

# OC Type

## 7.0 x 5.0 mm SMD Crystal Oscillator

### FEATURE

- Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package.
- Output frequency up to 166MHz
- Tr-state enable/disable.

### TYPICAL APPLICATION

- xDSL, WLAN, Fiber/10G-Bit Ethernet
- Notebook, PDA
- PC main board, VGA card



RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
<b>Supply Voltage Variation(V<sub>DD</sub>)</b>	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V
<b>Frequency Range</b>	0.0137	166	0.0137	133	0.0137	125	MHz
<b>Standard Frequency</b>	2.048, 25, 26, 27, 50, 66, 667, 100, 125						
<b>Supply Current</b>							mA
13.7 kHz ≤ Fo ≤ 70 kHz	—	1	—	1	—	1	
0.3125 MHz ≤ Fo < 35.328 MHz (A1)	—	10	—	8	—	7	
30 MHz ≤ Fo < 75 MHz	—	20	—	18	—	15	
75 MHz ≤ Fo < 133 MHz	—	35	—	30	—	25	
133 MHz ≤ Fo	—	45	—	40	—	—	
<b>Output Level (CMOS)</b> Output High (Logic "1")	2.97	—	2.25	—	1.62	—	V
Output Low (Logic "0")	—	0.33	—	0.25	—	0.18	
<b>Transition Time: Rise/Fall Time</b>							nSec
13.7 kHz ≤ Fo ≤ 70 kHz	—	50	—	50	—	50	
0.3125 MHz ≤ Fo < 100 MHz	—	5	—	5	—	5	
100 MHz ≤ Fo	—	3	—	3	—	3	
<b>Start Time</b>	—	5	—	5	—	5	mSec
<b>Output Drive Capability (CL)</b>	—	15	—	15	—	15	pF
<b>Tri-State (Input to Pin1)</b> Enable (High voltage or floating)	2.31	—	1.75	—	1.26	—	V
Disable (Low voltage or GND)	—	0.99	—	0.75	—	0.54	
<b>Period Jitter(Pk-Pk)</b>	—	40	—	40	—	40	pSec
<b>RMS Phase Jitter (Integrated 12 kHz~20 MHz)</b>	—	1	—	1	—	1	pSec
<b>Standby Current</b>	—	10	—	10	—	10	μA
<b>Aging (@ 25°C 1st year)</b>	—	±3	—	±3	—	±3	ppm
<b>Storage Temp. Range</b>	-55	125	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

+ Transition times are measured between 10% and 90% of V<sub>DD</sub>, with an output load of 15pF.

### FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C)	ppm		
	±20	±25	±50
-10 ~ +60	○	○	○
-20 ~ +70	△	○	○
-40 ~ +85	△	○	○
-40 ~ +125	×	×	○

\* ○: Available △: Conditional X: Not available

\* Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1<sup>st</sup> year), shock, and vibration

**Note: not all combination of options are available. Other specifications may be available upon request.**

Rev(30)04/2017

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