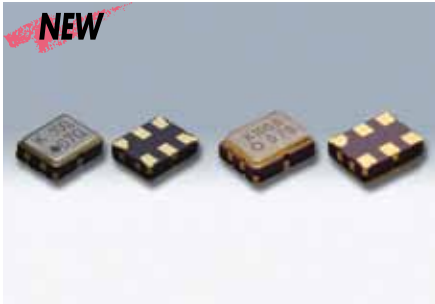


SMD Crystal Oscillators (For Automotive)

DSO223S/DSO323S SERIES



Actual size DSO223S DSO323S

■ Features

- 2.5V/3.3V operating voltage, High speed type
- 3-state function
- LV-PECL output (DSO223/323SK)
- LVDS output (DSO223/323SJ)
- HCSL output (DSO223/323SD)
- AEC-Q100 Compliant

■ Applications

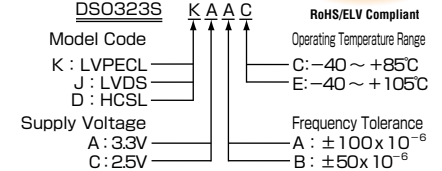
- Automotive multimedia devices

[Type]

DSO223S SERIES	2520 size
DSO323S SERIES	3225 size



[Function Code]



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

■ Standard Specification

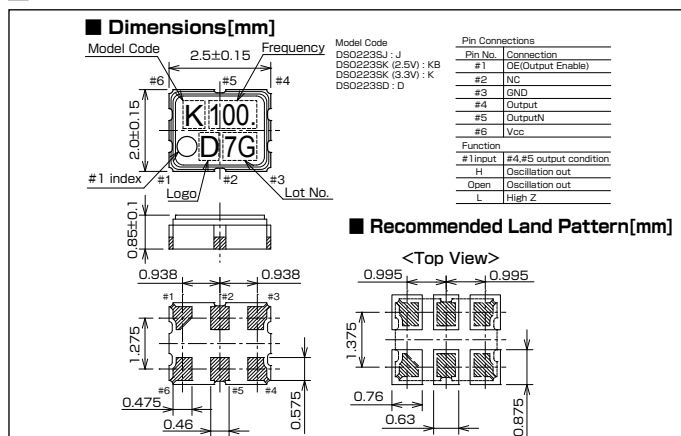
Item	Type	Legend	DSO223SK DSO323SK	DSO223SJ DSO323SJ	DSO223SD DSO323SD
Output Specification	—	—	LV-PECL	LVDS	HCSL
Output Frequency Range	fo	—	13.5~167MHz(DSO223S series)/13.5~212.5MHz(DSO323S series)		
Supply Voltage	Vcc	—	+2.5±0.125V/+3.3±0.165V		
Frequency Tolerance (Includes frequency tolerance at room temperature.)	f_tol	—	±50×10 ⁻⁶ max., ±100×10 ⁻⁶ max.		
Storage Temperature Range	T_stg	—	-40~+105°C		
Operating Temperature Range	T_use	—	-40~+85°C, -40~+105°C		
Current Consumption	Icc	—	45mA max. (fo≤170MHz), 50mA max. (170<fo≤212.5MHz)	20mA max.	30mA max. (fo≤170MHz), 35mA max. (170<fo≤212.5MHz)
Stand-by Current(#1 pin "L" Level)	I_std	—	10μA max.		
Load Resistance	Load-R	—	50Ω to Vcc-2V	100Ω (Output-OutputN)	50Ω
Symmetry	SYM	—	45~55% [at outputs cross point]		
0 Level Output Voltage	VoL	—	Vcc-1.81~Vcc-1.62V	—	-0.15V~0.15V
1 Level Output Voltage	VoH	—	Vcc-1.025~Vcc-0.88V	—	0.58V~0.85V
Rise and Fall Time	tr, tf	—	0.5ns max. [20~80% Output, OutputN]	0.4ns max. [20~80% Output-OutputN]	0.5ns max. [0.175~0.525V Level]
Differential Output Voltage	Vod1, Vod2	—	—	0.247~0.454V	—
Change to Vod	ΔVod	—	—	50mV [ΔVod= Vod1-Vod2]	—
Offset Voltage	Vos	—	—	1.125~1.375V	—
Offset to Vos	ΔVos	—	—	50mV	—
Crossing Point Voltage	Vcr	—	—	—	250~550mV
OE Pin 0 Level input Voltage	ViL	—	Vcc×0.3max.		
OE Pin 1 Level input Voltage	ViH	—	Vcc×0.7min.		
Output Disable Time	tPLZ	—	200ns		
Output Enable Time	tPZL	—	2ms		
Period Jitter(1)	tRMS	—	5ps typ. (13.5≤fo<27MHz) / 2.5ps typ. (27≤fo<212.5MHz) (σ)		
	tp-p	—	33ps typ. (13.5≤fo<27MHz) / 22ps typ. (27≤fo<212.5MHz) (Peak to peak)		
Total Jitter(1)	tTL	—	50ps typ. (13.5≤fo<27MHz) / 35ps typ. (27≤fo<212.5MHz) [tDJ + n*TRJ n=14.1(BER=1*10 ⁻¹⁵) (2)]		
Phase Jitter	tpj	—	1.5ps max. (13.5≤fo<27MHz) / 1ps max. (27≤fo<212.5MHz) [13.5≤fo<40MHz,fo offset: 12kHz~5MHz fo≥40MHz,fo offset: 12kHz~20MHz]		
Reliability	—	—	AEC-Q100		
Packing Unit	—	—	2000pcs./reel(φ180)		

(1) Measured WAVECREST DTS-2075

(2) tDJ: Deterministic jitter tRJ: Random jitter

Consult our sales representative for other specifications.

■ DSO223S SERIES



■ DSO323S SERIES

