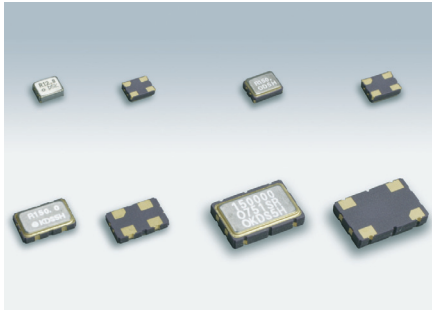


SMD Crystal Oscillators

DS0221SR/DS0321SR/DS0531SR/DS0751SR



■ Features

- Low current consumption: 6mA MAX (125MHz, 3.3V)
- Low voltage operation: 1.8V/2.5V/2.8V/3.3V
- Offers Narrow deviation: $\pm 20 \times 10^{-6}$ / $\pm 30 \times 10^{-6}$ / $\pm 50 \times 10^{-6}$ / $\pm 100 \times 10^{-6}$
- Available up to 150MHz by using AT cut fundamental resonator. Low jitter provides for high performance.
- Low profile: 0.815mm(DS0221SR), 1.1mm(DS0321SR/DS0531SR), 1.5mm(DS0751SR)



■ Product

DS0221SR A C

Type

Function Code
(Frequency tolerance)

Function Code
(Supply Voltage)

[Type]

DS0751SR	7349 size
DS0531SR	5032 size
DS0321SR	3225 size
DS0221SR	2520 size

[Function Code]

Frequency tolerance	Supply Voltage	3.0-3.6V 3.3V typ.	2.6-3.0V 2.8V typ.	2.25-2.75V 2.5V typ.	1.6-2.0V 1.8V typ.
$\pm 100 \times 10^{-6}$		AA	BA	CA	DA
$\pm 50 \times 10^{-6}$		AB	BB	CB	DB
$\pm 30 \times 10^{-6}$		AC	BC	CC	DC
$\pm 25 \times 10^{-6}$		AD	BD	CD	DD
$\pm 20 \times 10^{-6}$		AE	BE	CE	DE

■ Standard Specification

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

Item	Function Code		Available Frequency Range (MHz)	Legend	Spec.				Condition
	Supply Voltage	Frequency tolerance			min.	typ.	max.	Unit	
Supply Voltage	A	*	$0.3 \leq f_o \leq 150$	Vdd	+3.0	+3.3	+3.6	V	
	B	*	$0.3 \leq f_o \leq 100$		+2.6	+2.8	+3.0		
	C	*	$0.3 \leq f_o \leq 100$		+2.25	+2.5	+2.75		
	D	*	$0.3 \leq f_o \leq 80$		+1.6	+1.8	+2.0		
Frequency Tolerance (Includes frequency tolerance at room temperature.)	*	A	$0.3 \leq f_o \leq 150$	f _{tol}	-100	-	+100	$\times 10^{-6}$	-40~+85°C (Maximum Operating Temperature Range)
	*	B	$0.3 \leq f_o \leq 100$		-50	-	+50		-40~+85°C
	*	C	$0.3 \leq f_o \leq 80$		-30	-	+30		-20~+70°C
	*	D	$0.3 \leq f_o \leq 80$		-25	-	+25		-20~+70°C (Operating Temperature Range)
	*	E	$0.3 \leq f_o \leq 50$		-20	-	+20		-10~+70°C
Current Consumption	A	*	$0.3 \leq f_o < 32$	I _{dd}	-	-	1.8	mA	No Load
			$32 \leq f_o < 54$		-	-	2.5		
			$54 \leq f_o < 80$		-	-	5.0		
			$80 \leq f_o < 125$		-	-	6.0		
	B	*	$0.3 \leq f_o < 32$		-	-	1.8		
			$32 \leq f_o < 54$		-	-	2.5		
			$54 \leq f_o \leq 100$		-	-	5.0		
			$0.3 \leq f_o < 32$		-	-	1.5		
	C	*	$32 \leq f_o < 54$		-	-	2.0		
			$54 \leq f_o \leq 100$		-	-	4.0		
			$0.3 \leq f_o < 32$		-	-	1.0		
			$32 \leq f_o < 54$		-	-	1.4		
D	*	$54 \leq f_o \leq 80$	-	-	3.0				
Stand-by current (#1 pin "L" Level)	*	*	*	I _{std}	-	-	10	μA	
Symmetry	*	*	$f_o < 50$	SYM	45	50	55	%	50% Vdd Level
	*	*	$f_o \geq 50$		40	50	60		
0 Level Output Voltage	*	*	*	Vol	-	-	Vdd×0.1	V	
1 Level Output Voltage	*	*	*	Voh	Vdd×0.9	-	-		
Rise and Fall Time	A,B,C	*	$0.3 \leq f_o \leq 54$	tr, tf	-	-	5	ns	L _{CMOS} :15pF 10~90% Vdd Level
	D	*	$0.3 \leq f_o \leq 54$		-	-	7		
	*	*	$54 < f_o \leq 100$		-	-	5		
	*	*	$100 < f_o \leq 150$		-	-	3		
	A	*	$0.3 \leq f_o \leq 54$		-	-	10		
	A	*	$54 < f_o \leq 80$		-	-	6		
Output Load	*	*	*	L _{CMOS}	-	-	15	pF	
	A	*	$0.3 \leq f_o \leq 80$		-	-	30		
OE Pin 0 Level Input Voltage	*	*	*	Vil	-	-	Vdd×0.2	V	
OE Pin 1 Level Input Voltage	*	*	*	Vih	Vdd×0.8	-	-		
Output Disable Time	*	*	*	Tplz	-	-	150	ns	
Output Enable Time	*	*	*	Tpzi	-	-	1	ms	
Phase Jitter	A	*	$45 \leq f_o \leq 150$	tpj	-	-	1	ps	fo offset: 12kHz~20MHz

Consult our sales representative for other specifications.