

Typical Applications

Base Stations
 Test Equipment
 Switching

Features

AT-Cut Crystal
 Dual-inline oscillator
 Surface Mount Option



Previous Vectron Model Numbers

TQDILVC; TQDILVH

Frequency range

1 MHz – 80 MHz

Standard frequencies

16.384; 32.768; 34.368 MHz;
 51.840; 61.44; 68.736 MHz

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	-20.0		+20.0	ppm	-20 ... +70°C	D205
Parameter	Min	Typ	Max.	Units	Condition	
Initial tolerance	-10.0		+10.0	ppm	@vc=Vs/2 fo < 80 MHz	
vs. supply voltage change	-2.0		+2.0	ppm	Vs ± 5%	
vs. load change	-1.0		+1.0	ppm	Load ± 10% fo < 80 MHz	
vs. aging /1. Year	-2.0		+2.0	ppm		

Supply voltage

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Supply voltage (Vs)	4.75	5.0	5.25	VDC		SV050
Current consumption			40	mA	@ HCMOS fo < 60.0 MHz	
Supply voltage (Vs)	3.135	3.3	3.465	VDC		SV033
Current consumption			40	mA	@ HCMOS	

RF output

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

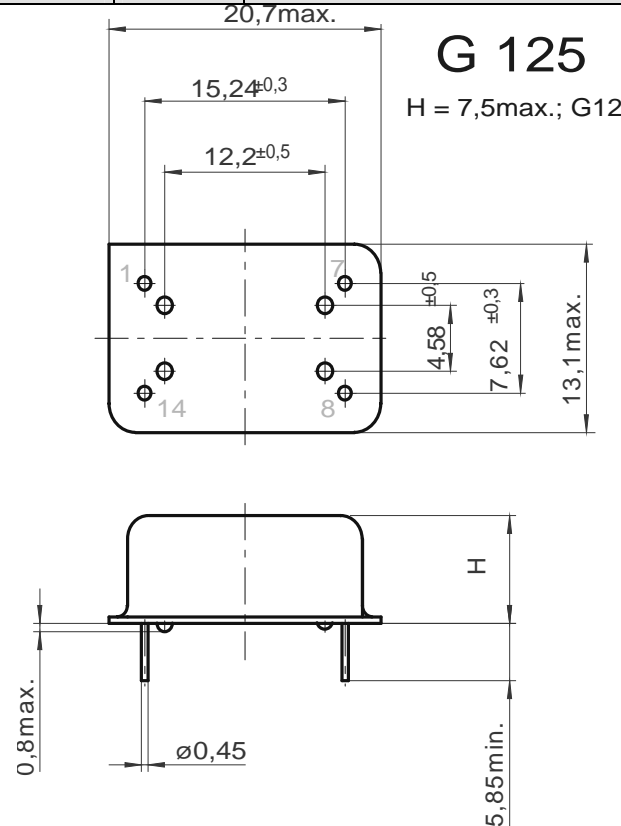
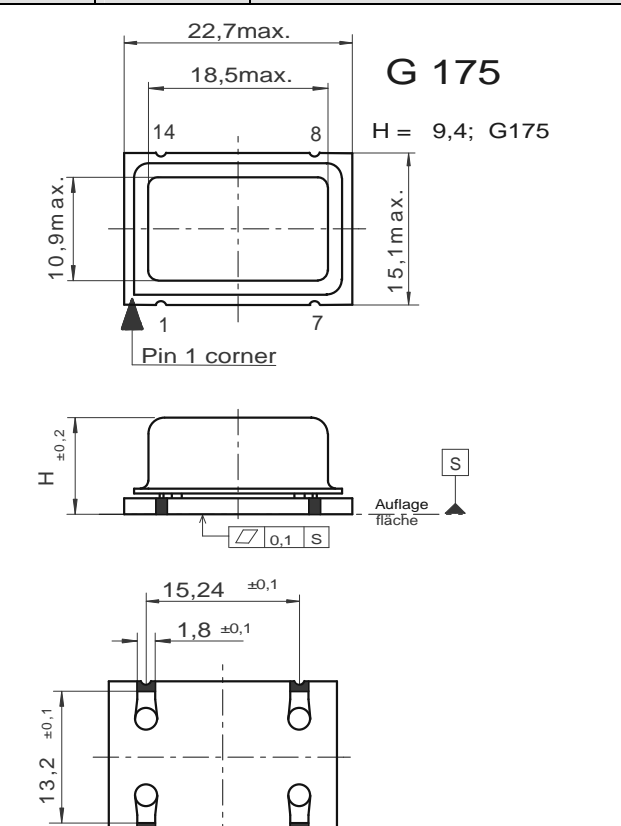
Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition
Tuning Range	±100.0	±140.0	±200.0	ppm	
Linearity			10	%	
Tuning Slope	Positive				
Control Voltage Range	0.5	2.5	4.5	VDC	
Frequency control input impedance	10			k Ω	

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition	
Phase Noise		-80		dBc/Hz	10 Hz	@16,384
		-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	Typ. for fo < 30 MHz
		-70		dBc/Hz	10 Hz	@32,768
		-90		dBc/Hz	100 Hz	MHz
		-85		dBc/Hz	1 kHz	HCMOS
		-80		dBc/Hz	10 kHz	5.0 V
		-90		dBc/Hz	100 kHz	Typ. for fo > 30 MHz
Weight			6	g		
Processing & Packing	handling&processing note					

