

HV053 Series



5.0 x 3.2mm, high temperature VCXO unit

Wide operating temperature up to 210°C
 High shock and vibration resistant
 Low aging, very fast start up
 RoHS and REACH compliant

Applications
 Down hole drilling, Avionics, Geothermal equipment, Airborne equipments, Fire fighter equipments

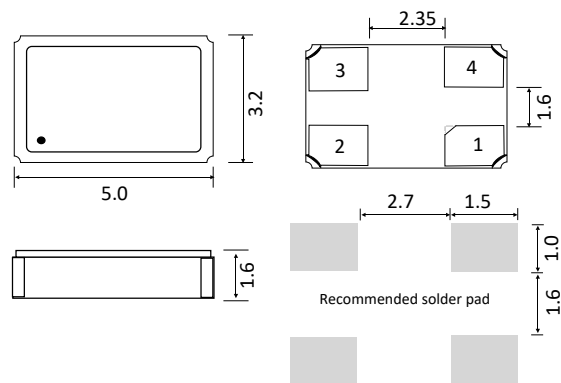
Parameters		Specification		Remarks
Frequency range		F_nom	5.0MHz ~ 40.0MHz	Table 1
Supply voltage		Vcc	3.3V	±5% , 47nF capacitor must be connected between GND and Vcc
Absolute Frequency Pulling range (APR)	-40°C ~ +85°C	F_stb	±130.0ppm	APR is inclusive of frequency deviation due to stability adjustment 25°C, long term aging 1 year, over supply voltage change, over load min to max, frequency stability over operating temperature range.
	-55°C ~ +125°C		±120.0ppm	
	-10°C ~ +150°C		±90.0ppm	
	-10°C ~ +175°C		±50.0ppm	
	-10°C ~ +210°C		±30.0ppm	
Input current		Icc	Table 2	without load
Output type			HCMOS	
Duty cycle		Sym	40/ 60 %	
Rise & Fall time		Tr, Tf	≤ 5.0 n sec	load 15pF, 20% to 80%
Level "0" & "1"			<0.4> Vcc - 0.5V	
Start-up time			< 5 msec	
Load min / max			3.0pF / 47.0pF	
Storage temperature range			-65°C ~ +125°C	
Vibration resistance survival			10 to 2,000Hz / 80g	
Shock resistance survival			10,000g /0.3ms/ ½ sine	
Voltage control range		Vc	0 to 3.3V	
Response slope			Positive	
Frequency bandwidth			≤10kHz	
Input impedance			≥100k ohm	

10MHz	12.288MHz	12.80MHz	20MHz
24MHz	24.576MHz	25.6MHz	
Please enquire for other frequencies			

Frequency	< 10MHz	≤ 20MHz	< 40MHz
Vcc = 3.3V	< 4mA	< 5mA	< 20mA

Reflow soldering	260°C / 10s max
Lids	Ceramic (Kovar for part with operating temp. -10°C ~ +210°C)
Termination	Au plated (standard), For tinned Ag/Cu/Sn please enquire

Dimensions (mm)



Pad 1	Vc
Pad 2	GND
Pad 3	Output
Pad 4	Supply voltage Vcc

HVO53 Series

5.0 x 3.2mm, high temperature VCXO unit



Specification requirement						
ACT series	Frequency (MHz)	Absolute pull range (APR)/Operating temperature	Supply voltage (V)	Termination	Packaging	RoHS
HVO53	Example 8.0MHz 14.7456MHz 40.0MHz	$\pm 130\text{ppm} / -40 \sim +85 \text{ }^\circ\text{C}$ $\pm 110\text{ppm} / -55 \sim +125 \text{ }^\circ\text{C}$ $\pm 90\text{ppm} / -10 \sim +150 \text{ }^\circ\text{C}$ $\pm 50\text{ppm} / -55 \sim +210 \text{ }^\circ\text{C}$ $\pm 30\text{ppm} / -10 \sim +210 \text{ }^\circ\text{C}$	3.3V	Au plated (standard) Tinned (Ag/Cu/Sn)	Loose : 128pcs/tray Tape&Reel : min 250pcs available in 12mm tape	-PF
HVO53/8MHz/ $\pm 90\text{ppm} / -10 \sim +150 \text{ }^\circ\text{C} / 3.3\text{V} / \text{Au plated} / \text{Loose}$						
A unique part number will be generated for each specification request. Example: HVO53-2000M-Cxxxx-PF						

Additional information

Drawing control: (Internal use only)
Commodity code: 854160 00 00
Issue number: N1
Date: 1/08/2019
Internal reference: M1

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Specifications subject to change without notification