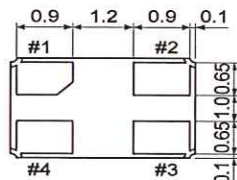
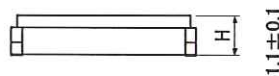
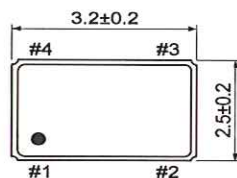
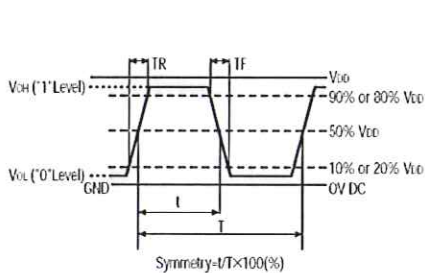
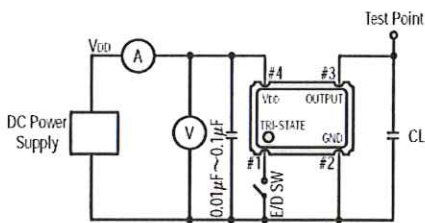


1. Part No. : 327SMO(D)
2. Output frequency : 32.768 kHz
3. Frequency stability : 327SMO(D)D:  $\pm 25$  ppm ( $\pm 0.0025\%$ ) over all conditions  
327SMO(D)E:  $\pm 20$  ppm ( $\pm 0.002\%$ ) over all conditions
4. Operating Conditions
  - Operating temperature :  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
  - Storage temperature :  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
  - Input voltage(VDD) :  $+3.3\text{V DC} \pm 5\%$  (+2.5V & +3.0V available)
5. Input current : 0.6 mA max. (0.24 mA, Typ. at VDD= +2.5V)  
1.0 mA max. (0.42 mA, Typ. at VDD= +3.0V & 3.3V)
6. Stand-by current :  $10 \mu\text{A}$  max. (Pin#1=ViL)
7. Output ( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )
  - Symmetry : 45% to 55% at 1/2 VDD level
  - Rise and fall times :  $1 \mu\text{s}$  max. (200 ns, Typ. at VDD= +3.3V)  
(10%VDD to 90% VDD level)
  - "0" level : 0.4V max. (VoL)
  - "1" level : VDD -0.4V min. (VoH)
  - Output load : CMOS 15 pF max.
8. Tri-state control voltage : 70%VDD min. (ViH)  
30% VDD max. (ViL)
9. Start-up time : 10 ms max.
10. SSB phase noise :  $-140$  dBc/Hz max. at 10kHz offset
11. Enable/Disable phase delay time :  $2 \mu\text{s}$  max.
12. Reflow soldering condition :  $+250^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for 10 seconds (reflow soldering)  
 $+170^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for 1 to 2 minutes (pre-heating)
13. Outline dimensions : See below



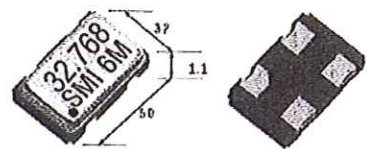
**327SMO(D) (Pb-free)  
RoHS Compliant**



CL : including fixture and probe capacitance.

PIN	CONNECTION
1	"L" OPEN or "H"
2	GND
3	Z OUTPUT
4	VDD

Z : high impedance



mm

ISSUED		CHECKED		APPROVAL	
 '08/07/16 佐々木		 '08/07/16 竹内		 '08/07/16 三浦	
ITEM. <b>CRYSTAL CLOCK OSCILLATORS</b>				No. <b>SO-9970A</b>	