

Helping Customers Innovate, Improve & Grow

Features

- Any frequency between 1 MHz and 110 MHz accurate to 6 decimal places
- Low power consumption of 3.6 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

Applications

- Ideal for DSC, DVC, DVR, IP CAM, Tablets, e-Books, SSD, GPON, EPON
- Ideal for high-speed serial protocols such as: USB, SATA, SAS, Firewire, Ethernet, etc.

Performance Specifications

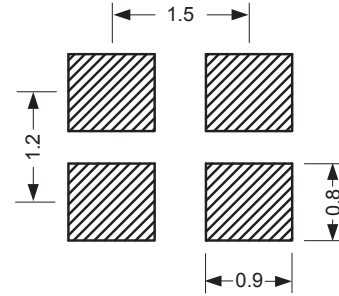
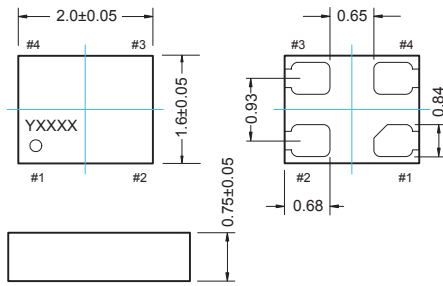
Parameter and Conditions	Symbol	Min.	Typ.	Max.	Unit	Condition
Output Frequency Range	f	1	–	110	MHz	
Frequency Stability	F _{stab}	-20	–	+20	PPM	Inclusive of Initial tolerance at 25°C, and variations over operating temperature, rated power supply voltage and load.
		-50	–	+50	PPM	
Aging	Ag	-1.5	–	1.5	PPM	1st year at 25°C
Operating Temperature Range	T _{use}	-20	–	+70	°C	Extended Commercial
		-40	–	+85	°C	Industrial
Supply Voltage	V _{dd}	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	I _{dd}	–	3.9	4.5	mA	No load condition, f = 20 MHz, V _{dd} = 2.5V, 2.8V, 3.0V or 3.3V
		–	3.6	3.9	mA	No load condition, f = 20 MHz, V _{dd} = 1.8V
Standby Current	I _{std}	–	2.5	5	μA	ST = GND, V _{dd} = 3.0V or 3.3V, Output is Weakly Pulled Down
		–	2.5	5	μA	ST = GND, V _{dd} = 2.5V or 2.8V, Output is Weakly Pulled Down
		–	1	1.2	μA	ST = GND, V _{dd} = 1.8V, Output is Weakly Pulled Down
Duty Cycle	DC	45	–	55	%	All V _{dds}
Rise/Fall Time	T _r , T _f	–	1.2	2	ns	20% - 80% V _{dd} = 2.5V, 2.8V, 3.0V or 3.3V
		–	1.5	3	ns	20% - 80% V _{dd} = 1.8V
Output High Voltage	VOH	90%	–	–	V _{dd}	IOH = -4 mA (V _{dd} = 3.0V or 3.3V) IOH = -3 mA (V _{dd} = 2.8V and V _{dd} = 2.5V) IOH = -2 mA (V _{dd} = 1.8V)
Output Low Voltage	VOL	–	–	10%	V _{dd}	IOL = 4 mA (V _{dd} = 3.0V or 3.3V) IOL = 3 mA (V _{dd} = 2.8V and V _{dd} = 2.5V) IOL = 2 mA (V _{dd} = 1.8V)
Input High Voltage	VIH	70%	–	–	V _{dd}	Pin 1, OE or ST
Input Low Voltage	VIL	–	–	30%	V _{dd}	Pin 1, OE or ST
Input Pull-up Impedance	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 V _{dd} reaches its rated minimum value
Resume Time	T _{resume}	–	–	5	ms	Measured from the time ST pin crosses 50% threshold
RMS Period Jitter	T _{jitt}	–	2	3	ps	f = 20 MHz, V _{dd} = 2.5V, 2.8V, 3.0V or 3.3V
		–	2	4	ps	f = 20 MHz, V _{dd} = 1.8V
RMS Phase Jitter (random)	T _{phj}	–	1.5	2	ps	Integration bandwidth = 12 kHz to 20 MHz

Packaging Options

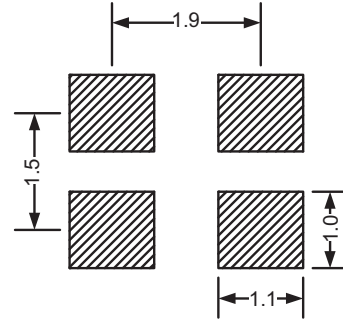
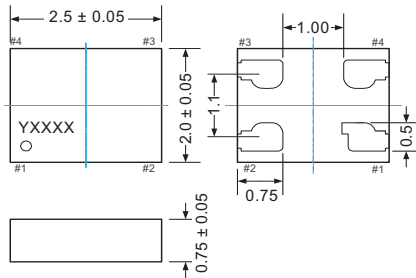
Package Outline & Dimensions (Unit: mm)

Recommended Land Pattern (Unit: mm)

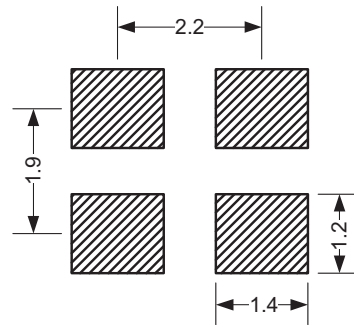
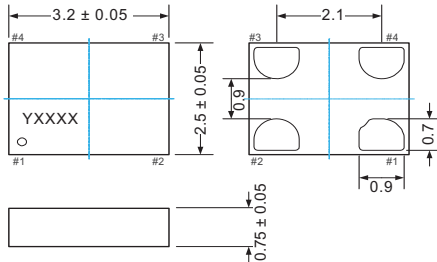
2.0 x 1.6 x 0.75 mm



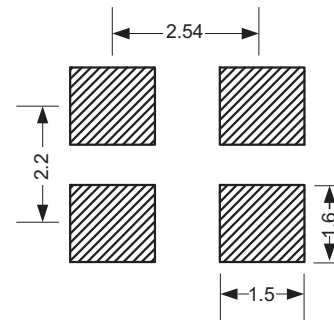
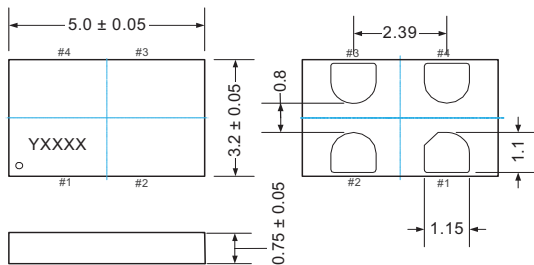
2.5 x 2.0 x 0.75 mm



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

