

# ASO21R / ASO22R / ASO23R CMOS Compatible

1.8 Volt, 2.5 Volt and 3.3 Volt 2.5x2.0mm  
Surface Mount Ceramic Programmable Crystal Oscillator

## Applications:

- MP3/MP4
- Digital Camera
- Mobile Phone

## Features

- Wide frequency range
- Low current consumption
- Good lead time
- RoHS Compliant

## Specification

MODEL		ASO21R	ASO22R	ASO23R
Frequency Range	MHz	1.000 ~ 110.000	1.000 ~ 90.000	1.000 ~ 110.000
Frequency Stability*	ppm	Type A : $\pm 25$ , $\pm 50$ (-20 to 70°C) Type B : $\pm 25$ , $\pm 50$ (-40 to 85°C)		
Temperature Range				
Operating Temp	°C	-20 to +70 / -40 to +85		
Storage Temp	°C	-55 to +125		
Power Supply Voltage	VDC	1.8 Typ. 1.6 to 2.2	2.5 Typ. 2.2 to 2.8	3.3 Typ. 2.7 to 3.6
Output Voltage High (V <sub>OH</sub> )	V (Max)	90% V <sub>DD</sub>		
Output Voltage Low (V <sub>OL</sub> )	V (Min)	10% V <sub>DD</sub>		
Output Level		CMOS		
Output Symmetry	%	45~55		
Input Current	mA (Max)	10	15	15
Rise / Fall Time (10% / 90%)	nS (Max)	5		
Output Load		15pF		
Aging	ppm/Year	$\pm 3$		

\* Inclusive of 25°C  $\pm$  3°C & Operating Temperature Range ◦

## ENABLE/ DISABLE FUNCTION

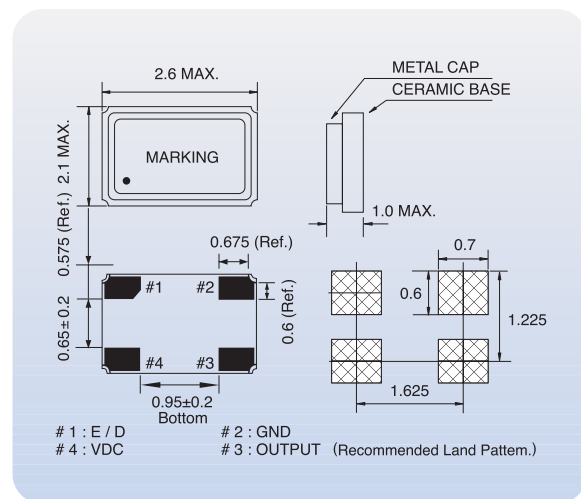
INH (# 1)	Q (# 4) & QN (# 5)
HIGH (Open)	Operating
Low	High impedance

## PART NUMBERING GUIDE

Example: ASO23R-106.25M-F2T

MODE	Frequency	Stability	OP Temp Range	Tristate
ASO21R ASO22R ASO23R	In MHZ	D: $\pm 25$ ppm E: $\pm 30$ ppm F: $\pm 50$ ppm G: $\pm 100$ ppm O: Others	1: 0 to +70°C 2: -10 to +70°C 3: -20 to +70°C 4: -40 to +85°C 5: -40 to +105°C 0: Others	T: Tristate 0: Non-Tristate

## DIMENSION (mm)



## MARKING RULE

