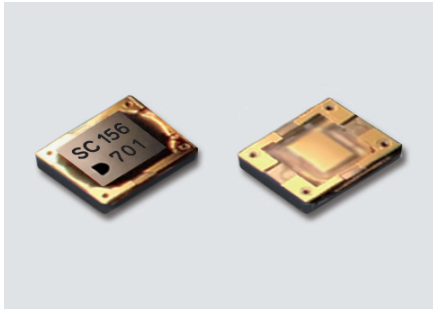


## SMD Differential Output Crystal Oscillators

### DS1008JC/DS1008JK/DS1008JJ



Actual size □

#### ■ Features

- 1008 size, height 0.24mm  
Unprecedented extremely low-profile package using a novel structure
- Available frequency range : 156.25MHz
- HD-LVDS output (DS1008JC)
- LV-PECL out put (DS1008JK)
- LVDS output (DS1008JJ)
- By using AT cut fundamental resonator, low jitter provides for high performance.



#### ■ Applications

- Optical transmission device

#### ■ Standard Specification

Item	Type	Legend	DS1008JC	DS1008JK	DS1008JJ	Condition
Output Specification	—		HD-LVDS	LV-PECL	LVDS	
Output Frequency Range	f <sub>o</sub>		156.25MHz			
Supply Voltage	V <sub>cc</sub>		+3.3V ± 0.165V		+2.5V ± 0.125V / +3.3V ± 0.165V	
Frequency Tolerance (Includes frequency tolerance at room temperature.)	f <sub>tol</sub>		± 100 × 10 <sup>-6</sup> max.			- 40 to +85°C
Current Consumption	I <sub>cc</sub>		35mA max.	57mA max.	26mA max.	
Load Condition	Load-R		100 Ω (Output-OutputN, DC Cut)	50 Ω to V <sub>cc</sub> - 2.0V	100 Ω (Output-OutputN)	
Symmetry	SYM		45 to 55%			at outputs cross point
0 Level Output Voltage	V <sub>OL</sub>		—	V <sub>cc</sub> - 1.81 to V <sub>cc</sub> - 1.62	—	
1 Level Output Voltage	V <sub>OH</sub>		—	V <sub>cc</sub> - 1.025 to V <sub>cc</sub> - 0.88	—	
Rise and Fall Time	tr, tf		0.4ns max	0.5ns max	0.4ns max	20 to 80% Output-OutputN
Differential Output Voltage	V <sub>OD1</sub> , V <sub>OD2</sub>		0.500 to 1.000V	—	0.247 to 0.454V	
Change to V <sub>OD</sub>	Δ V <sub>OD</sub>		—	—	50mV	Δ V <sub>OD</sub> =ABS(V <sub>OD1</sub> -V <sub>OD2</sub> )
Offset Voltage	V <sub>OS</sub>		—	—	1.125 to 1.375V	Output, OutputN Offset Voltage
Offset to V <sub>OS</sub>	Δ V <sub>OS</sub>		—	—	50mV	Magnitude Change V <sub>OS</sub>
Start Up Time	T <sub>st</sub>		2ms			
Period Jitter (1)	t <sub>RMS</sub>		2.5ps typ.			
	tp-p		22ps typ.			Peak to peak
Phase Jitter (2)	tpj		0.1ps max.		0.12ps max.	f <sub>o</sub> offset: 12kHz to 20MHz @ +25°C
Packing Unit (3)			3000pcs./reel (φ 180)			

(1) Measured WAVECREST DTS-2075

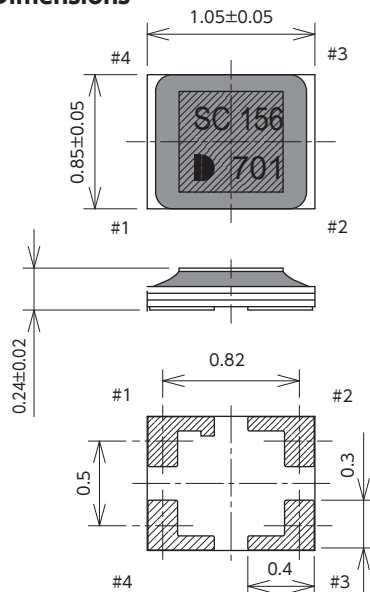
(2) Measured Keysight Technologies E5052B

(3) Moisture prevention packing

Consult our sales representative for other specifications

[mm]

#### ■ Dimensions



#### Pin Connection

Pin No.	Connection
#1	GND
#2	OutputN
#3	Output
#4	V <sub>cc</sub>

#### ■ Recommended Land Pattern

<Top View>

