

Typical Applications

Base Stations
 Test Equipment
 Synthesizers

Features

AT-Cut Crystal
 Dual-inline oscillator
 Surface Mount Option



Previous Vectron Model Numbers

TQDILP; TQDILC; TQDILAC

Frequency range

1 MHz – 90 MHz

Standard frequencies

10.00; 16.384; 19.44; 30.72; 32.768; MHz;
 50.00; 77.76 MHz;

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	-100.0		+100.0	ppm	-55 ... +125°C	H104
	-50.0		+50.0	ppm	-55 ... +125°C	H505
	-50.0		+50.0	ppm	-55 ... +105°C	G505
	-25.0		+25.0	ppm	-55 ... +105°C	G255
	-15.0		+15.0	ppm	-40 ... +85°C	F255
	-50.0		+50.0	ppm	-20 ... +70°C	D505
	-20.0		+20.0	ppm	-20 ... +70°C	D205
	-10.0		+10.0	ppm	-20 ... +70°C	D105
	-7.5		+7.5	ppm	-20 ... +70°C	D756
	-5.0		+5.0	ppm	-20 ... +70°C	D506
Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Initial tolerance	-100.0		+100.0	ppm		T104
	-50.0		+50.0	ppm		T505
	-20.0		+20.0	ppm		T205
	-10.0		+10.0	ppm		T105
	-5.0		+5.0	ppm		T506
vs. supply voltage change	-2.0		+2.0	ppm	V _S ± 5% Load ± 10% fo ≤ 90 MHz	
vs. load change	-1.0		+1.0	ppm		
vs. aging /1. Year	-2.0		+2.0	ppm		

Supply voltage

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Supply voltage (V _S)	4.75	5.0	5.25	VDC		SV050
Current consumption			40	mA	@ HCMOS fo ≤ 90.0 MHz	

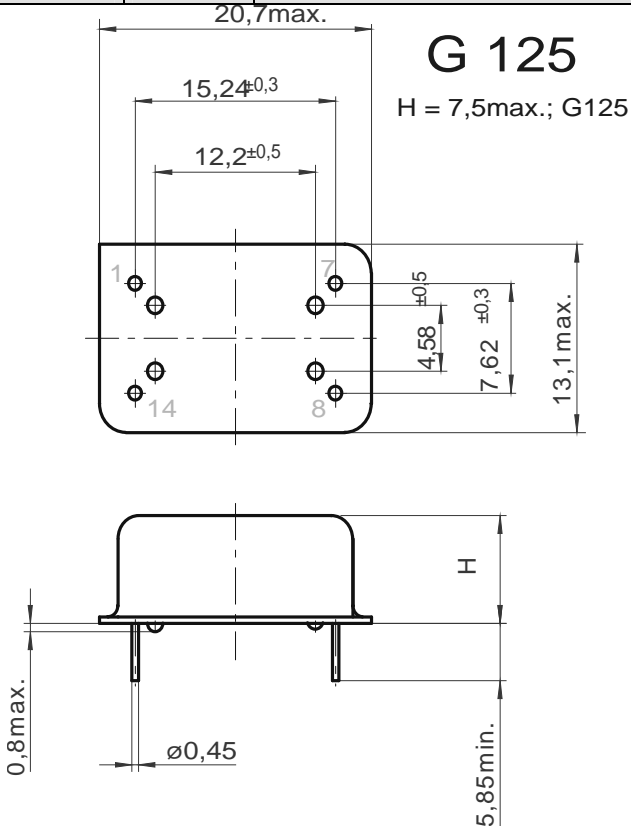
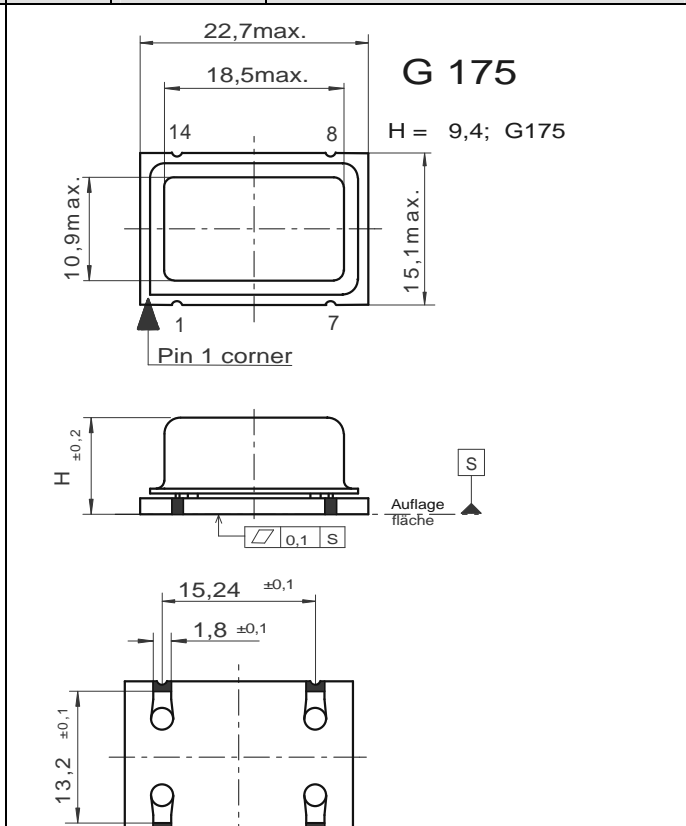
RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Signal	HCMOS					RFH
Load		15.0		pF	@ 15 pF 10 to 90 % @ V _S /2	
Rise and Fall time			5	ns		
Duty cycle	40		60	%		

