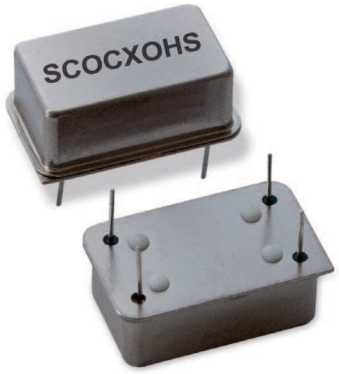
MICRO CRYSTAL SWITZERLAND

SCOCXOHS family package DIL 14

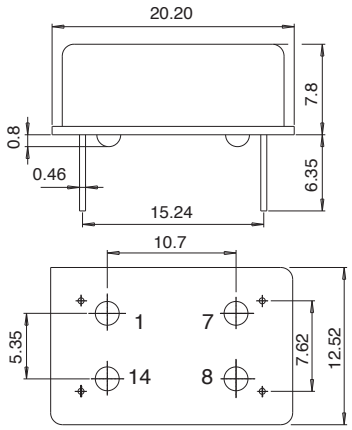
Sine Wave Output 10 to 120MHz Low phase noise



RoHScompliant:

DIMENSIONS

Package:



Pin out
Pin 1 = Voltage control
Pin 7 = Gnd
Pin 8 = Fout
Pin 14 = Vdd

All dimensions in mm typical

Oven control quartz crystal oscillator
Fundamental mode frequency
High shock and vibration resistance
Wide temperature range
Low aging
Customer specification on request
Very fast warm up
Low power consumption
Swiss made quality

DESCRIPTION:

This DIL 14 package has been specially designed for the applications:
- Digital switching
- Telecom transmission
- Sonet / SDH / DWDM / FDM/36 / WIMAX
- Airbone equipments
- Battery operated systems
- Instrumentation
- Radio Transceiver

The OCXO are supplied on trays (50 pcs/tray).

ELECTRICAL CHARACTERISTICS AT 25°C

Frequency versus temperature A: 0 to +60°C B: -20 to +70°C C: -40 to +85°C	ΔF/F	see table 1 (without air flow)		
Frequency long term aging 1) long term aging 10 years long term aging 1st year	ΔF/F	10MHz < ± 2.5 ≤ ± 0.3	100MHz < ± 4 ≤ ± 1	ppm
Frequency control range see table 3	Vc	10MHz ≥ ± 2.5	100MHz ≥ ± 4	ppm
Supply voltage	Vdd	3.3 / 5		V
Input current	Idd	see table 2		
Output signal sine wave		see table 4		
Start-up time	t	<5		ms
Frequency stability versus load ± 5%	ΔF/F	≤ ± 10		ppb
Warm-up within ± 0.1 ppm at 25°C	Vdd	3.3	5	V
	t	≤ 120	≤ 60	s
Stability versus Vdd	ΔF/F	< ± 0.1		ppm
Short term stability 0.1 to 30s 5E-11 typ at 1s	Tau	< 5		E-10
Phase noise typical Static conditions BW = 1Hz 10Hz 100Hz 1 kHz 10 kHz 100kHz		10MHz -110 -140 -155 -160 -160	100MHz -90 -120 -140 -150 -155	dBc/Hz

1) <± 1 E-9 / day after 30 days operating 10MHz
<± 3 E-9 / day after 30 days operating 100MHz

TABLE 1: Vdd = 3.3V

Operating Temperature range	Vdd = 3.3V ± 0.15V	
	Version standard	Version high stability
A = 0 to +60°C	≤ ± 75 ppb	≤ ± 50 ppb
B = -20 to +70°C	≤ ± 150 ppb	≤ ± 75 ppb
C = -40 to +85°C	≤ ± 250 ppb	≤ ± 100 ppb

TABLE 1: Vdd = 5V

Operating Temperature range	Vdd = 5V ± 0.2V	
	Version standard	Version high stability
A = 0 to +60°C	≤ ± 50 ppb	≤ ± 25 ppb
B = -20 to +70°C	≤ ± 100 ppb	≤ ± 50 ppb
C = -40 to +85°C	≤ ± 150 ppb	≤ ± 100 ppb

TABLE 2: Idd

Temperature	Vdd = 3.3V	Vdd = 5V
+25°C -20°C	120 mA 170 mA	80 mA 110 mA
start-up current at 25°C ≤ 300mA duration	30s	10s

TABLE 3: VC

Frequency control adjustment response slope positive	Vdd = 3.3V	Vdd = 5V
Voltage control input impedance > 47kΩ	0 to 3.3V	0.5 to 5V
Resistor control R connect pin 1 to ground (Input impedance > -4,7kΩ)	0 to 10kΩ	0 to 10kΩ

TABLE 4: OUTPUT SIGNAL

Vdd	3.3V	5V
Load	50Ω	50Ω
Level ≤20MHz	≥ 4dBm	≥ 4dBm
Level >20MHz	≥ -2dBm	≥ 0dBm
Harmonics	-15dBc	-15dBc
Spurius	-70dBc	-70dBc

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STANDARD FREQUENCIES:

Frequency «MHz»	
10	100
Other frequencies from 10 MHz to 120 MHz on request	

ENVIRONMENTAL CHARACTERISTICS:

Storage temp. range	-55 to +125°C
Vibration resistance	10 to 2000Hz / 20g
Shocks resistance	5000g / 0.3ms / ½ sine

TERMINATIONS AND PROCESSING:

pins soldering	+235°C / 10s max +260°C / 5s max
Package SMD version option D1 or D2 see application notes	Dil 14.4 pins GND to case height = 8mm

PRODUCT DESCRIPTION AND ORDERING INFORMATION:

SCOCXOHS V T - C V5 20MHz XXX

W = Vdd 3.3V
V = Vdd 5V

T = high stability
blank = standard stability

A = 0 to +60°C
B = -20 to +70°C
C = -40 to +85°C
X = custom

R1 = R = 0 to 10kΩ
V3 = Vc = 0 to 3.3V
V5 = Vc = 0.5 to 5V
Y = custom

Frequency

customer spec N°

A unique part number will be generated for each product specification, i.e:
20xxxx-EA00 (in ESD plastic tray)
Please contact us.

All specifications subject to change without notice.

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