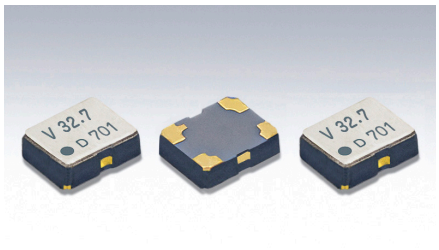
SMD TCXO〈For Automotive〉

DSK1612ATD



Actual size

■ Features

- Digital temperature compensated type
- High precision: ±5.0×10^{-6} (-40 to +85℃)
- Low current consumption
- AEC-Q200 Compliant

■ Applications

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

Pb-Free

RoHS Compliant

■ Standard Specification

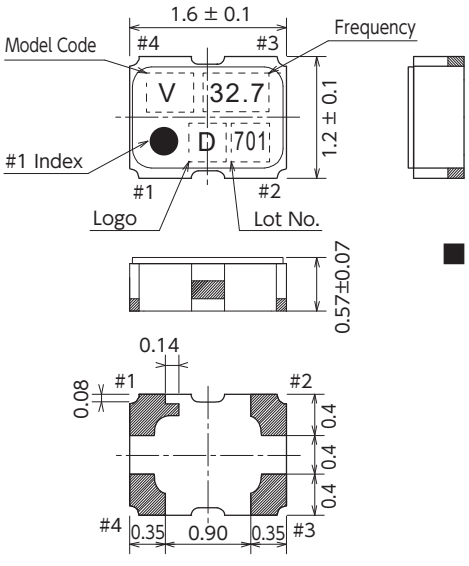
Item	Legend	Spec.				Condition
		min.	typ.	max.	Unit	
Output Frequency	f_0	–	32.768	–	kHz	
Supply Voltage Range	Vcc	+1.5	–	3.63	V	Temperature Compensated Operating
Frequency Tolerance	f_tol	−5.0	–	+5.0	×10^{-6}	Vcc=+1.8V or +3.3V, TA=-40 to +85℃ (Standard operating temperature range, Referenced to 32.768kHz)
Current Consumption	I_{CC1}	–	0.90	1.90	μA	Vcc=+1.8V, TA=-40 to +85℃, at No Load (1)
		–	1.23	2.60		Vcc=+3.3V, TA=-40 to +85℃, at No Load (1)
	I_{CC2}	–	1.26	2.43		Vcc=+1.8V, TA=-40 to +85℃, at No Load Temperature Compensation Interval: 0.5s (standard specification) (2)
		–	1.59	3.12		VCC=+3.3V, TA=-40 to +85℃, at No Load Temperature Compensation Interval: 0.5s (standard specification) (2)
Symmetry	SYM	40	50	60	%	at 50% Vcc
0 Level Output Voltage	V_{OL}	–	–	Vcc×0.1	V	
1 Level Output Voltage	V_{OH}	Vcc×0.9	–	–	V	
Rise and Fall Time	tr, tf	–	–	40	ns	10 to 90% Vcc Level
Load Condition	L_{CMOS}	–	–	15	pF	
Start Up Time	Tstart	–	–	0.5	s	
Reliability	AEC-Q200					
Packing Unit (3)	3000pcs./reel (φ180)					

(1) I_{CC1} is the current value when the temperature compensation circuit is not operating.
(2) I_{CC2} is the average current value when the temperature compensation circuit is operating and non-operating.
(3) Moisture prevention packing is unnecessary. Moisture Sensitivity Level: Level1 (IPC/JEDEC J-STD-033)

Consult our sales representative for other specifications.

[mm]

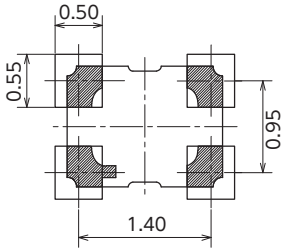
■ Dimensions



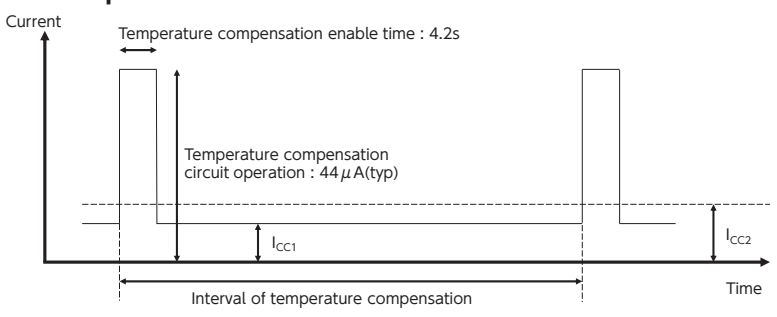
Pin No.	Connection
#1	GND
#2	Output
#3	Vcc
#4	GND

■ Recommended Land Pattern

<Top View>



■ Current profile



I_{CC2} (typ)=0.90μA×(0.5s-4.2ms)/0.5s + 44μA×4.2ms/0.5s=1.26 (Vcc=1.8V)
I_{CC2} (typ)=1.23μA×(0.5s-4.2ms)/0.5s + 44μA×4.2ms/0.5s=1.59 (Vcc=3.3V)