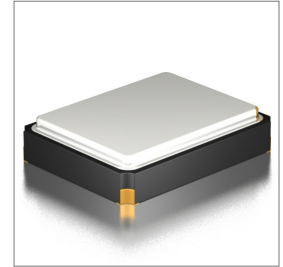


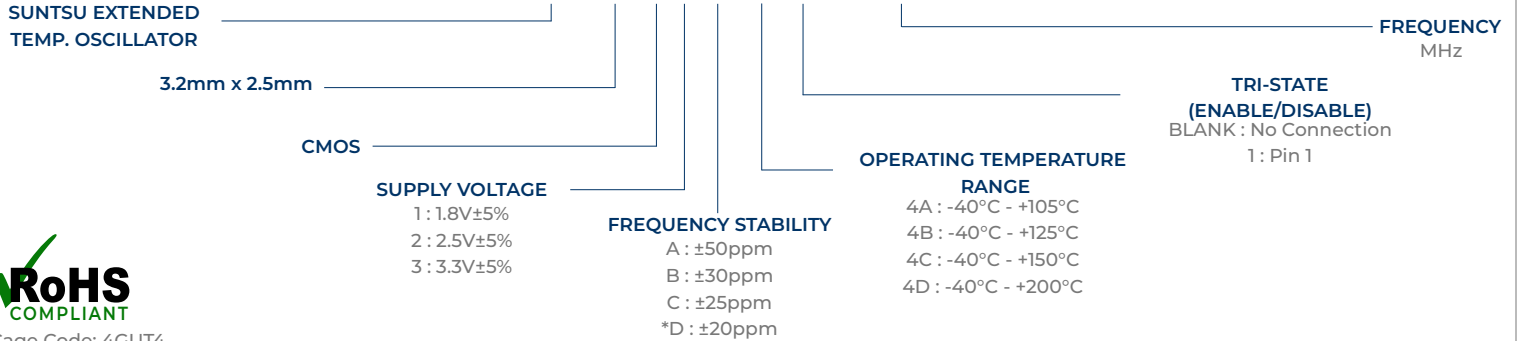
- Features**
- ± 20 ppm (Frequency Stability) Available
 - GT-Cut Fundamental
 - Tape and Reel
 - Low Current Consumption
 - High Stability Over Extended Temperatures

- Applications**
- Automotive Instruments
 - High Temperature Sensing at EV
 - Telemetry
 - Aerospace
 - Industrial Process Control
 - 5G



Part Numbering Guide

SEO 32 C 3 A 4D 1 - 20.000M



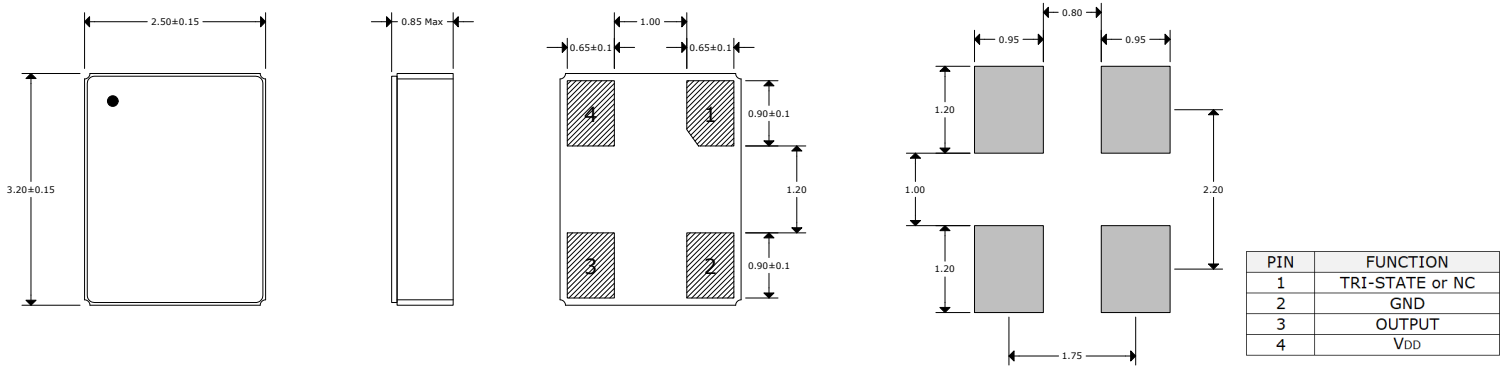
Cage Code: 4GUT4

* High Precision Frequency stability of ± 20 ppm is applicable to $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
To customize your parameters contact a Suntsu representative.