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition	
Phase Noise		-80		dBc/Hz	10 Hz	@10.000
		-110		dBc/Hz	100 Hz	MHz
		-135		dBc/Hz	1 kHz	HCMOS
		-145		dBc/Hz	10 kHz	5.0 V
		-150		dBc/Hz	100 kHz	
Weight			6	g		
Processing & Packing	handling&processing note					

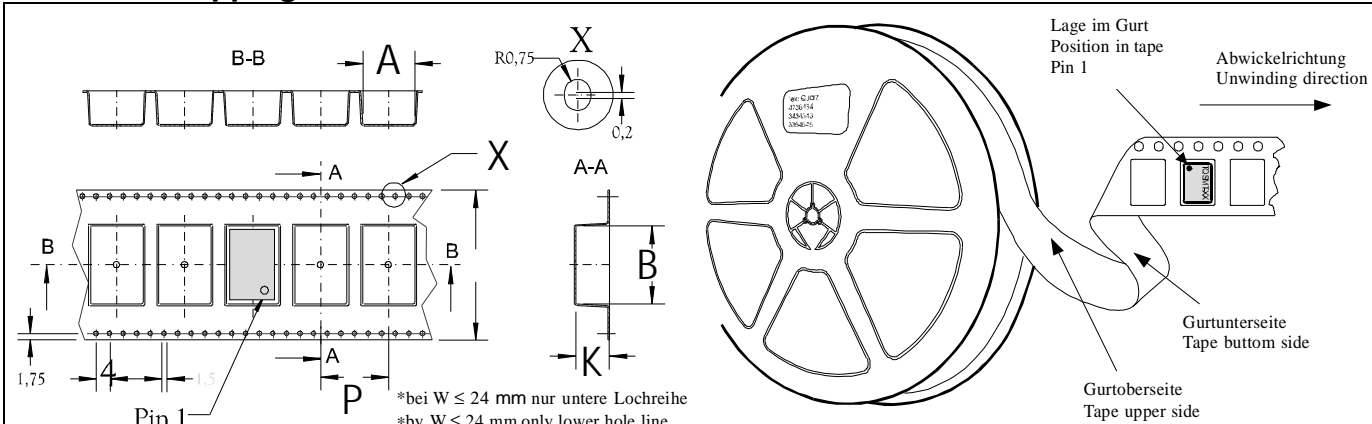
Enclosures

Type G125				Type G175		
Package Codes:						
Code A1	Height "H" 7.5	Pin Length "L" 5.85		Code B1	Height "H" 9.4	Pin Length "L" NA
 <p style="text-align: center;">G 125 H = 7,5max.; G125</p>				 <p style="text-align: center;">G 175 H = 9,4; G175</p>		
Dimensions: mm				Dimensions: mm		
Pin Connections				Pin Connections		
1 NC 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) Outline Drawing: G125				1 NC 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) Outline Drawing: G175		
Marking						
C1410A1-xxxx frequency * C AYYWW						

Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			7	V	
Operable temperature range	-40		+80	°C	For temperature Code F, D
Storage temperature range	-40		+90	°C	For temperature Code F, D

Standard Shipping Method



Lage im Gurt
Position in tape
Pin 1

Abwickelrichtung
Unwinding direction

Gurtunterseite
Tape bottom side

Gurtoberseite
Tape upper side

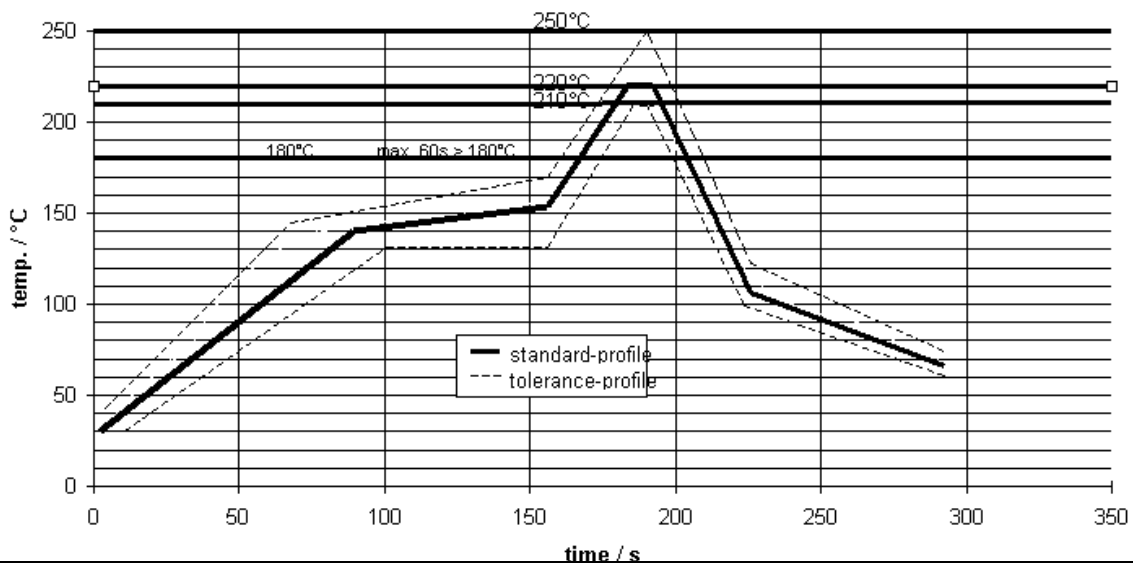
*bei $W \leq 24$ mm nur untere Lochreihe
*by $W \leq 24$ mm only lower hole line

Production tolerance complying DIN IEC 286-3

Enclosure Type	Tape width W [mm]	Quantity per meter	Quantity per reel	Dimension P
G175	44	50	300	20

Recommended Reflow Profile

standard-reflow-profile for SMD-oscillators



SMD oscillators must be on the top side of the PCB during the reflow process.

How to Order this Product:

Step 1	Use this worksheet to forward the following information to your factory representative:					
	Model	Stability Code	Initial tolerance	Supply Voltage Code	RF Output Code	Package Code
	C1410					

Example: C1410 D205 T104 SV050 RFH A1

Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:			
	Model	Package Code	Dash	Dash Number
	C1410	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

Typical P/N = C1410A1-0001

Notes:

- 1 Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
- 2 Unless otherwise stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C)
- 3 Phase noise degrades with increasing output frequency.
- 4 Subject to technical modification.
- 5 Contact factory for availability.