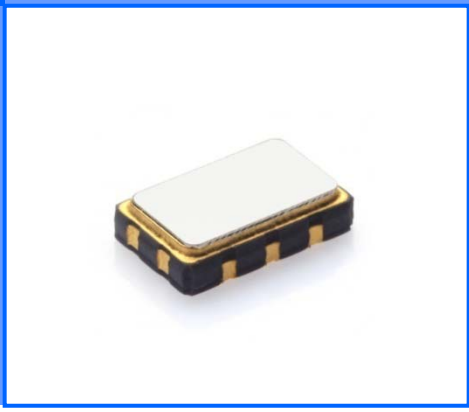
HCSL TYPE
SHO-53

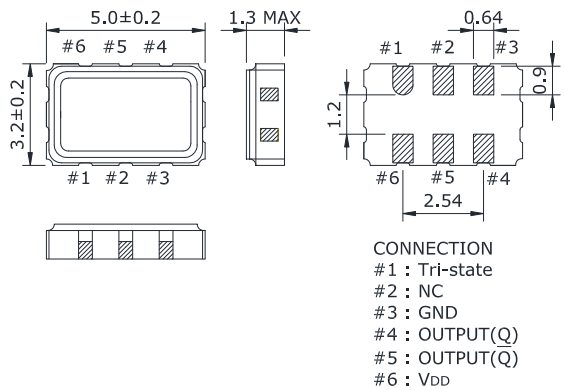
- 5×3.2 mm Miniature Package
- 2.5 V, 3.3 V Supply Voltage
- *Non Multiplied*
- Stability up to ±25 ppm
- HCSL(High speed Current Steering Logic) Output
- Tri-state Function Available



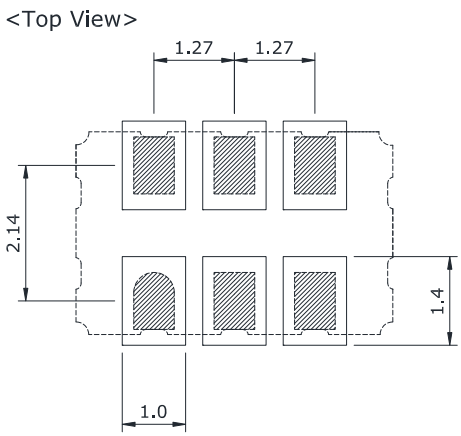
■ ELECTRICAL SPECIFICATIONS

ITEM	Value	Remarks
Output Logic Type	HCSL	HCSL XO
Frequency Range	100.000 MHz, 125.000 MHz	Standard Frequency
Supply Voltage(V_{DD})	2.5 V_{DC} ±5 %, 3.3 V_{DC} ±5 %	
Operating Temperature Range	-20 to +70 ℃, -40 to +85 ℃	
Storage Temperature Range	-55 to +125 ℃	
Frequency Stability	±25 ppm, ±50 ppm Max.	Over operating Temperature range
Input Current	60 mA Max.	
Output Voltage Logic High(V_{OH})	0.580 V Min. 0.850 V Max.	
Output Voltage Logic Low(V_{OL})	-0.150 V Min. 0.150 V Max.	
Rise / Fall Time	0.3 ns Typ., 0.7 ns Max.	Measured over 20 % to 80 % of waveform
Duty Cycle	45 to 55 %, 40 to 60 %	Measured at 50 % of waveform
Start-up Time	10 ms Max.	
Output Load Condition(HCSL)	50 Ω	Between Output and Ground
Output Enable Function (V_{IH} and V_{IL})	70 % of V_{DD} min. to Enable Output 30 % of V_{DD} max. to Disable Output	High Impedance
RMS Phase Jitter	1 ps Max.	BW : 12 kHz to 20 MHz
Frequency Aging	±3 ppm Max.	25 ℃, First year

■ MECHANICAL DIMENSIONS (mm)



■ LAND PATTERN (mm)



