

Helping Customers Innovate, Improve & Grow

### Features

- Frequency Range 1 MHz and 137 MHz accurate to 6 decimal places
- Low power consumption of 4.5 mA typical
- CMOS compatible output
- Industry-standard packages: 2.0 x 1.6, 2.5 x 2.0, 3.2 x 2.5, 5.0 x 3.2, 7.0 x 5.0 mm
- Operating temperature to 125°C
- Capable of surviving 50,000 g shock, with 70 g vibration resistance and 0.1ppb/g g-sensitivity

### Applications

- Military Applications
- Environmentally Demanding Applications
- Ruggedized Equipment

### Performance Specifications

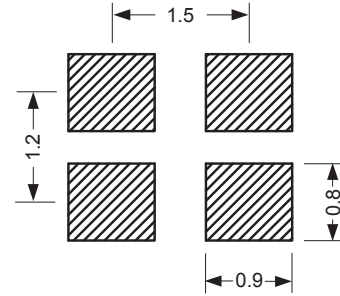
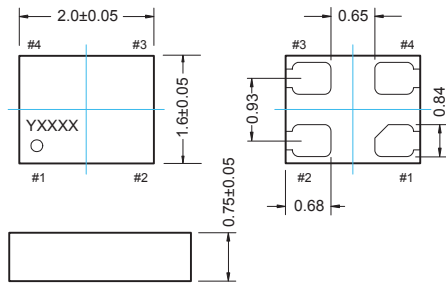
Parameter and Conditions	Symbol	Min.	Typ.	Max.	Unit	Condition
Output Frequency Range	f	1	–	137	MHz	
Frequency Stability	F_stab	-20	–	+20	ppm	Inclusive of Initial tolerance at 25°C, and variations over operating temperature, rated power supply voltage and load.
		-50	–	+50	ppm	
Aging	Ag	-1.5	–	1.5	ppm	1st year at 25°C
Operating Temperature Range	T_use	-55	–	+125	°C	
		-40	–	+125	°C	
		-40	–	+105	°C	
		-40	–	+85	°C	
Supply Voltage	Vdd	1.62	1.8	1.98	V	Other supply voltages between 2.5V and 3.3V can be supported. Contact Vectron for additional information.
		2.25	2.5	2.75	V	
		2.52	2.8	3.08	V	
		2.7	3.0	3.3	V	
		2.97	3.3	3.63	V	
Current Consumption	Idd	–	3.9	5	mA	No load condition, f = 20 MHz, Vdd = 2.5V, 2.8V, 3.0V or 3.3V
		–	3.6	4.5	mA	No load condition, f = 20 MHz, Vdd = 1.8V
Standby Current	I_std	–	2.5	10	µA	ST = GND, Vdd = 3.0V or 3.3V, Output is Weakly Pulled Down
		–	2.5	10	µA	ST = GND, Vdd = 2.5V or 2.8V, Output is Weakly Pulled Down
		–	1	5	µA	ST = GND, Vdd = 1.8V, Output is Weakly Pulled Down
Duty Cycle	DC	45	–	55	%	All supply voltage options
Rise/Fall Time	Tr, Tf	–	1.2	2.5	ns	20% - 80% Vdd = 2.5V, 2.8V, 3.0V or 3.3V
		–	1.5	3.5	ns	20% - 80% Vdd = 1.8V
		–	1.5	3	ns	20% - 80% Vdd = 2.25V - 3.63V
Output High Voltage	VOH	90%	–	–	Vdd	IOH = -4 mA (Vdd = 3.0V or 3.3V) IOH = -3 mA (Vdd = 2.8V and Vdd = 2.5V) IOH = -2 mA (Vdd = 1.8V)
Output Low Voltage	VOL	–	–	10%	Vdd	IOL = 4 mA (Vdd = 3.0V or 3.3V) IOL = 3 mA (Vdd = 2.8V and Vdd = 2.5V) IOL = 2 mA (Vdd = 1.8V)
Input High Voltage	VIH	70%	–	–	Vdd	Pin 1, OE or ST
Input Low Voltage	VIL	–	–	30%	Vdd	Pin 1, OE or ST
Input Pull-up Impedence	Z_in	–	100	250	kΩ	Pin 1, OE logic high or logic low, or ST logic high
		2	–	–	MΩ	Pin 1, ST logic low
Startup Time	T_start	–	–	5	ms	Measured from the time Vdd reaches its rated minimum value
Enable/Disable Time	T_oe	–	–	150	ns	
Resume Time	T_resume	–	–	5	ms	Measured from the time ST pin crosses 50% threshold
RMS Period Jitter	T_jitt	–	2	4	ps	f = 20 MHz, Vdd = 2.5V, 2.8V, 3.0V or 3.3V
		–	2	4.5	ps	f = 20 MHz, Vdd = 1.8V
RMS Phase Jitter (random)	T_phj	–	1.5	3	ps	Integration bandwidth = 12 kHz to 20 MHz, -40 to +125°C
		–	2.5	3	ps	Integration bandwidth = 12 kHz to 20 MHz, -55 to +125°C

