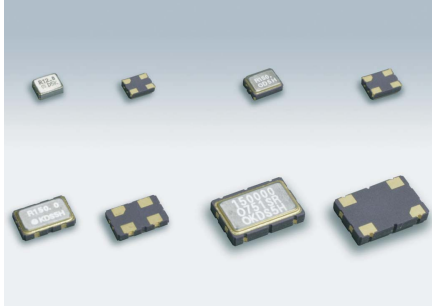


SMD Crystal Oscillators

DS0221SR/DS0321SR/DS0531SR/DS0751SR



Actual size 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 160MHz by using AT cut fundamental resonator. Low jitter provides for high performance.
- Low profile: 0.815mm(DS0221SR),
1.1mm(DS0321SR/DS0531SR),
1.5mm(DS0751SR)



[Type]

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

[Function Code]

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

■ 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		
Output Frequency Range	A	*	$0.3 \leq f_o \leq 160$	V _{dd}	+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	$0.3 \leq f_o \leq 160$	f _{tol}	-100	-	+100	×10 ⁻⁶	-40~+85°C	-10~+70°C (Standard Operating Temperature Range)
	*	B	$0.3 \leq f_o \leq 100$		-50	-	+50			
	*	C	$0.3 \leq f_o \leq 80$		-30	-	+30			
	*	D	$0.3 \leq f_o \leq 80$		-25	-	+25			
	*	E	$0.3 \leq f_o \leq 50$		-20	-	+20			
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			
			$125 \leq f_o \leq 160$		-	-	8.0			
	B	*	$0.3 \leq f_o < 32$		-	-	1.8			
			$32 \leq f_o < 54$		-	-	2.5			
			$54 \leq f_o \leq 100$		-	-	5.0			
	C	*	$0.3 \leq f_o < 32$		-	-	1.5			
			$32 \leq f_o < 54$		-	-	2.0			
			$54 \leq f_o \leq 100$		-	-	4.0			
	D	*	$0.3 \leq f_o < 32$		-	-	1.0			
$32 \leq f_o < 54$			-	-	1.4					
$54 \leq f_o \leq 80$			-	-	3.0					
Stand-by current (#1 pin "L" Level)	*	*	*	I _{std}	-	-	10	μA		
Symmetry	*	*	$f_o < 50$	SYM	45	50	55	%	50% V _{dd} Level	
	*	*	$f_o \geq 50$		40	50	60			
0 Level Output Voltage	*	*	*	V _{ol}	-	-	V _{dd} × 0.1	V		
1 Level Output Voltage	*	*	*	V _{oh}	V _{dd} × 0.9	-	-			
Rise and Fall Time	A,B,C	*	$0.3 \leq f_o \leq 54$	tr, tf	-	-	5 (4)	ns	L _{CMOS} :15pF 10~90% V _{dd} Level (20~80% V _{dd} Level)	
	D	*	$0.3 \leq f_o \leq 54$		-	-	7 (6)			
	*	*	$54 < f_o < 100$		-	-	4 (3)			
	*	*	$100 \leq f_o \leq 160$		-	-	3 (2.5)			
	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	*	*	*	V _{il}	-	-	V _{dd} × 0.2	V		
OE Pin 1 Level Input Voltage	*	*	*	V _{ih}	V _{dd} × 0.8	-	-			
Output Disable Time	*	*	*	T _{plz}	-	-	150	ns		
Output Enable Time	*	*	*	T _{pzl}	-	-	1	ms		
Phase Jitter	A	*	$45 \leq f_o \leq 160$	t _{pj}	-	-	1	ps	f _o offset: 12kHz~20MHz	
Packing Unit	DS0221SR, DS0321SR: 2000pcs./reel (φ180), DS0531SR: 1000pcs./reel (φ180), DS0751SR: 1000pcs./reel (φ254)									

Consult our sales representative for other specifications.