = 2.5 V		2.0	5.0		4MHz ≤ F ≤ 20 MHz
			3.0	10.0		20 MHz < F ≤ 50 MHz
	Vdd = 1.8 V		1.5	5.0		4MHz ≤ F ≤ 20 MHz
			2.5	5.0		20 MHz < F ≤ 50 MHz
Output Load				15	pF	
Output Voltage	V <sub>OH</sub>	0.9*Vdd			V	CMOS
	V <sub>OL</sub>			0.1*Vdd		CMOS
Tri-state function		"1" (VIH ≥ 0.7*Vdd) or Open : Oscillation "0" (VIH < 0.3*Vdd) : Hi Z				
Aging		-3.0		+3.0	ppm	@+25°C First year
Symmetry @1/2Vdd		40	50	60	%	Standard
		45	50	55		Option S
Start-up Time				10.0	ms	
Rise/Fall Time (Tr/Tf)				10.0	ns	

\*Overall frequency stability includes initial frequency tolerance @+25°C and stability over the operating temperature.

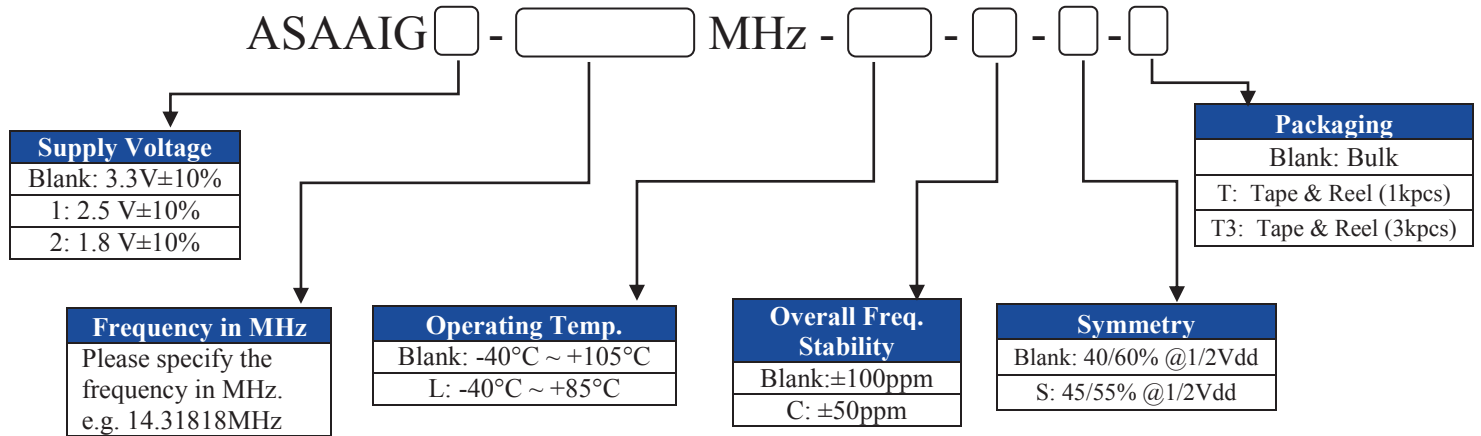


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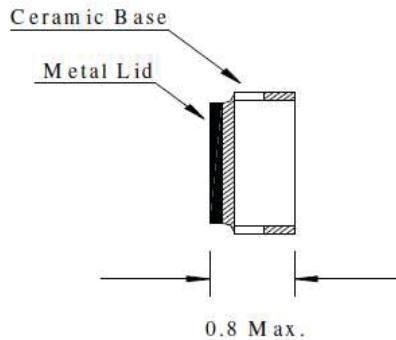
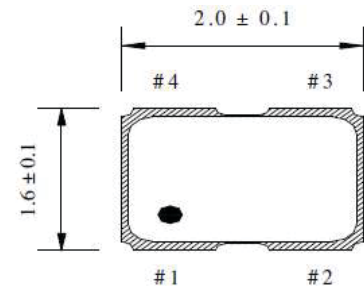


