

Features
<ul style="list-style-type: none"> <li>±20ppm/±30ppm (Tolerance/Stability) Available</li> <li>Wide Frequency Range</li> <li>AT-Cut</li> <li>Bulk Packing</li> </ul>

Applications
<ul style="list-style-type: none"> <li>Computer Peripherals</li> <li>Microprocessor</li> <li>Test Equipment</li> </ul>



### Part Numbering Guide

SCM 83 2 18 A A 48 T - 48.000M

SUNTSU CYLINDRICAL MHz CRYSTAL

8.3mm x 3.2mm

2 LEAD

**RoHS COMPLIANT**

Cage Code: 4GUT4  
 To customize your parameters contact a Suntsu representative.

**LOAD CAPACITANCE**  
 S : Series  
 7-30 : 7pF - 30pF

**FREQUENCY TOLERANCE**  
 A : ±50ppm / B : ±30ppm  
 C : ±25ppm / D : ±20ppm

**FREQUENCY STABILITY**  
 A : ±50ppm  
 B : ±30ppm

**OPERATING TEMPERATURE RANGE**  
 07 : 0°C - +70°C  
 16 : -10°C - +60°C  
 17 : -10°C - +70°C  
 27 : -20°C - +70°C  
 38 : -30°C - +85°C  
 48 : -40°C - +85°C

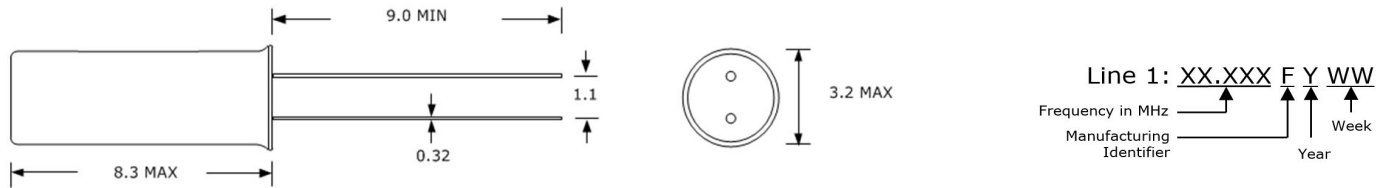
**FREQUENCY**  
 MHz

**MODE OF OPERATION**  
 BLANK : Fundamental  
 T : Third Overtone

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	3.579545		29.999	AT-Cut Fundamental
Frequency Range	MHz	30		90	3 <sup>rd</sup> Overtone
Frequency Tolerance at +25°C	ppm	-20		+20	See part numbering guide for options.
Frequency Stability v's Op Temp	ppm	-30		+30	See part numbering guide for options.
Frequency Stability v's Aging	ppm	-5		+5	First year @ +25°C.
Operating Temperature	°C	-40		+85	See part numbering guide for options.
Storage Temperature	°C	-40		+125	
Load Capacitance	pF	7		30	See part numbering guide for options.
Shunt Capacitance	pF			5	
Drive Level	µW			100	
Insulation Resistance	MΩ	500			@ 100VDC ± 15V.
3.579MHz ~ 3.999MHz	Ω			200	AT-Cut Fundamental
4.000MHz ~ 5.999MHz	Ω			150	AT-Cut Fundamental
6.000MHz ~ 6.999MHz	Ω			100	AT-Cut Fundamental
7.000MHz ~ 8.999MHz	Ω			80	AT-Cut Fundamental
ESR - 9.000MHz ~ 12.999MHz	Ω			60	AT-Cut Fundamental
13.000MHz ~ 19.999MHz	Ω			50	AT-Cut Fundamental
20.000MHz ~ 29.999MHz	Ω			30	AT-Cut Fundamental
30.000MHz ~ 69.999MHz	Ω			100	3 <sup>rd</sup> Overtone
-70.000MHz ~ 90.000MHz	Ω			80	3 <sup>rd</sup> Overtone

### Outline Drawing & Part Marking

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



Environmental Specifications		Mechanical Specifications	
Temperature Cycling	MIL-STD-883, Method 1010, Condition B	Mechanical Shock	MIL-STD-202, Method 213, Condition C
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