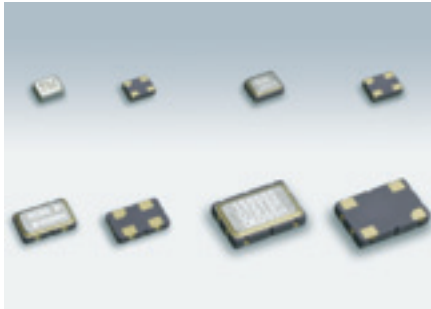


SMD Crystal Oscillators

DS0221SR/DS0321SR/DS0321LR/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), 0.855mm(DS0321LR), 1.1mm(DS0321SR/DS0531SR), 1.5mm(DS0751SR)



■ Product

DS0221SR A C

Type

Function Code
(Frequency tolerance)

Function Code
(Supply Voltage)

[Type]

DS0751SR	7349 size
DS0531LR	5032 size
DS0321SR	3225 size H 1.1mm
DS0321LR	3225 size H 0.855mm
DS0221SR	2520 size

[Function Code]

Frequency tolerance \ Supply Voltage	3.0V~3.6V 3.3V typ.	2.6V~3.0V 2.8V typ.	2.25V~2.75V 2.5V typ.	1.6V~2.0V 1.8V typ.
$\pm 100 \times 10^{-6}$	A A	B A	C A	D A
$\pm 50 \times 10^{-6}$	A B	B B	C B	D B
$\pm 30 \times 10^{-6}$	A C	B C	C C	D C
$\pm 25 \times 10^{-6}$	A D	B D	C D	D D
$\pm 20 \times 10^{-6}$	A E	B E	C E	D E

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	
Supply Voltage	A	*	$0.7 \leq f_o \leq 150$	V _{dd}	+3.0	+3.3	+3.6	V	
	B	*	$0.7 \leq f_o \leq 100$		+2.6	+2.8	+3.0		
	C	*	$0.7 \leq f_o \leq 100$		+2.25	+2.5	+2.75		
	D	*	$0.7 \leq f_o \leq 80$		+1.6	+1.8	+2.0		
Frequency Tolerance (Includes frequency tolerance at room temperature.)	*	A	$0.7 \leq f_o \leq 150$	f _{tol}	-100	-	+100	$\times 10^{-6}$	-40°C~+85°C (Operating Temperature Range)
	*	B	$0.7 \leq f_o \leq 100$		-50	-	+50		-40°C~+85°C (Operating Temperature Range)
	*	C	$0.7 \leq f_o \leq 80$		-30	-	+30		-20°C~+70°C (Operating Temperature Range)
	*	D	$0.7 \leq f_o \leq 80$		-25	-	-25		-20°C~+70°C (Operating Temperature Range)
	*	E	$0.7 \leq f_o \leq 50$		-20	-	-20		-10°C~+70°C (Operating Temperature Range)
	*								
Current Consumption	A	*	$0.7 \leq f_o < 32$	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		
			$125 \leq f_o \leq 150$		-	-	8.0		
	B	*	$0.7 \leq f_o < 32$		-	-	1.8		
			$32 \leq f_o < 54$		-	-	2.5		
			$54 \leq f_o \leq 100$		-	-	5.0		
			$0.7 \leq f_o < 32$		-	-	1.5		
			$32 \leq f_o < 54$		-	-	2.0		
	C	*	$54 \leq f_o \leq 100$		-	-	4.0		
			$0.7 \leq f_o < 32$		-	-	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% 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	*	$0.7 \leq f_o < 54$	tr, tf			7	ns	10%~90%V _{dd} Level
	B,C,D	*	$0.7 \leq f_o < 54$				5		
	*	*	$54 \leq f_o < 100$				5		
	*	*	$100 \leq f_o \leq 150$				3		
Output Load	*	*	*	L _{CMOS}			15	pF	
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	
Packing Unit	A	*	$75 \leq f_o \leq 150$	tpj	-	-	1	ps	Fo offset: 12kHz~20MHz

Consult our sales representative for other specifications.