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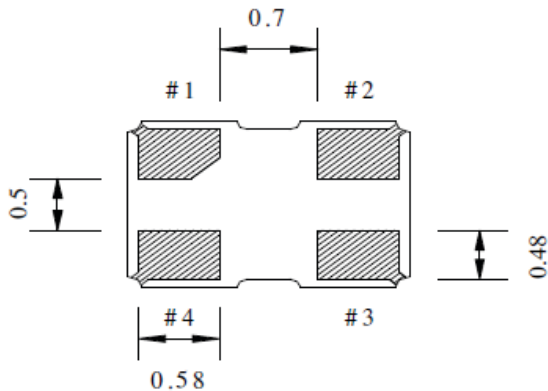
## Part Identification



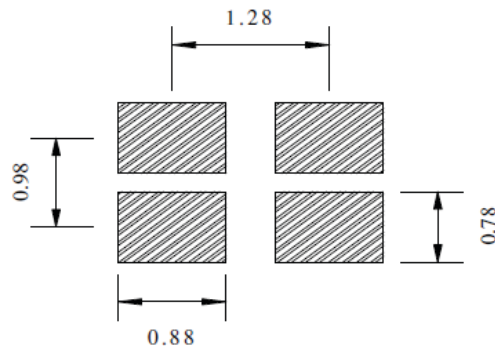
## Outline Dimensions



PIN #	Name
1	Tri-state
2	GND
3	Output
4	Vdd



### Recommend Land Pattern



Dimensions: mm



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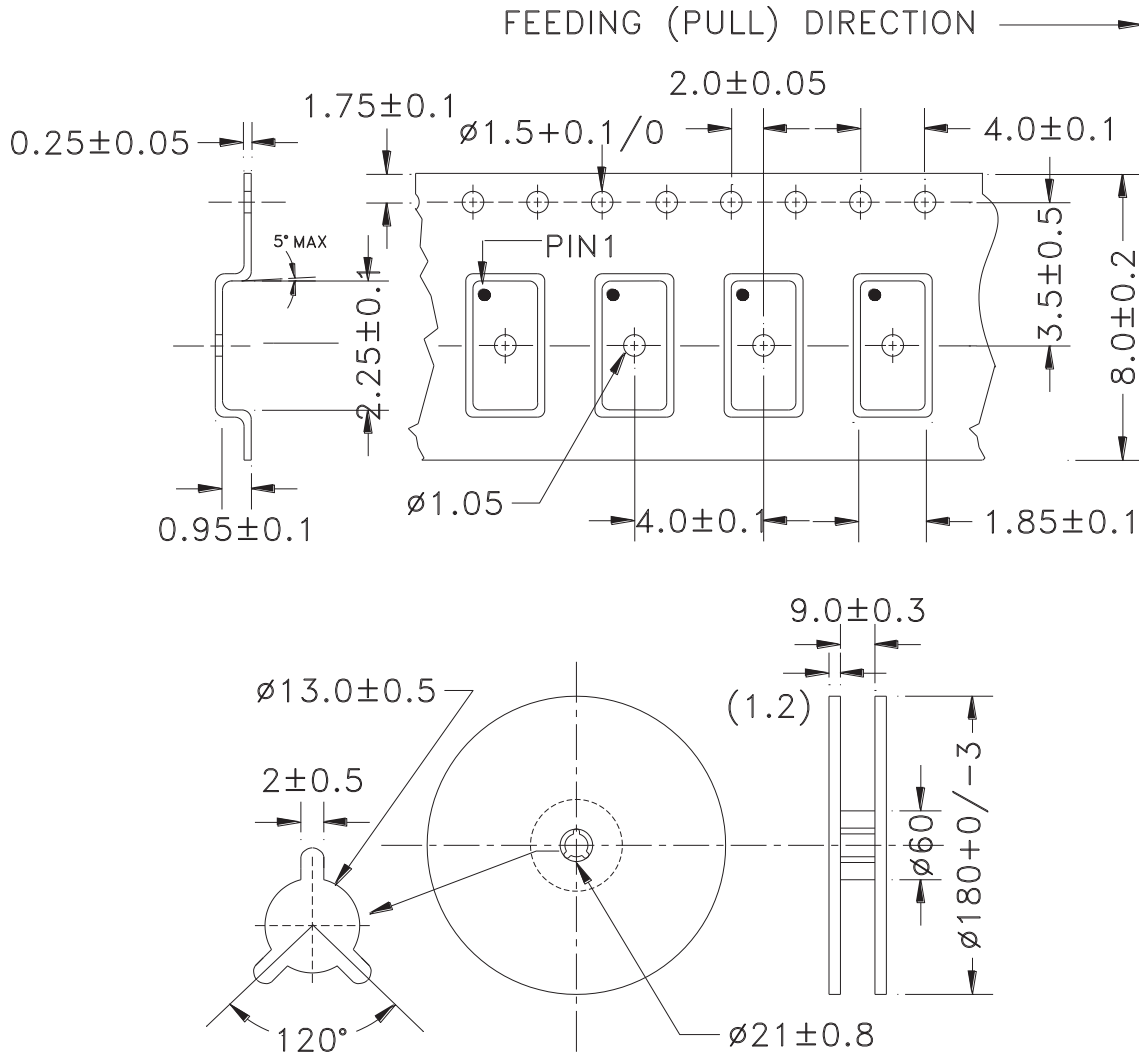