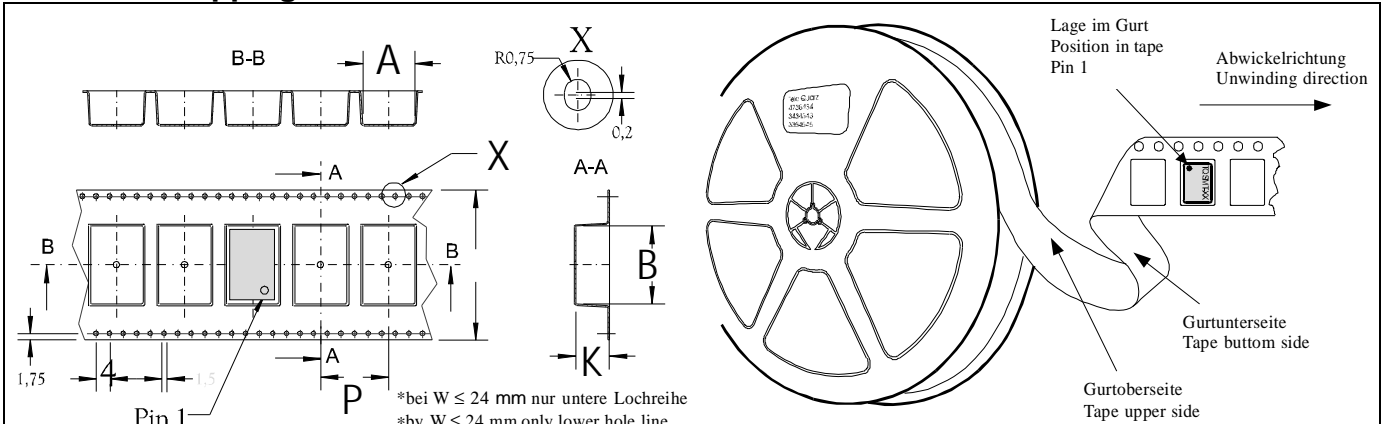
Enclosures

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>		
Pin Connections			Pin Connections		
1 Control Voltage (Vc) 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) Outline Drawing: G125			1 Control Voltage (Vc) 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) Outline Drawing: G175		
Marking					
C5410A1-xxxx frequency * C AYYWW					

Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			7	V	
Operable temperature range	-30		+80	°C	
Storage temperature range	-40		+90	°C	

Standard Shipping Method



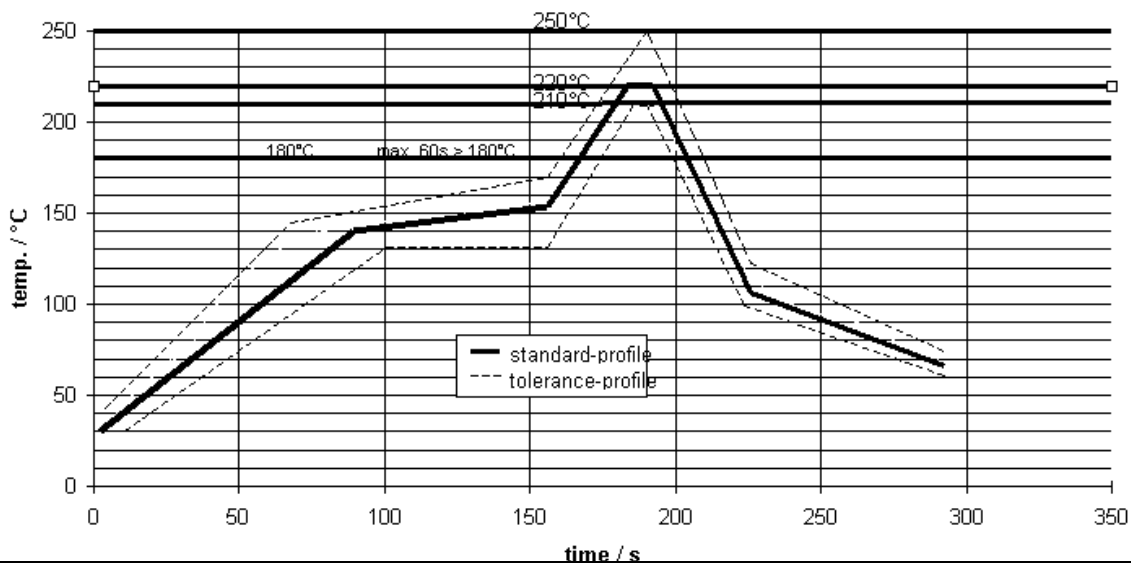
*bei $W \leq 24$ mm nur untere Lochreihe
*by $W \leq 24$ mm only lower hole line

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	Supply Voltage Code	RF Output Code	Package Code
	C5410				
<i>Example:</i>	<i>C5410</i>	<i>D205</i>	<i>SV050</i>	<i>RFH</i>	<i>A1</i>

Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:			
	Model	Package Code	Dash	Dash Number
	C5410	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]
	<i>Typical P/N = C5410A1-0001</i>			

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.