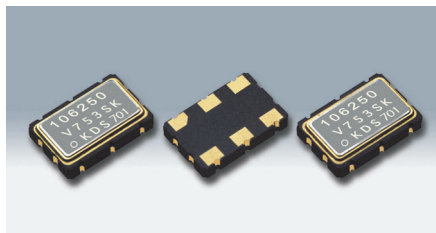


SMD Differential Output Voltage Controlled Crystal Oscillators

DSV753SV/DSV753SK/DSV753SJ/DSV753SD



Actual size

Features

- 7.3×4.9×1.5mm size miniature SMD-VCXO(0.06cc)
- Available with four types of output function:CMOS, LV-PECL, LVDS, HCSSL
- Differential output(LV-PECL, LVDS, HCSSL)
- Low jitter
- 3-state function

Applications

- Optical transmission device,radio transmitter-receiver equipment,digital image devices and HDTV.



Standard Specification

Item	Type	Legend	DSV753SV	DSV753SK	DSV753SJ	DSV753SD
Output Specification	—		CMOS	LV-PECL	LVDS	HCSSL
Output Frequency Range	f _o		2 to 170MHz		80 to 170MHz	
Supply Voltage	V _{cc}		+3.3V±0.33V		+3.3V±0.165V	
Frequency Control Voltage	V _{cont}		+1.65V±1.65V		+1.65V±1.65V	
Storage Temperature Range	T _{stg}		-40 to 85°C			
Operating Temperature Range	T _{use}		-10 to 70°C / -40 to 85°C			
Frequency Tolerance	f _{tol}		±50 X 10 ⁻⁶ max.			
Frequency Adjustment Range	f _{cont}		±100 X 10 ⁻⁶ min. [Positive Slope]			
Current Consumption	I _{cc}		12mA max. (2MHz≤f _o ≤90MHz) 25mA max. (80MHz≤f _o ≤170MHz) [No Load]	50mA max.	30mA max.	40mA max.
Stand-by Current (#1 pin "L" Level)	I _{std}		5mA max. (2MHz≤f _o ≤90MHz) 30μA max. (80MHz≤f _o ≤170MHz)	30μA max.		
Output Load	Load		15pF max.	50Ω to V _{cc} -2V	100Ω(Output-OutputN)	50Ω
Symmetry	SYM		40 to 60%[50% V _{cc} Level]	40 to 60%[at outputs cross point]		
0 Level Output Voltage	V _{OL}		V _{cc} ×0.1 max.	V _{cc} -1.81 to V _{cc} -1.62V	—	-150 to 150mV
1 Level Output Voltage	V _{OH}		V _{cc} ×0.9 min.	V _{cc} -1.025 to V _{cc} -0.88V	—	600 to 850mV
Rise and Fall Time	tr, tf		10ns max. (2MHz≤f _o ≤40MHz) 6ns max. (40MHz<f _o ≤54MHz) 4ns max. (54MHz<f _o ≤90MHz) 2ns max. (80MHz≤f _o ≤170MHz) [10 to 90% V _{cc} Level]	0.5ns max. [20 to 80% Output, OutputN]	0.5ns max. [20 to 80% Output-OutputN]	0.5ns max. [0.175 to 0.525V Level]
Differential Output Voltage	V _{OD1} , V _{OD2}		—	—	0.247 to 0.454V	—
Change to V _{OD}	ΔV _{OD}		—	—	50mV [ΔV _{OD} = V _{OD1} -V _{OD2}]	—
Offset Voltage	V _{OS}		—	—	1.125 to 1.375V	—
Offset to V _{OS}	ΔV _{OS}		—	—	50mV	—
Crossing Point Voltage	V _{cr}		—	—	—	250 to 550mV
OE Pin 0 Level Input Voltage	V _{IL}		V _{cc} ×0.3 max.			
OE Pin 1 Level Input Voltage	V _{IH}		V _{cc} ×0.7 min.			
Output Disable Time	t _{PLZ}		150ns max. (2MHz≤f _o ≤90MHz) 200ns max. (80MHz≤f _o ≤170MHz)	200ns max.		
Output Enable Time	t _{PZL}		150ns max. (2MHz≤f _o ≤90MHz) 2ms max. (80MHz≤f _o ≤170MHz)	2ms max.		
Period Jitter (1)	t _{RMS}		2.4ps typ. (σ)			
	t _{p-p}		22ps typ. (Peak to peak)			
Total Jitter (1)	t _{TL}		33ps typ. [t _{DJ} + n×t _{RJ} n=14.1 (BER=1×10 ⁻¹³) (2)]			
Phase Jitter	t _{pj}		1ps max. (f _o <40MHz, f _o offset : 12kHz to 5MHz, 40MHz≤f _o , f _o offset : 12kHz to 20MHz)			
Packing Unit (3)	—		1000pcs/reel (254φ)			

(1) Measured WAVECREST DTS-2075

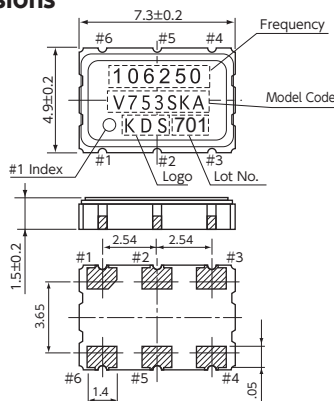
(2) t_{DJ} : Deterministic Jitter t_{RJ} : Random Jitter

(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



Frequency
DSV753SV (A+kHz)
DSV753SK (kHz)
DSV753SJ
DSV753SD

Model Code
DSV753SV→V753SV
DSV753SK→V753SKA
DSV753SJ→V753SJA
DSV753SD→V753SDA

Pin No.	Connection
#1	V _{cont}
#2	OE (Output Enable)
#3	GND
#4	Output
#5	NC - DSV753SV OutputN - DSV753SK OutputN - DSV753SJ DSV753SD
#6	V _{cc}

Function	#4,#5 Output condition
H	Oscillation out
Open	Oscillation out
L	High Z

Recommended Land Pattern

