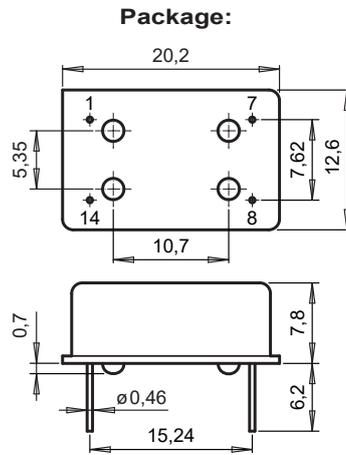




DIMENSIONS



Pin Out:

pin 1 GND
pin 7 GND
pin 8 F_{OUT}
pin 14 V_{DD}

Case is connected to GND (pin 7)

All dimensions in mm typical

APPLICATIONS

Cospas-Sarsat
Airborne Equipment

DESCRIPTION

The OCXOVT-SAR is an Oven Controlled Quartz Crystal Oscillator with Sine Wave Output that incorporates a custom circuit and an XTAL operating under vacuum, in a hermetically sealed DIL-14 metal package.

FEATURES

- High stability and low aging.
- Very fast warm up.
- Low power consumption.
- Operates in fundamental mode.
- High shock and vibration resistant.
- RoHS-compliant.

ELECTRICAL CHARACTERISTICS AT 25°C

Frequency versus temperature -40 to +55°C 15 minutes after turn-on and a change rate of 5°C/h	$\Delta F/F$	< ± 3 ppb / 50 s	
Frequency long term aging including calibration and 10 years aging	$\Delta F/F$	< ± 4.5	ppm
Frequency calibration (pin 1 to GND)	$\Delta F/F$	$\leq \pm 1$	ppm
Supply voltage ± 0.2 V	V_{DD}	5.0	V
Input current	I_{DD}	See I_{DD} table	mA
Output signal		sine wave	
Output signal level	V_{OS}	> 1	V_{PP}
Start-up time	t_{START}	< 5	ms
Capacitive load min. / max.	C_L	5 / 15	pF
Frequency stability versus load $\pm 10\%$	$\Delta F/F$	$\leq \pm 10$	ppb
Warm-up time within ± 0.1 ppm at +25°C	t	≤ 60	s
Stability versus V_{DD}	$\Delta F/F$	< ± 0.1	ppm
Short term stability (Allan deviation) at T = 0.1 to 30 s 0.05 ppb typical at T = 1 s	σ	< 0.5	ppb
Phase noise typical at 10 MHz:			
Static conditions		-100	
BW = 1 Hz	L	-130	dBc/Hz
		-140	
		-145	
		-145	

INPUT CURRENT: I_{DD} (load typ. $C_L = 10$ pF)

Temperature	$V_{DD} = 5.0 \text{ V} \pm 0.2 \text{ V}$
+25°C	≤ 40 mA
-20°C	≤ 70 mA
Start-up current at -40°C / duration	≤ 350 mA / 10 s

STANDARD FREQUENCIES

Frequencies		
5.075350 MHz	5.0753125 MHz	10.150625 MHz
10.150700 MHz	12.688281 MHz	12.688375 MHz
Other frequencies from 5 MHz to 40 MHz on request		

ENVIRONMENTAL CHARACTERISTICS

	Conditions
Storage temperature range	-55 to +125°C
Shock resistance (survival)	500 g, 4 ms, ½ sine, 6 directions 100 g, 23 ms, ½ sine, 6 directions
Vibration resistance (survival)	20 g / 10 – 2000 Hz

TERMINATIONS AND PROCESSING, OPTION 1

Thermal shock	25 cycles, -55 to +85°C
Life test	1000 hours
Warm storage aging	1000 hours
Pins soldering	+235°C / 10 s max. +260°C / 5 s max.
Package	Metal DIL-14 / 4 pins
Terminations (Option 1) (see Application Manual)	SMD, formed leads (D2)
	THD, Standard (Blank)

ORDERING INFORMATION

OCXO	V	T	- SAR	10.150700 MHz	D2	XXX
Supply voltage $V = V_{DD} = 5.0 \text{ V}$				Frequency		
Frequency stability T = High stability				Option 1 D2 = SMD (formed leads) Blank = THD (Standard)		
Cospas-Sarsat Applications (Sine Wave Output) (-40 to +55°C)				Customer specification N°		
A unique part number will be generated for each product specification, i.e:						
20xxxx-EA00		yyy pcs (in ESD plastic tray)				

All specifications subject to change without notice.



Micro Crystal AG
Muehlestrasse 14
CH-2540 Grenchen
Switzerland

Phone +41 32 655 82 82
sales@microcrystal.com
www.microcrystal.com