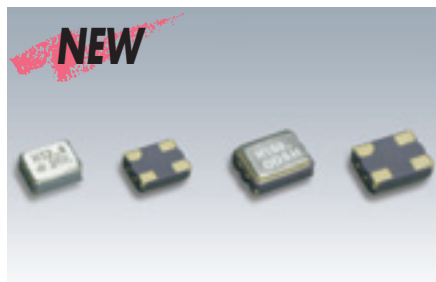


SMD Crystal Oscillators

DSO221SH/DSO321SH/DSO321LH

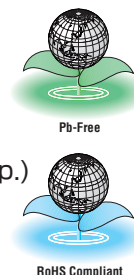


Features

- Low current consumption: 2.5mA Max.(44MHz, 3.3V)
- Low voltage operation: 2.5V/2.8V/3.3V
- Low phase noise: Fo offset ± 1 kHz -145 dBc/Hz(Typ.)
Fo offset ± 100 kHz -158 dBc/Hz(Typ.)
- Low profile: 0.82mm(DSO221SH), 0.855mm(DSO321LH)
1.1mm(DSO321SH)

Applications

- Wireless-LAN



Product

DSO321SH A B ←3225 Size 3.3V, $\pm 50 \times 10^{-6}$

DSO221SH C C ←2520 Size 2.5V, $\pm 30 \times 10^{-6}$

Type

Function Code (Frequency tolerance)

Function Code (Supply Voltage)

Frequency tolerance (-10~+70°C)	Supply Voltage	3.0V~3.6V 3.3V typ.	2.6V~3.0V 2.8V typ.	2.25V~2.75V 2.5V typ.
$\pm 100 \times 10^{-6}$		AA	BA	CA
$\pm 50 \times 10^{-6}$		AB	BB	CB
$\pm 30 \times 10^{-6}$		AC	BC	CC
$\pm 25 \times 10^{-6}$		AD	BD	CD
$\pm 20 \times 10^{-6}$		AE	BE	CE

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

Standard Specification

Item		Function Code		Available Frequency Range (MHz)	Legend	Spec.				Condition
		Supply Voltage	Frequency tolerance			MIN.	TYP.	MAX.	Unit	
Operating Temperature Range		*	*	*	T _{use}	−10	+25	+70	deg. C	
Supply Voltage		A	*	26≤Fo≤44	Vdd	+3.0	+3.3	+3.6	V	
		B	*			+2.6	+2.8	+3.0		
		C	*			+2.25	+2.5	+2.75		
Frequency Tolerance		*	A	26≤Fo≤44	F _{tol}	—	—	±100	×10 ⁶	−10~+70deg. C Includes frequency tolerance at room temperature.
		*	B			—	—	±50		
		*	C			—	—	±30		
		*	D			—	—	±25		
		*	E			—	—	±20		
Current Consumption		A	*	26≤Fo≤44	I _{dd}	—	—	+2.5	mA	No Load
		B	*			—	—	+2.5		
		C	*			—	—	+2.0		
Stand-by current (#1 pin "L" Level)		*	*	*	I _{std}	—	—	+10	μA	
Symmetry		*	*	Fo≤44	SYM	45	50	55	%	at 50% Vdd
"0" Level		*	*	*	V _{ol}	—	—	0.1Vdd	V	
"1" Level		*	*	*	V _{oh}	0.9Vdd	—	—		
Rise and Fall Time		*	*	Fo≤44	tr, tf			10	ns	0.1 Vdd — 0.9 Vdd
Output Load		*	*	*	L _{CMOS}			15	pF	
#1 (OE) Pin 0 Level Input Voltage		*	*	*	V _{il}	—	—	0.2Vdd	V	
#1 (OE) Pin 1 Level Input Voltage		*	*	*	V _{ih}	0.8Vdd	—	—		
Output Disable Time		*	*	*	T _{plz}	—	—	150	ns	
Output Enable Time		*	*	*	T _{pzl}	—	—	5	ms	
Phase Noise	F _{out} ±1kHz	*	*	*	PHN	—	−145	—	dBc/Hz	Vdd=2.8 V
	F _{out} ±100kHz					—	−158	—		
Packing Unit		2000pcs./reel (ø180)								

Consult our sales representative for other specifications.

Dimensions[mm]