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**Packaging**

T= Tape and reel (1,000pcs/reel)

T3= Tape and reel (3,000pcs/reel)



Dimensions: mm

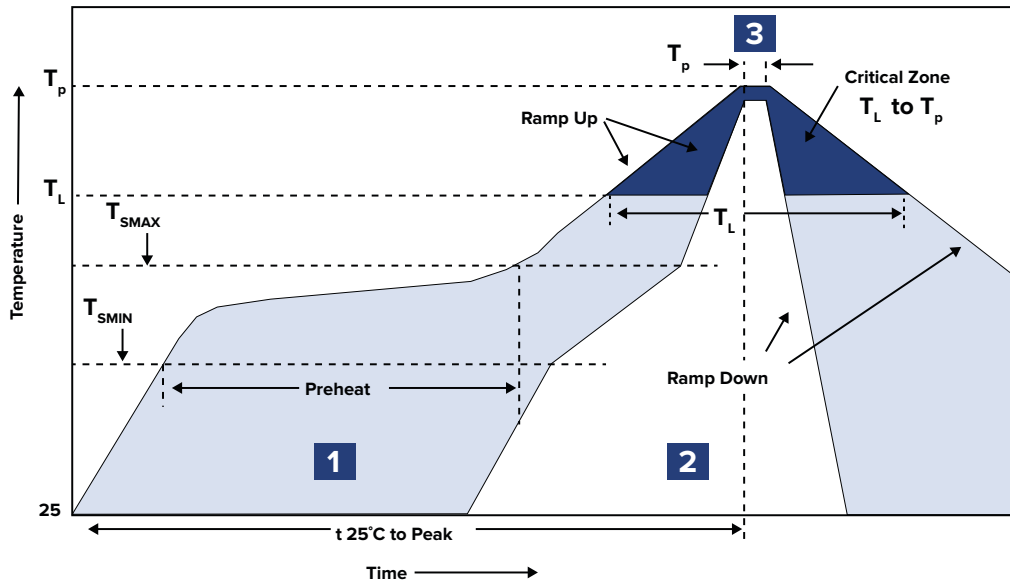


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## Reflow Profile



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	$T_L$ 230°C	30 ~ 40 sec.
3	Peak heat	$T_P$ 260°C±5°C	5 sec. MAX

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