■ PART NUMBERING GUIDE

SHO – 53 33 50 A D S R – 125.000M

SUPPLY VOLTAGE(V_{DD})
33: 3.3 V, 25 : 2.5 V

FREQUENCY STABILITY
25 : ±25 ppm, 50 : ±50 ppm
BLANK : ±100 ppm

OPERATING TEMPERATURE RANGE
A : -40 to 85 ℃, B : -20 to 70 ℃
BLANK : 0 to 70 ℃

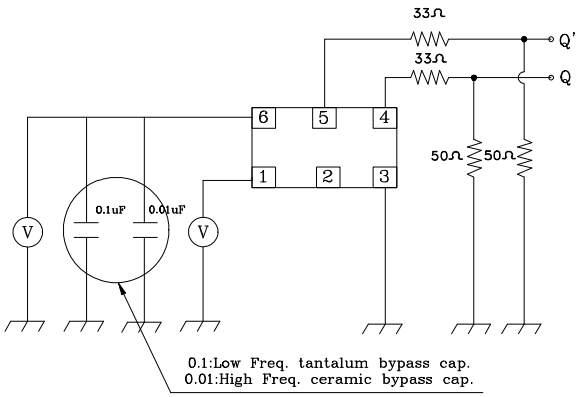
DUTY CYCLE
D : 45/55, E : 40/60

FREQUENCY
M : MHz

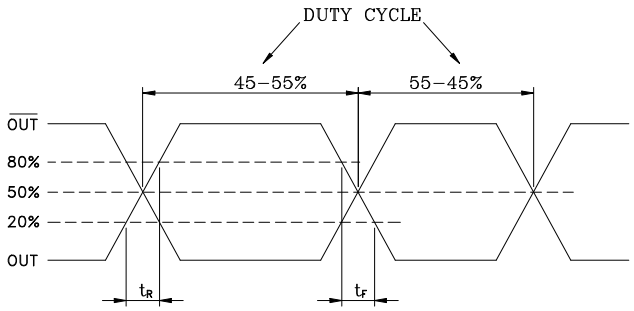
PACKAGE OPTION
R : TAPE AND REEL
BLANK : BULK

PIN 1 CONNECTION
S : TRI-STATE, E/D
BLANK : NO CONNECTION

■ TEST CIRCUIT (HCSL)



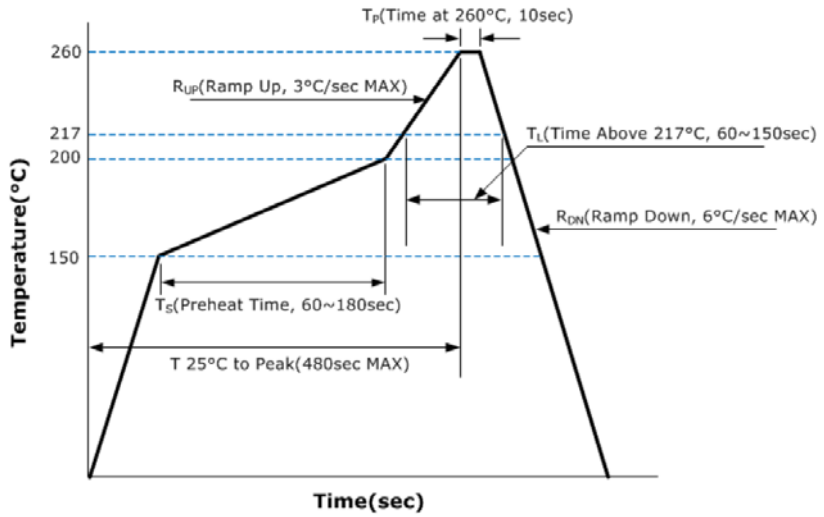
■ WAVEFORM (HCSL)



■ ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Solderability	MIL-STD-883, Method 2003

■ REFLOW PROFILE



■ MARKING GUIDE

Frequency in MHz

LINE 1 : XXX.XXX

LINE 2 : ●SHO YY WW

Model Name

Year

Week

■ TAPE AND REEL DIMENSIONS