# Packaging Options

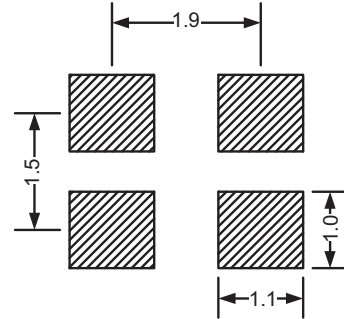
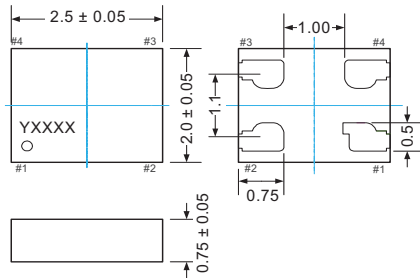
## Package Outline & Dimensions (Unit: mm)

## Recommended Land Pattern (Unit: mm)

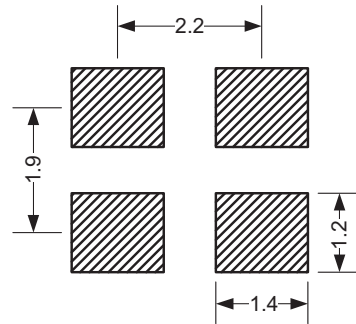
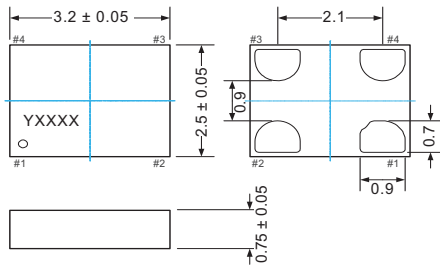
2.0 x 1.6 x 0.75 mm



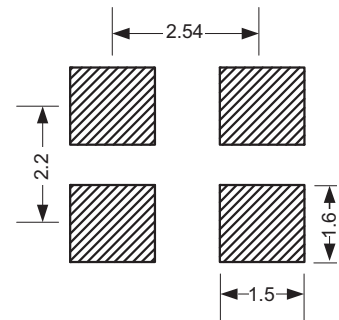
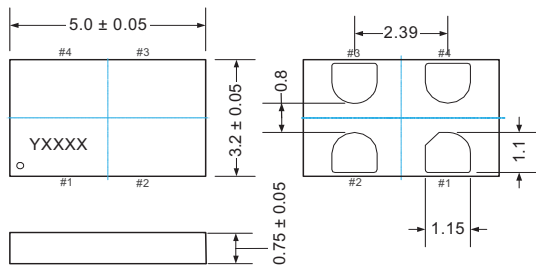
2.5 x 2.0 x 0.75 mm



3.2 x 2.5 x 0.75 mm



5.0 x 3.2 x 0.75 mm



7.0 x 5.0 x 0.90 mm

