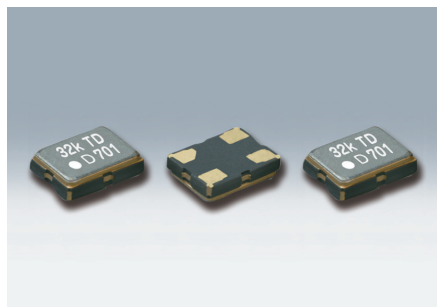


SMD TCXO (For Automotive)

DSK321STD/DSK321STA



Actual size

Features

- Digital temperature compensated type(DSK321STD)
- Analog temperature compensated type(DSK321STA)
- High precision: $\pm 5.0 \times 10^{-6}$ ($-40 \sim +85^{\circ}\text{C}$)
 $\pm 3.8 \times 10^{-6}$ ($-10 \sim +60^{\circ}\text{C}$)
- Low current consumption
- Low voltage operation: $+1.1 \sim +3.6\text{V}$ (DSK321STA)
- Moisture prevention packing is unnecessary.
Moisture Sensitivity Level: Level 1 (IPC/JEDEC J-STD-033)
- AEC-Q100 Compliant



Applications

- High precision clock source
- High precision clock source for RTC

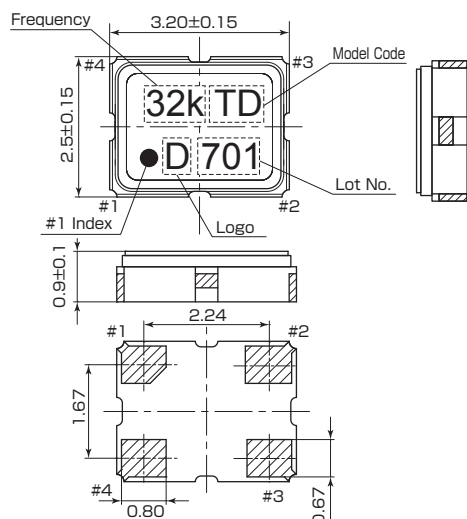
Standard Specification

Item	Legend	Spec.				Condition
		min.	typ.	max.	Unit	
Output Frequency	fo	—	32.768	—	kHz	
Supply Voltage Range	Vcc	+2.0	—	+5.5	V	(Temperature Compensated Operating)
		+1.3	—	+5.5	V	(Clock Timing Operating)
Frequency Tolerance (Includes frequency tolerance at room temperature.)	f_tol	—5.0	—	+5.0	$\times 10^{-6}$	$-40 \sim +85^{\circ}\text{C}$
		—3.8	—	+3.8	$\times 10^{-6}$	$-10 \sim +60^{\circ}\text{C}$
Current Consumption	Icc	—	+1.2	+2.5	μA	Vcc=+3.3V, Temperature Compensation Interval:0.5s, No Load
		—	+1.7	+3.2	μA	Vcc=+5.0V, Temperature Compensation Interval:0.5s, No Load
		—	+1.0	+2.0	μA	Vcc=+3.3V, Temperature Compensation Interval:2.0s, No Load
		—	+1.5	+3.0	μA	Vcc=+5.0V, Temperature Compensation Interval:2.0s, No Load
	Icc	—	+1.05	+2.4	μA	Vcc=+1.2V, Temperature Compensation Interval:0.5s, No Load
		—	+1.15	+2.5	μA	Vcc=+1.8V, Temperature Compensation Interval:0.5s, No Load
		—	+0.85	+2.1	μA	Vcc=+1.2V, Temperature Compensation Interval:2.0s, No Load
		—	+0.95	+2.2	μA	Vcc=+1.8V, Temperature Compensation Interval:2.0s, No Load
Symmetry	SYM	40	50	60	%	at 50% Vcc
0 Level Output Voltage	VOL	—	—	+0.4	V	
1 Level Output Voltage	VOH	Vcc-0.4	—	—	V	
Rise and Fall Time	tr, tf	—	—	50	ns	Vcc=+2.0~+5.5V, 10~90% Vcc Level
		—	—	200	ns	Vcc=+1.3~+5.5V, 10~90% Vcc Level
		—	—	50	ns	Vcc=+1.5~+3.6V, 10~90% Vcc Level
		—	—	200	ns	Vcc=+1.1~+1.5V, 10~90% Vcc Level
Load Condition	L_CMOS	—	—	15	pF	
Start Up Time	Tstart	—	—	3.0	s	
Reliability		—	—	1.0	s	
Packing Unit		AEC-Q100 2000pcs./reel ($\phi 180$)				

Consult our sales representative for other specifications.

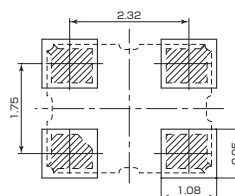
[mm]

Dimensions



Recommended Land Pattern

<Top View>



Model Code
TD:DSK321STD
TA:DSK321STA

Pin Connections	
Pin No.	Connection
#1	Vcc
#2	GND
#3	Output
#4	Vcc