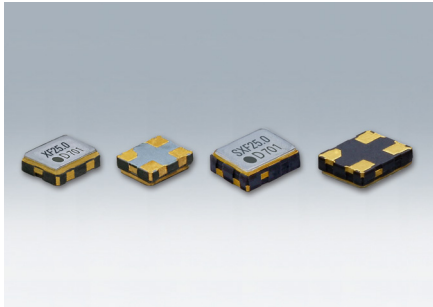


SMD Crystal Oscillators

DSO211SXF/DSO221SXF



Actual size DSO211SXF □ DSO221SXF □

Features

- Supply Voltage: 1.8V/2.5V/2.8V/3.3V
- Available frequency range: 1 to 125MHz
- Low profile: 0.7mm (DSO211SXF), 0.8mm (DSO221SXF)
- CMOS Level Output
- Capable of operating over a wide temperature range, from -40 to 125°C.
- 3-state function

Applications

- Audio equipment, communication equipment, visual equipment, FA equipment, PC, gaming equipment and WiLAN



[Function Code]

DSO***SXF A Z

A : 3.3V	A : $\pm 100 \times 10^{-6}$
B : 2.8V	Z : $\pm 80 \times 10^{-6}$
C : 2.5V	B : $\pm 50 \times 10^{-6}$
D : 1.8V	C : $\pm 30 \times 10^{-6}$
	D : $\pm 25 \times 10^{-6}$
	E : $\pm 20 \times 10^{-6}$

[Type]

DSO211SXF	2016 size
DSO221SXF	2520 size

When requesting the product, please select the model and function code of your request.

Standard Specification

Item	Function Code		Output Frequency Range (MHz)	Legend	Spec.			Unit	Condition	
	Supply Voltage	Frequency tolerance			min.	typ.	max.			
Supply Voltage	A	*	$1 \leq f_0 \leq 125$	V _{cc}	+3.0	+3.3	+3.6	V		
	B				+2.6	+2.8	+3.0			
	C				+2.25	+2.5	+2.75			
	D				+1.6	+1.8	+2.0			
Frequency Tolerance (includes frequency tolerance at room temperature)	*	A	*	f _{tol}	-	-	± 100	$\times 10^{-6}$	-40 to +125°C	-10 to +70°C (Standard Operating Temperature Range)
		Z			-	-	± 80			
		B			-	-	± 50			
		C			-	-	± 30			
		D			-	-	± 25			
Current Consumption	*	A	*	I _{cc}	$100 \leq f_0 \leq 125$	-	-	10.0	mA	No Load
					$40 \leq f_0 < 100$	-	-	4.2		
					$1 \leq f_0 < 40$	-	-	2.4		
					$100 \leq f_0 \leq 125$	-	-	9.0		
					$40 \leq f_0 < 100$	-	-	3.7		
					$1 \leq f_0 < 40$	-	-	2.2		
					$100 \leq f_0 \leq 125$	-	-	8.0		
					$40 \leq f_0 < 100$	-	-	3.4		
					$1 \leq f_0 < 40$	-	-	2.0		
					$40 \leq f_0 \leq 100$	-	-	2.7		
					$1 \leq f_0 < 40$	-	-	1.7		
					Stand-by Current (#1 pin "L"Level)	*	*	*		
Load Condition	*	*	*	L _{CMOS}	-	-	15	pF		
Symmetry	*	*	*	SYM	45	50	55	%	50% V _{cc} Level	
0 Level Output Voltage	*	*	*	V _{OL}	-	-	V _{cc} $\times 0.1$	V		
1 Level Output Voltage	*	*	*	V _{OH}	V _{cc} $\times 0.9$	-	-	V		
Rise and Fall Time	A, B, C	*	*	tr, tf	-	-	3	ns	10 to 90% V _{cc} Level	
OE Pin 0 Level Input Voltage	D	*	*	V _{IL}	-	-	V _{cc} $\times 0.3$	V		
OE Pin 1 Level Input Voltage	*	*	*	V _{IH}	V _{cc} $\times 0.7$	-	-	V		
Output Disable Time	*	*	*	tPLZ	-	-	200	ns		
Output Enable Time	*	*	*	tPZL	-	-	2	ms		
Period Jitter (1)	*	*	*	tRMS	-	2.4	-	ps	σ Peak to peak	
Total Jitter (1)	*	*	*	tp-p	-	23	-	ps	tDJ+n \times tRJ n=14.1(BER=1 $\times 10^{-12}$) (2)	
Phase Jitter	*	*	$40 \leq f_0 \leq 125$	tTL	-	34	-	ps	f ₀ offset:12kHz to 20MHz	
			$10 \leq f_0 < 40$	tpj	-	-	1	ps	f ₀ offset:12kHz to 5MHz	
Packing Unit (3)	3000pcs./reel (ϕ 180)									

(1) Measured WAVECREST DTS-2075

Consult our sales representative for other specifications.

(2) tDJ:Deterministic jitter tRJ:Random jitter

(3) Moisture prevention packing is unnecessary. Moisture Sensitivity Level: Level1 (IPC/JEDEC J-STD-033)

DSO211SXF

[mm]

DSO221SXF

[mm]

Dimensions

Model Code: 2.0 \pm 0.1, Frequency: 25.0, #1 Index, Logo, Lot No.

Pin Connections:
 Pin No. | Connection
 #1 | OE(Output Enable)
 #2 | GND
 #3 | Output
 #4 | V_{cc}

Function:
 #1 Input | #3 Output condition
 H | Oscillation out
 L | High Z

Recommended Land Pattern (Top View)

Dimensions

Model Code: 2.5 \pm 0.15, Frequency: 25.0, #1 Index, Logo, Lot No.

Pin Connections:
 Pin No. | Connection
 #1 | OE(Output Enable)
 #2 | GND
 #3 | Output
 #4 | V_{cc}

Function:
 #1 Input | #3 Output condition
 H | Oscillation out
 L | High Z

Recommended Land Pattern (Top View)