OY Type
2.5 x 2.0 mm SMD Crystal Oscillator

Actual Size ☐

RoHS Compliant

FEATURE
- Typical 2.5 x 2.0 x 0.85 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
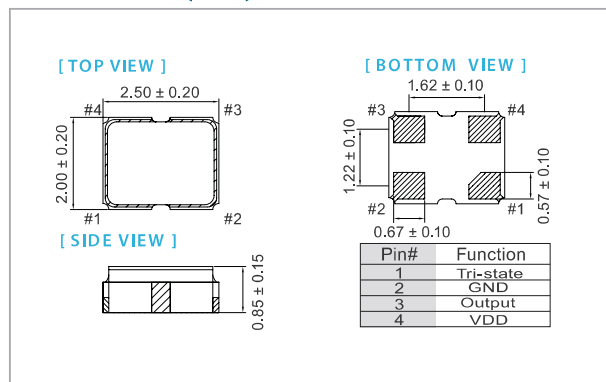- Tri-state enable/disable

TYPICAL APPLICATION
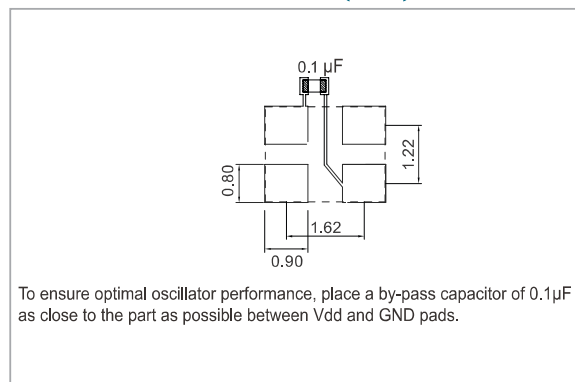- WLAN/WiMAX,
- Mobile Phone
- DSC,Set-top Box ,HDTV

DIMENSION (mm)

[TOP VIEW]
2.50 ± 0.20
#4   #3
2.00 ± 0.20
#1   #2
[SIDE VIEW]
0.85 ± 0.15

[BOTTOM VIEW]
1.62 ± 0.10
#3   #4
1.22 ± 0.10
#2   #1
0.57 ± 0.10
0.67 ± 0.10

Pin#	Function
1	Tri-state
2	GND
3	Output
4	VDD

SOLDER PAD LAYOUT (mm)

0.1 μF
1.22
0.80
1.62
0.90

To ensure optimal oscillator performance, place a by-pass capacitor of 0.1μF as close to the part as possible between Vdd and GND pads.
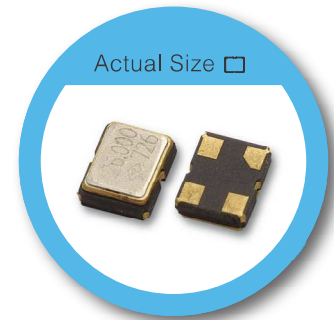
ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		1.8 V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-10%	VDD+10%	VDD-10%	VDD+10%	VDD-10%	VDD+10%	V
Frequency Range	1.25	125	1.25	125	1.25	125	MHz
Standard Frequency	24, 26, 30, 40						
Supply Current	−	15	−	10	−	7	mA
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS)							
Output High (Logic "1")	2.97	−	2.25	−	1.62	−	V
Output Low (Logic "0")	−	0.33	−	0.25	−	0.18	
Transition Time:Rise/Fall Time+							
1.25 MHz ≦ Fo < 20 MHz	−	4	−	4	−	5	
20 MHz ≦ Fo < 80 MHz	−	3	−	3	−	4	nSec
80 MHz ≦ Fo ≦ 125 MHz	−	3	−	3	−	4	
Start Time	−	2	−	2	−	2	mSec
Tri-State(Input to Pin 1)							
Enable (High voltage or floating)	2.31	−	1.75	−	1.26	−	V
Disable (Low voltage or GND)	−	0.99	−	0.75	−	0.54	
Period Jitter(Pk-Pk)	−	40	−	40	−	40	pSec
RMS Phase Jitter (Integrated 12 kHz ~ 20 MHz)	−	1	−	1	−	1	pSec
Standby Current	−	10	−	10	−	10	μA
Aging (@ 25°C 1st year)	−	±3	−	±3	−	±3	ppm
Storage Temp. Range	-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 VDD, 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 (1st year), shock, and vibration

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

Specifications subject to change without notice.

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