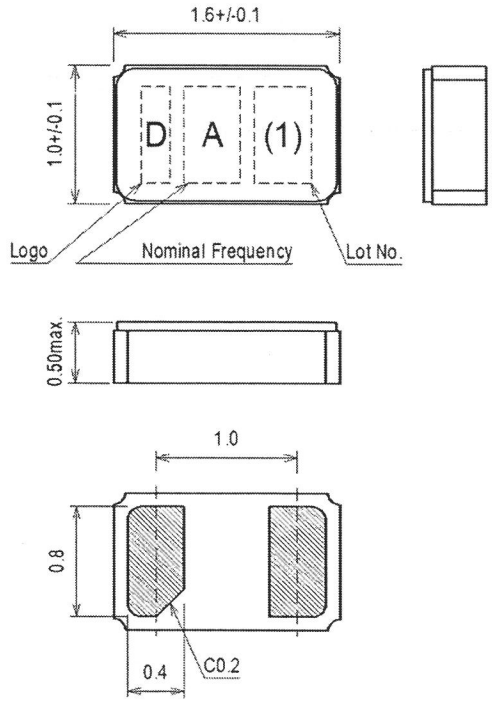
DATE 19-Jul-22

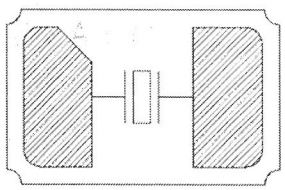
No. ZD13786

SPECIFICATION OF SURFACE MOUNT TYPE

1 .TYPE	DST1610A
2 .NOMINAL FREQUENCY	32.768 kHz
3 .OVERTONE ORDER	Fundamental
4 .LOAD CAPACITANCE(CL)	12.5 pF
5 .FREQUENCY TOLERANCE	$\pm$ 20 $\times$ 10^{-6} (at +25 $\pm$ 3° C)
6 .DRIVE LEVEL	0.1 μW $\pm$ 20 % (0.5μW max.)
7 .SERIES RESISTANCE	50 kΩ max. (at CL=Series)
8 .TURNOVER TEMPERATURE	+25 $\pm$ 5° C
9 .PARABOLIC COEFFICIENT	-0.04 $\times$ 10^{-6} / ° C^2 max.
10 .OPERATING TEMPERATURE RANGE	-40 ~ +85 ° C
11 .STORAGE TEMPERATURE RANGE	-40 ~ +85 ° C
12 .SHUNT CAPACITANCE(C0)	1.3 pF Typ.
13 .INSULATION RESISTANCE	500 MΩ min. (at DC 100 $\pm$ 15V)
14 .DIMENSIONS	Refer to Fig-1



<TOP VIEW>



D : manufacturer's code
A : Nominal Frequency
(1) : Lot. No.

Fig.-1

DAISHINKU CORP.

1. Device Name TCXO
2. Model Name DSB211SJA
3. Nominal Frequency 25.000 MHz
4. Mass 0.015g max.

5. Absolute Maximum Ratings

	Item	Symbol	Rating	unit
1	Supply Voltage	V_{CC}	-0.3~+4.6	V
2	Storage Temperature Range	$T_{\_STG}$	-40~+105	°C

6. Recommended Operating Conditions

	Item	Symbol	min.	typ.	max.	unit
1	Supply Voltage	V_{CC}	+3.135	+3.3	+3.465	V
2	Output Load	$L_{\_CMOS}$	-	-	15	pF
3	Operable Temperature Range	$T_{\_OPR}$	-40	-	+105	°C

7. Electrical Characteristics (T_A=+25°C, V_{CC}=+3.3V, $L_{\_CMOS}$=15pF unless otherwise noted)

	Item	Symbol	Condition	Limits			unit	Notes
				min.	typ.	max.		
1	Current Consumption	Icc	At No Load	-	-	4.5	mA	
2	Stand-by Current	$I_{\_std}$	#1 pin low level	-	-	10	uA	
3	Output Characteristics							
	1.Rise Time	tr	V_{CC}x0.1~V_{CC}x0.9	-	-	5.0	ns	
	2.Fall Time	tf	V_{CC}x0.1~V_{CC}x0.9	-	-	5.0	ns	
	3.Low Level	V_{OL}		-	-	V_{CC}x0.1	V	
	4.High Level	V_{OH}		V_{CC}x0.9	-	-	V	
	5.Symmetry	SYM	V_{CC}x0.5 Level	45	-	55	%	
4	Frequency Stability	f_tol						
	1.Tolerance		After 2 times reflow	-	-	±1.5	ppm	1,2
	2.vs Temperature		T_A=-40~+105°C	-	-	±5.0	ppm	3
	3.vs Supply Voltage		V_{CC}=+3.3±5%	-	-	±0.5	ppm	
	4.vs Aging		T_A=Room ambient	-	-	±1.0	ppm/year	
5	Input OE							
	1.Output enable time	tPZL		-	-	3	ms	
	2.Output disable time	tPLZ		-	-	150	ns	
	3.Enable input	V_{IH}		V_{CC}x0.8	-	-	V	
	4.Disable input	V_{IL}		-	-	V_{CC}x0.2	V	
6	Start Up Time		@90% of final V_{OUT} level	-	-	3	ms	