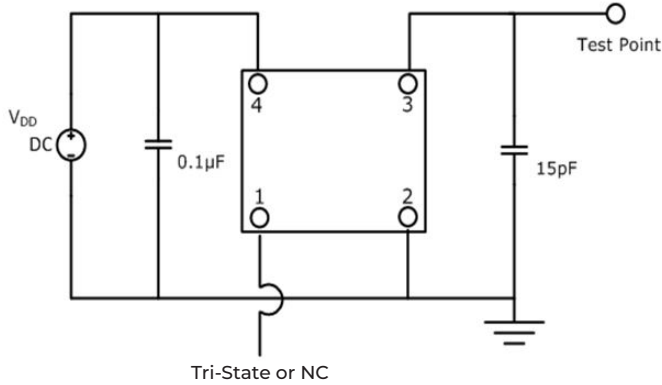
Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	1		150	GT-Cut Fundamental.
Frequency Stability (Includes Initial Tolerance at 25°C, Frequency Stability over Operating Temperature, Output Load Change, Supply Voltage Change, and First Year Aging at 25°C.)	ppm	-20		20	See part numbering guide for options.
Operating Temperature	°C	-40		200	See part numbering guide for options.
Storage Temperature	°C	-40		200	
Supply Voltage (V _{DD}) - 1.8V option	V	1.710	1.8	1.890	
Supply Voltage (V _{DD}) - 2.5V option	V	2.375	2.5	2.625	
Supply Voltage (V _{DD}) - 3.3V option	V	3.125	3.3	3.465	
Current Consumption - Enable	mA	5.8	8	10	1MHz to 150MHz, V _{DD} =3.3V, No load
Current Consumption - Standby	µA	35	60	100	
Output Load (CMOS)	pF			15	
Output Logic Levels High (V _{OH})	V	0.9*V _{DD}			
Output Logic Levels Low (V _{OL})	V			0.1*V _{DD}	
Rise (TR) and Fall (TF) Time	ns		1.5	5	0.1V _{DD} to 0.9V _{DD}
Symmetry (Duty Cycle)	%	45	50	55	
Tri-State Input Voltage - Enable	V	0.7*V _{DD}			
Tri-State Input Voltage - Disable	V			0.3*V _{DD}	
Start-Up Time	ms			10	
Random Jitter	ps		3.6		
Total Jitter	ps		51		
Phase Jitter (12kHz ~ 20MHz)	ps		20		

Outline Drawing & Recommended Landed Pattern

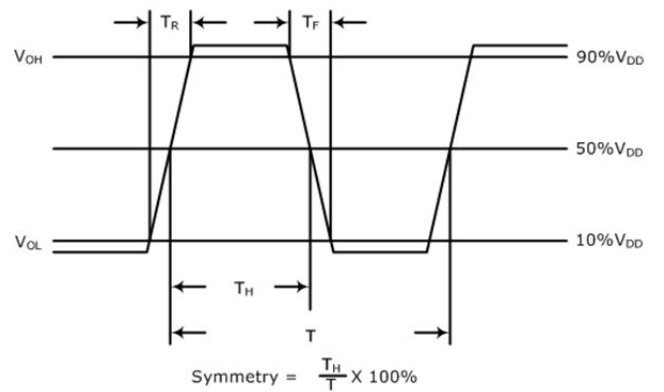
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