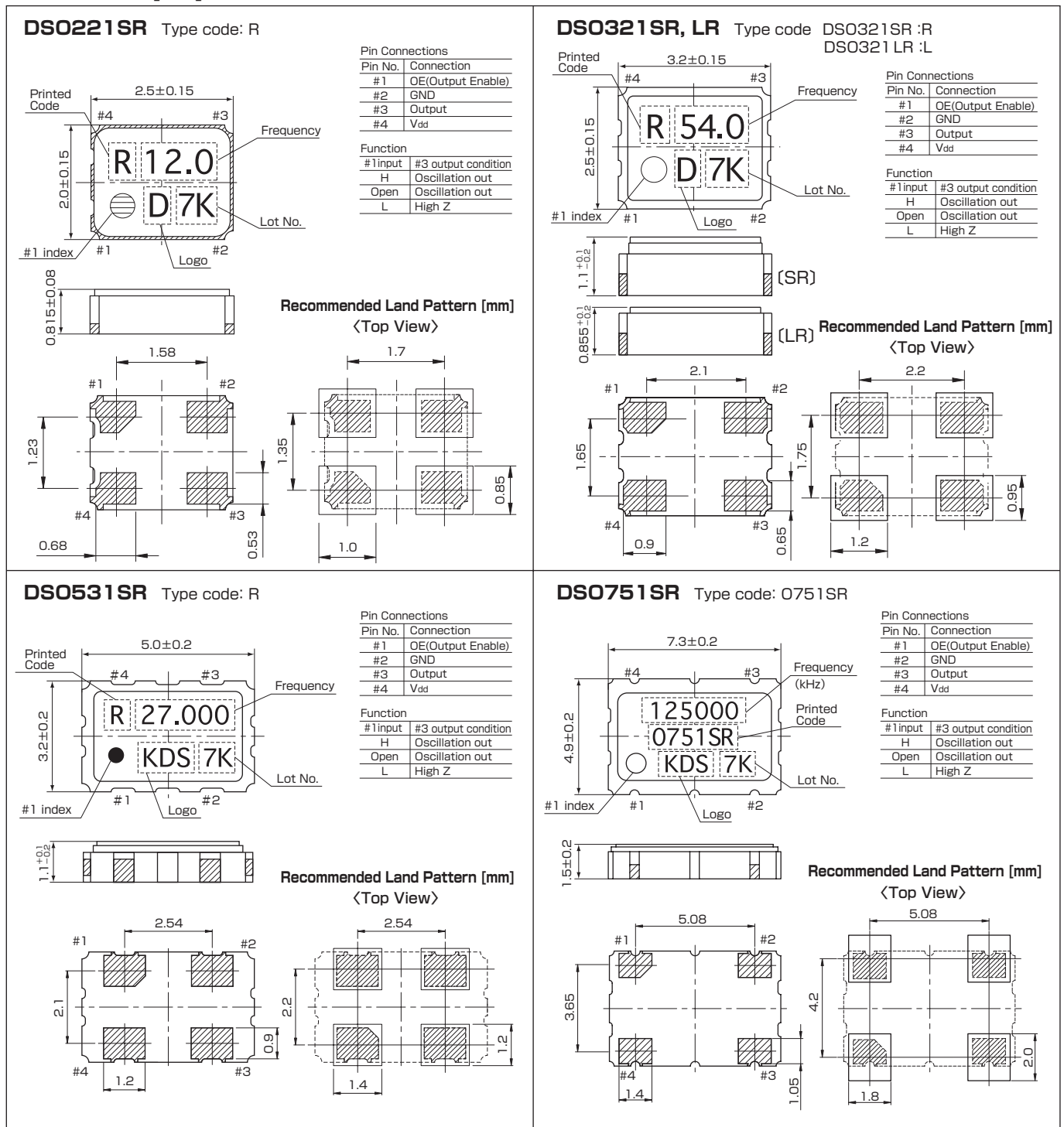
SMD Crystal Oscillators

DSO221SR/DSO321SR/DSO321LR/DSO531SR/DSO751SR

Applications

- PC, PDA, and peripherals
- DSC, DVD, Blu-ray Disk, HD DVD, TV, HDTV, DVC, HDD
- WiMAX
- Mobile phones: AP, camera module
- Telecommunications: GbEthernet, ISDN

Dimensions[mm]



Packing Unit

DSO221SR/ DSO321SR/ DSO321LR: 2000pcs./reel (φ180)

DSO531SR: 1000pcs./reel (φ180)

DSO751SR: 1000pcs./reel (φ254)