# Electrical characteristics



- This parts does not contain any hazardous substances as specified in the RoHS ( The restriction of the use of certain hazardous substances )
- P/N: SCO-323350ADSR-33.333M
- Requirements

	Items	Specifications	
1	Nominal Frequency	33.333000 MHz	
2	Model Name	SCO-32	
3	Dimension	See drawing	
4	Operating Temperature range	-40~85℃	
5	Storage temperature range	-55~125℃	
6	Frequency Tolerance / Stability (in operating temperature range)	± 50 ppm max.	
7	Supply voltage(V <sub>DD</sub> )	1.8~3.3 VDC±5%.	
8	Input Current(consumption current)	25 mA max.	
9	Rising/Falling time(Tr/Tf)	2 ns max.	
10	Symmetry(Output duty cycle)	45:55 %	
11	Aging in a year	± 3 ppm / year	
12	Enable/Disable function on pin 1	available	
13	Output Loads (CMOS)	CL=15pF	
14	Marking	33.333 S YWW	

#### Application Note

Please do not connect inductor or bead between power supply and VDD(#4 pad).

It can make output oscillation unstable.

Please connect bypass capacitor  $0.1\mu$ F or  $0.01\mu$ F between VDD(#4 pad) and circuit ground.

Please connect #1 pad to Vcc(#4 pad), if Enable/Disable function of #1 isn't used.

■ Storage condition of SMD products in the room temperature

Temperature :  $25\pm3\%$ , Humidity:  $35\pm10\%$ (RH)

#### ■ Storage period

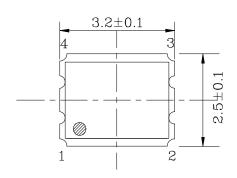
It is recommended that Storage period of SMD products for Bulk and T & R be within 6 months and 12 months, respectively.

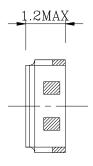
#### ■ Electrostatic Discharge (ESD) Precaution

SMD Oscillators are ESD-sensitive devices. The work surface where devices are placed for handling, processing, testing, etc., must, be made of static-dissipative material and be grounded to ESD ground.

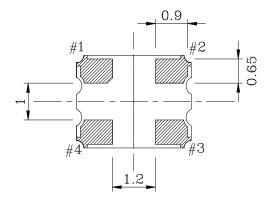


# ■Dimension (Unit: mm)









### CONNECTION

1 : N.C or EN/DIS(Tri-State)

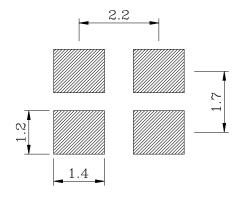
2 : GND 3 : OUTPUT 4 : Vcc

◆ E/D Function			
Condition on Pin 1	Output		
≥ 0.7Vcc	Enable		
≤ 0.3Vcc	Disable		
N.C	Enable		

# Note)

Please connect #1 pad to Vcc(#4 pad),

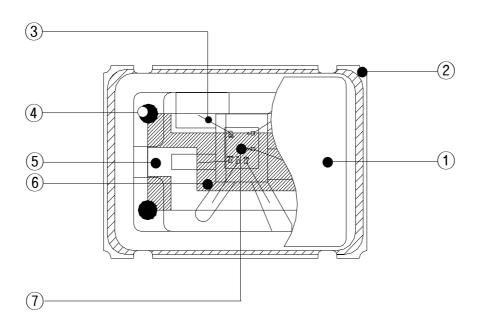
■ Recommended Soldering Pattern (Unit: mm) if don't use Enable/Disable function of #1.



#### Note)

Please connect bypass capacitor  $0.1\mu\text{F}$  or  $0.01\mu\text{F}$  between Vcc(#4 pad) and circuit ground.

# ■Structure illustration



# **■**Component

Component	Materials and Finish
Lid	Kovar
Package	$Al_2O_3$
Gold Wire	Au
Epoxy	Silicon
Synthetic Quartz	SiO <sub>2</sub>
Electrode	Ag
IC	Silicon