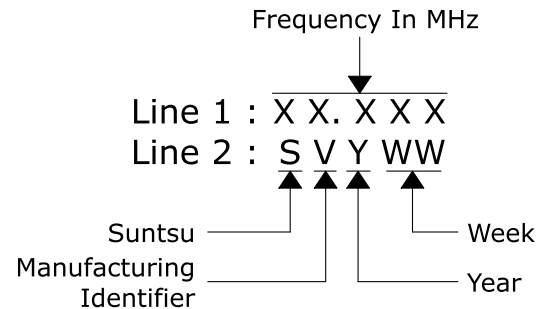
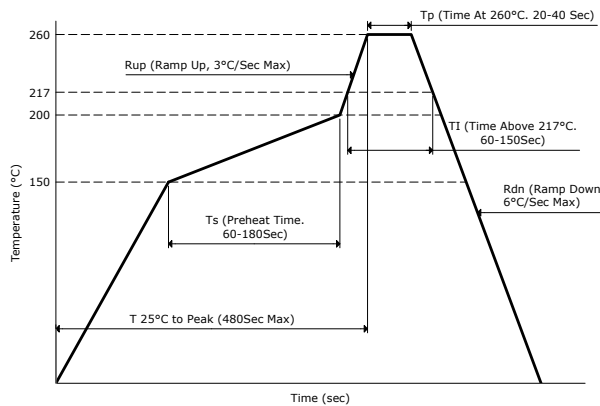
Test Circuit (CMOS)



Waveform (CMOS)



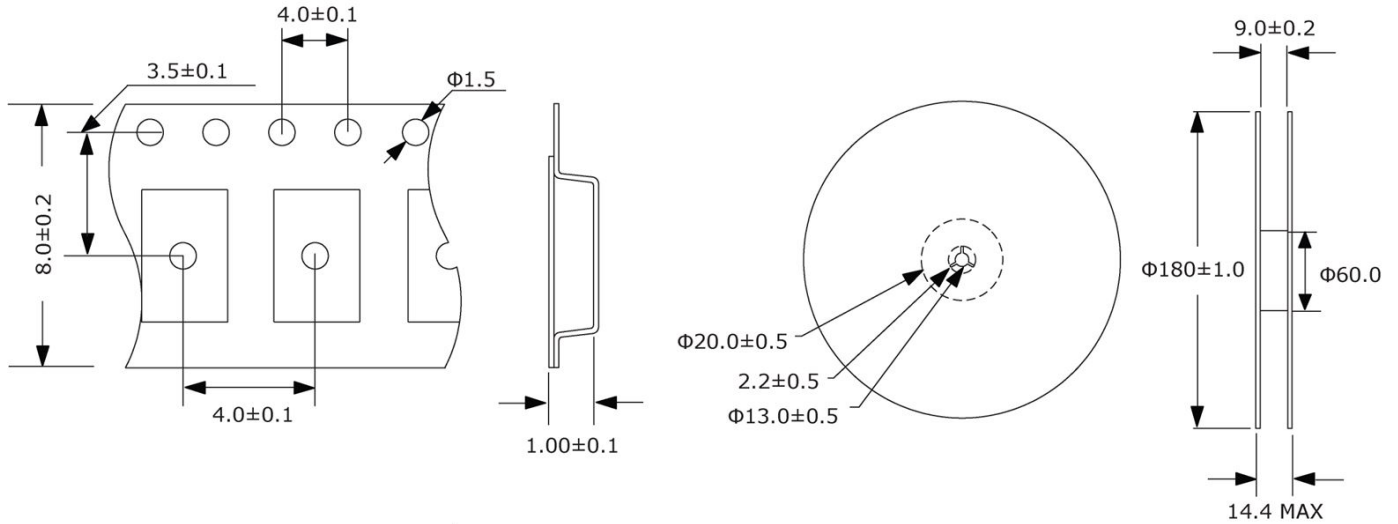
Reflow Profile & Part Marking



Tape And Reel Dimensions

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

3,000pcs / Reel



Environmental Specifications		Mechanical Specifications	
Temperature Cycling	MIL-STD-883, Method 1010, Condition B	Mechanical Shock	MIL-STD-202, Method 213, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A	Vibration	MIL-STD-883, Method 2007, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C	Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Moisture Resistance	MIL-STD-883, Method 1004	Resistance to Solvents	MIL-STD-202, Method 215
Moisture Sensitivity	J-STD-020, MSL 1	Solderability	MIL-STD-883, Method 2003