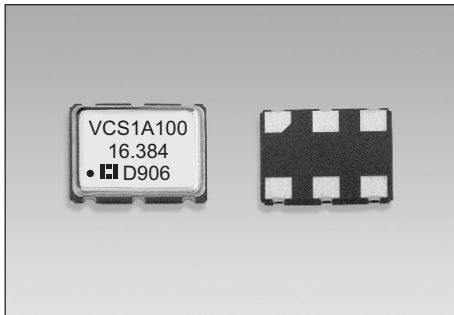




SMD VOLTAGE CONTROLLED CRYSTAL OSCILLATORS



• VC-S Series



The VC-S series is surface mount voltage controlled crystal oscillator designed primarily for use in phase locked loops, phase shift keying and other telecommunication applications such as ADSL, Cable modem etc. VC-S1 is 5V power supply and VC-S3 is 3.3V power supply.

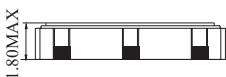
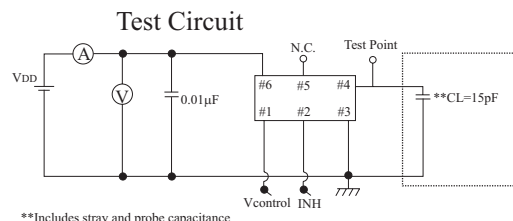
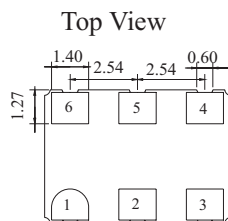
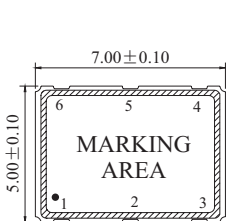
FEATURES

- Miniature Package
- Industry Standard
- TTL/HCMOS output compatible
- Tri-State Enable
- Tape and Teel
- 3.3V available

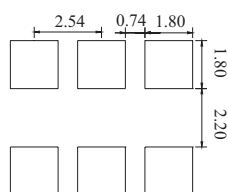
Electrical Specifications

Parameter	Condition	VC-S1	VC-S3
Frequency Range*	F ₀	1.750MHz~54.000MHz	
Frequency Calibration	At 25°C	± 15ppm	
Temperature Stability	Over T _{OPR}	± 15ppm, ± 25ppm, ± 50ppm	
Stability vs. power change	V _{DD} +/-5%	± 5ppm	
Stability vs. load change	15pF+/-10%	± 3ppm	
Pullability	Over Control Voltage Range	± 50ppm, ± 100ppm, ± 200ppm	± 50ppm, ± 100ppm, ± 150ppm
Control Voltage Range		0.5~4.5V	0~3.3V
Operating Temperature Range	T _{OPR}	0°C~70°C (-40°C~+85°C option)	
Storage Temperature Range	T _{STG}	-55°C~+125°C	
Power Supply Voltage	V _{DD}	5.0V+/-5%	3.3V+/-5%
Aging (First Year)	25°C ± 3°C	± 5ppm	
Supply Current	I _{DD}	30mA Max	
Output Symmetry	Sym	At 1/2V _{DD} 40/60%(45/55% Option)	
Rise time	T _r	20%V _{DD} ~80%V _{DD} 8nS Max	10nS Max
Fall Time	T _f	80%V _{DD} ~20%V _{DD} 8nS Max	10nS Max
Output Voltage	V _{OH}	90% V _{DD} min	
	V _{OL}	10% V _{DD} max	
Output Load		15pF Max	
Start-up Time	T _s	10mS Max	
Packing Unit		1000pcs/reel	

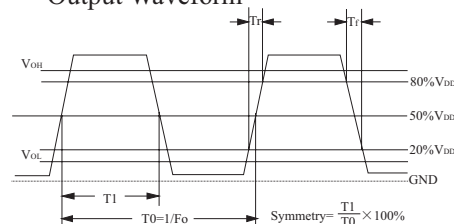
Mechanical Dimensions(mm)



Recommended Solder Pattern



Output Waveform



Pin	Connection
#1	Vcontrol
#2	Tri-state
#3	GND
#4	Output
#5	N.C.
#6	V _{DD}

***note: A 0.01µF bypass capacitor should be placed between V_{DD}(Pin6) and GND(Pin3) to Minimize power supply line noise

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Specifications are subject to change without notice