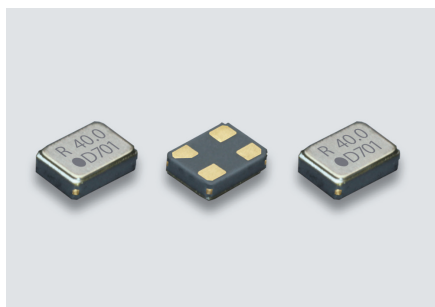


SMD Crystal Oscillators

DSO1612AR



Actual size □

■ Features

- 1612 size, 0.5 mm height. Ultra miniature and lightweight SMD SPXO
- 3-state function
- AEC-Q200 Compliant (Option: Equivalent to AEC-Q100)
- Supply Voltage : 1.8V/2.5V/2.8V/3.0V/3.3V
- Available frequency range : 0.584375 to 80MHz
- Available up to 80MHz by using AT cut fundamental resonator. Low jitter provides for high performance.
- CMOS Level Output

■ Applications

- PC, DSC, DVD, DVC, HDD
- Smartphone, WiLAN, WiMAX, Bluetooth
- Gaming equipment
- Automotive multimedia device
- Wearable devices

[Function Code]

DSO1612AR

A A

A : 3.3V	A : $\pm 100 \times 10^{-6}$
M : 3.0V	B : $\pm 50 \times 10^{-6}$
B : 2.8V	C : $\pm 30 \times 10^{-6}$
C : 2.5V	D : $\pm 25 \times 10^{-6}$
D : 1.8V	E : $\pm 20 \times 10^{-6}$



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	*	0.584375≤f0≤80	Vcc	+3.0	+3.3	+3.6	V		
	M				+2.7	+3.0	+3.3			
	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	0.584375≤f0≤80	f_tol	-100	—	+100	×10 ⁻⁶	-40 to +85℃	- 10 to +70 (Standard Operating Temperature Range)
		B			-50	—	+50			
		C	0.584375≤f0≤50		-30	—	+30		-20 to +70℃	
		D			-25	—	+25		-10 to +70℃	
		E			-20	—	+20			
Current Consumption	A,M	*	0.584375≤f0<40	Icc	—	—	3.0	mA	No Load	
			40≤f0≤80		—	—	4.2			
	0.584375≤f0<40		—		—	2.4				
	40≤f0≤80		—		—	3.7				
	0.584375≤f0<40		—		—	2.0				
	40≤f0≤80		—		—	3.4				
	0.584375≤f0<40		—		—	1.7				
	40≤f0≤80		—		—	2.7				
Stand-by Current (#1 pin "L" Level)	*	*	*	I_std	—	—	10	μA	-40 to +85℃	
Load Condition	*	*	0.584375≤f0≤80	L_CMOS	—	—	15	pF		
Symmetry	*	*	0.584375≤f0≤80	SYM	45	50	55	%	at 50% Vcc	
0 Level Output Voltage	*	*	*	V _{OL}	—	—	Vcc×0.1	V		
1 Level Output Voltage	*	*	*	V _{OH}	Vcc×0.9	—	—			
Rise and Fall Time	A,M,B,C	*	0.584375≤f0≤80	tr, tf	—	—	3.0	ns	10 to 90% Vcc Level	
	D				—	—	5.0			
OE Pin 0 Level Input Voltage	*	*	*	V _{IL}	—	—	Vcc×0.2	V		
OE Pin 1 Level Input Voltage	*	*	*	V _{IH}	Vcc×0.8	—	—			
Output Disable Time	*	*	*	tPLZ	—	—	200	ns		
Output Enable Time	*	*	*	tPZL	—	—	2	ms		
Period Jitter (1)	*	*	*	tRMS	—	2.2	—	ps	σ	
Total Jitter (1)	*	*	*	tp-p	—	20	—	ps	Peak to peak	
Phase Jitter	*	*	*	tTL	—	31	—	ps	tDJ+n×tRJ n=14.1 (BER=1×10 ⁻¹²) (2)	
Packing Unit (3)			40≤f0≤80 10≤f0<40	tpj	—	—	1	ps	f0 offset:12kHz to 20MHz f0 offset:12kHz to 5MHz	
3000pcs./reel (φ180)										

(1) Measured WAVECREST DTS-2075

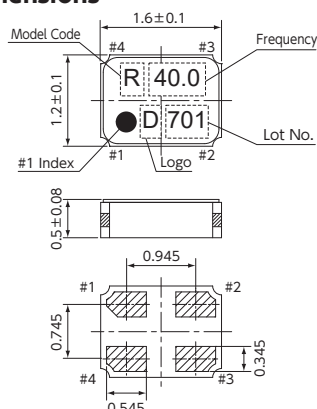
(2) tDJ : Deterministic jitter tRJ : Random jitter

(3) Moisture prevention packing is unnecessary. Moisture Sensitivity Level : Level 1 (IPC/JEDEC J-STD-033)

Consult our sales representative for other specifications.

[mm]

■ Dimensions



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
Open	Oscillation out
L	High Z

■ Recommended Land Pattern

<Top View>

