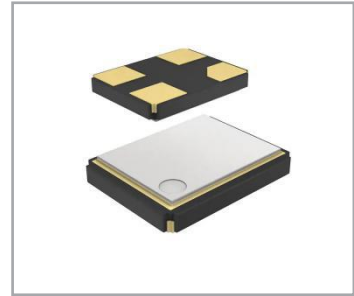


OD Type Crystal Oscillator

Typical 2.5x2.0mm

Frequency 1MHz to 50MHz

STARWAVE



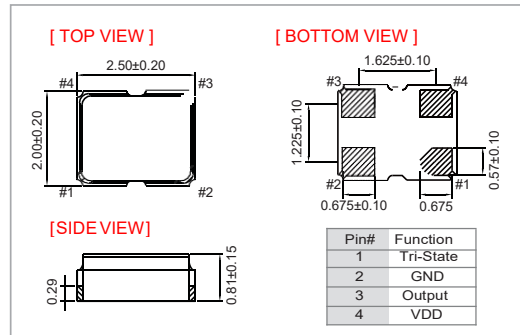
FEATURE

- Typical 2.5 x 2.0 x 0.81 mm ceramic SMD package
- Operation supply voltage: 1.8V, 2.5V and 3.3V
- Output frequency up to 50MHz
- Tri-State Enable/Disable
- Frequency Stability ± 50 ppm over -40°C to 105°C
- Pb-free/RoHS compliant

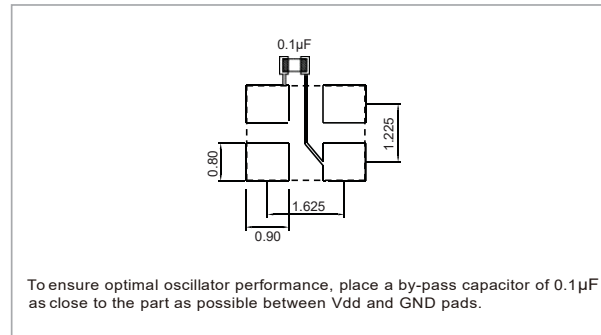
TYPICAL APPLICATION

- Computer Peripherals
- Set-top Box , HDTV
- DSC, PDA

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter		3.3V		2.5V		1.8V		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		1.25	125	1.25	125	1.25	125	MHz
Standard Frequency		24, 26, 30, 40						MHz
Supply Current	At 15pF Load	-	20	-	15	-	8	mA
	No Load Condition, 1.25MHz ≤ Fo < 10MHz	-	-	-	-	-	-	-
	No Load Condition, 10MHz ≤ Fo < 20MHz	-	2	-	2	-	1.5	mA
	No Load Condition, 20MHz ≤ Fo < 80MHz	-	3	-	2.5	-	1.5	mA
	No Load Condition, 80MHz ≤ Fo < 125MHz	-	8	-	7	-	5	mA
Duty Cycle		45	55	45	55	45	55	%
Output Level	Output High	2.97	-	2.25	-	1.62	-	V
	Output Low	-	0.33	-	0.25	-	0.18	V
Transition Time: Rise / Fall Time ⁺	1.25MHz ≤ Fo < 10MHz	-	3	-	4	-	5	nSec
	10MHz ≤ Fo < 20MHz	-	3	-	3	-	4	nSec
	20MHz ≤ Fo < 80MHz	-	3	-	3	-	4	nSec
	80MHz ≤ Fo < 125MHz	-	3	-	3	-	4	nSec
Startup 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	V
Output Loading		15		15		15		pF
Stand by Current (@-40°C to 85°C)		-	10	-	10	-	10	µA
Stand by Current (@-40°C to 125°C)		-	20	-	20	-	20	µA
Period Jitter (Pk-Pk)		-	40	-	40	-	40	pSec
RMS Phase Jitter (12kHz to 20MHz)		-	1	-	1	-	1	pSec
Aging (@ 25°C, 1 st 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. ppm (°C)	±15	±20	±25	±50
-20~+70	△	△	○	○
-40~+85	×	△	○	○
-40~+105	×	△	○	○

*O: 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.

OD Type Crystal Oscillator
Typical 2.5x2.0mm
Frequency 1MHz to 50MHz



Ordering Information

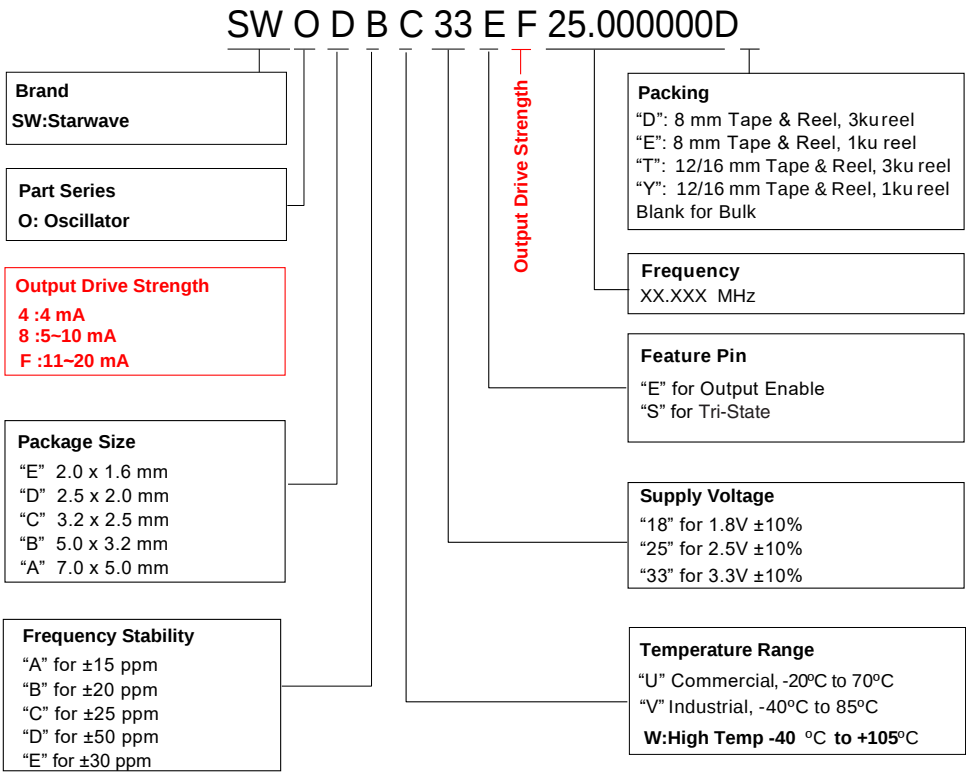


Table 13. Ordering Codes for Supported Tape & Reel Packing Method

Device Size (mm x mm)	16 mm T&R (3ku)	16 mm T&R (1ku)	12 mm T&R (3ku)	12 mm T&R (1ku)	8 mm T&R (3ku)	8 mm T&R (1ku)
2.0 x 1.6	-	-	-	-	D	E
2.5 x 2.0	-	-	-	-	D	E
3.2 x 2.5	-	-	-	-	D	E
5.0 x 3.2	-	-	T	Y	-	-
7.0 x 5.0	T	Y	-	-	-	-