Notes

1. Ref. to nominal frequency
2. Please leave after reflow in 8h or more at room ambient.
3. Ref. to frequency (T_A=+25°C)

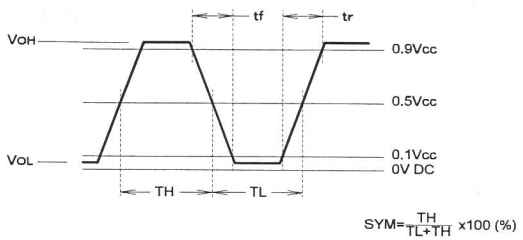


Fig1 . Output Waveform

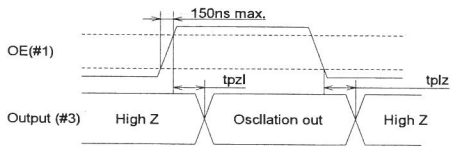


Fig2 . Input output condition

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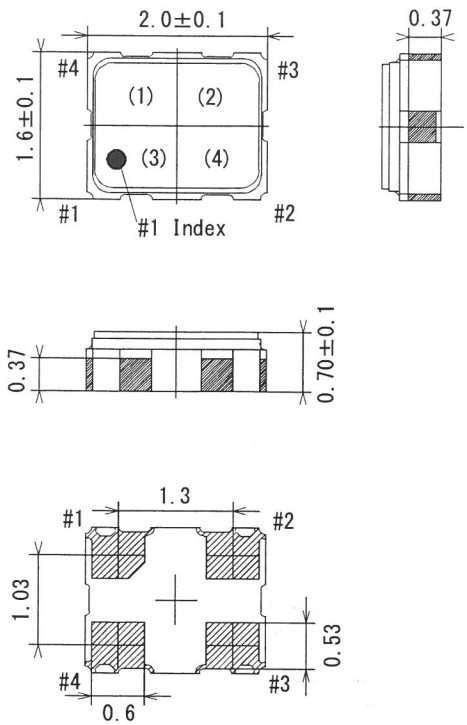
8. Outline, Pin Connections

Outline



Pin Connections

Pin No.	Connection
#1	O.E.(Output Enable)
#2	GND
#3	Output
#4	Vcc

Function

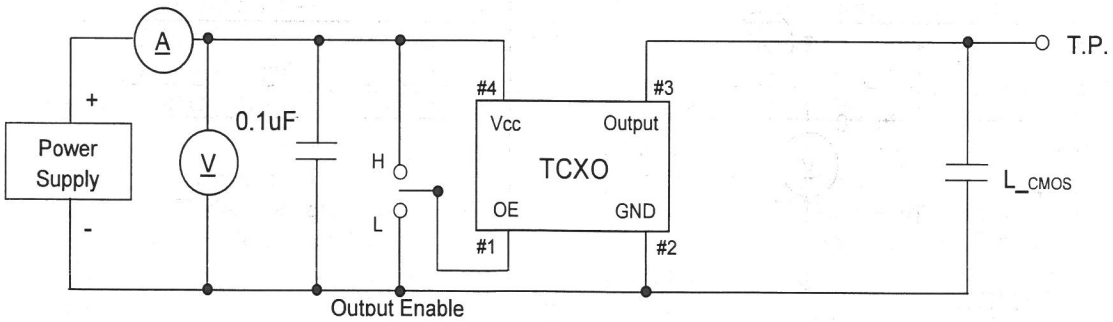
OE(#1) input	#3 output condition
"H"	Oscillation out
"L"	High Z

Marking

(1) Model code	JA
(2) Frequency	25.0 (MHz, 4digits)
(3) Logo	D
(4) Date code	Year (1digit) +Week (2digits) e.g.2022/1/1 → 201

unit: mm
Dimensional Tolerance: ±0.1
(Unless otherwise noted)

9. Measurement Circuit



Output Enable
H Oscillation
L Stand by

L_{CMOS}=15pF (Include Jig stray capacitance)

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