

Typical Applications

PCS Base Stations
 Land Mobile Radio
 Cellular Telephony
 Radio in the Local Loop

Previous Vectron Model Numbers

Frequency Range

Standard Frequencies

Features

EFC Standard
 Hermetic
 Wide Frequency Range



TQDILTC; 979; 979W, 959; 959W, TC-400

10 MHz – 200 MHz

10, 19.44, 20.48, 38.88, 77.76MHz;

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	-2.0		+2.0	ppm	-40 ... +85°C	F206
	-1.0		+1.0	ppm	-40 ... +85°C	F106
	-2.0		+2.0	ppm	-20 ... +70°C	D206
	-1.0		+1.0	ppm	-20 ... +70°C	D106
	-1.0		+1.0	ppm	0 ... +50°C	B106
	-0.5		+0.5	ppm	0 ... +50°C	B507
Parameter	Min	Typ	Max.	Units	Condition	
Initial tolerance	- 2.5		+2.5	ppm	at time of shipment, nominal EFC V _S ± 5% Load ± 10%	
vs. supply voltage change	- 0.2		+0.2	ppm		
vs. load change	- 0.2		+0.2	ppm		
vs aging		1.0		ppm/yr		

Supply voltage (Vs)

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Supply voltage [Standard]	3.135	3.3	3.465	VDC		SV033
Supply voltage [Option]	4.75	5	5.25	VDC		SV050
Current consumption			15	mA	@ +25°C & 3.3VDC & clipped sinewave @ +25°C & 3.3VDC & CMOS @ +25°C & 5.0VDC & clipped sinewave @ +25°C & 5.0VDC & CMOS	
			50	mA		
			18	mA		
			50	mA		

RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Signal [Standard]	HCMOS					RFH
Load	13.5	15	16.5	pF	with Vs= 5.0V and 15pF load with Vs=3.3V and 15pF load with Vs= 5.0V and 15pF load with Vs=3.3V and 15pF load	
Signal Level (Vol)			0.5	VDC		
Signal Level (Voh)	4.5		0.3	VDC		
	3.0			VDC		
Rise and Fall time			5	ns		
Duty cycle	40	50	60	%	@ (Voh-Vol)/2	
Signal [Option]	clipped Sinewave					RFC
Load R	9	10	11	kΩ	@ 10kΩ 10pF	
C	9	10	11	pF		
Output power	0.7			V _{pp}		

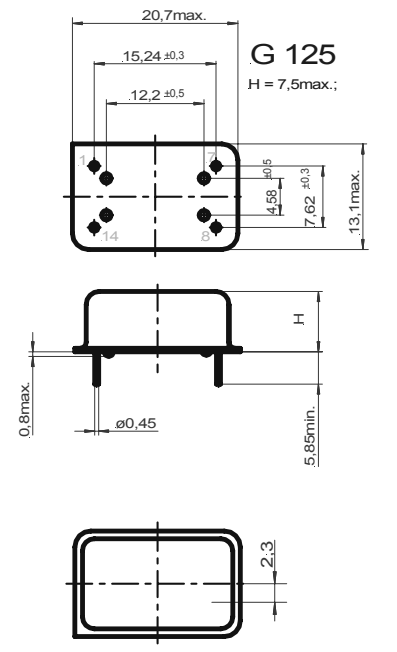
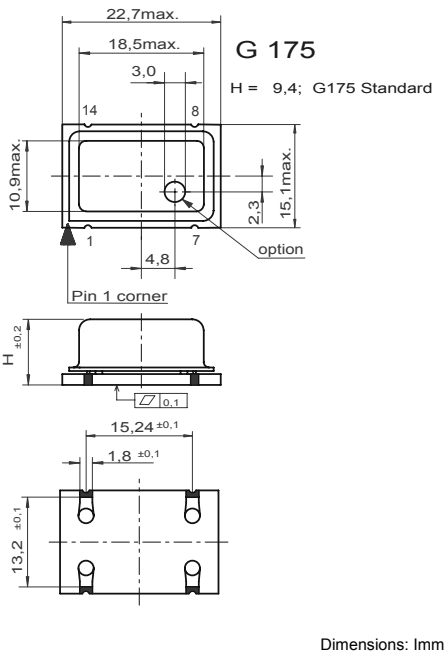
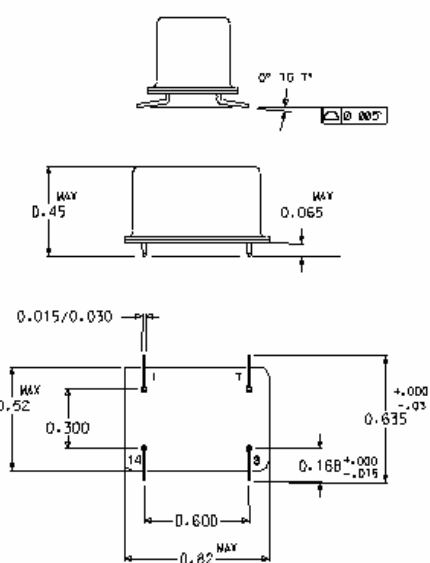
Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition
Tuning Range	± 8.0	±12.0	± 20.0	ppm	Standard Version
Linearity			10	%	
Tuning Slope	Positive				
Control Voltage Range	0.3	1.65	3.0	VDC	with Vs=3.3VDC
	0.5	2.5	4.5	VDC	with Vs=5.0VDC
Freq. control input impedance	10			kΩ	

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition
Phase Noise ³		-90		dBc/Hz	10 Hz
		-120		dBc/Hz	100 Hz
		-140		dBc/Hz	1 kHz
		-150		dBc/Hz	10 kHz
Weight			6	g	
Processing & Packing	Handling & processing note				

Enclosures

Type G125			Type G175			Type C		
Package Codes:								
Code	Height "H"	Pin Length "L"	Code	Height "H"	Pin Length "L"	Code	Height "H"	Pin Length "L"
A1	7.5	5.85	B1	9.4	NA	C1	0.45	NA
A2	8.0	5.85						
A3	10.1	5.85						
 <p>G 125 H = 7,5max.;</p> <p>Dimensions: mm</p>			 <p>G 175 H = 9,4; G175 Standard</p> <p>Dimensions: Imm</p>			 <p>Dimensions: inches</p>		
<p>Pin Connections</p> <ul style="list-style-type: none"> 1 Electronic Frequency Control Input (EFC) 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) <p>Outline Drawing: G125</p>			<p>Pin Connections</p> <ul style="list-style-type: none"> 1 Electronic Frequency Control Input (EFC) 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) <p>Outline Drawing: G175</p>			<p>Pin Connections</p> <ul style="list-style-type: none"> 1 Electronic Frequency Control Input (EFC) 7 Ground (Case) 8 RF Output 14 Supply Voltage Input (Vs) <p>Outline Drawing: VD-XXXXX</p>		
<p>Marking</p> <p>C2400xx-xxxx Frequency * C AYYWW</p>								

Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			6.0	V	
Control Voltage	0		Vs	V	
Maximum output load @ CMOS			50	pF	
Operable temperature range	-40		+85	°C	
Storage temperature range	-55		+125	°C	

Standard Shipping Method

Lage im Gurt
Position in tape
Pin 1

Abwickelrichtung
Unwinding direction

Gurtunterseite
Tape bottom side

Gurtoberseite
Tape upper side

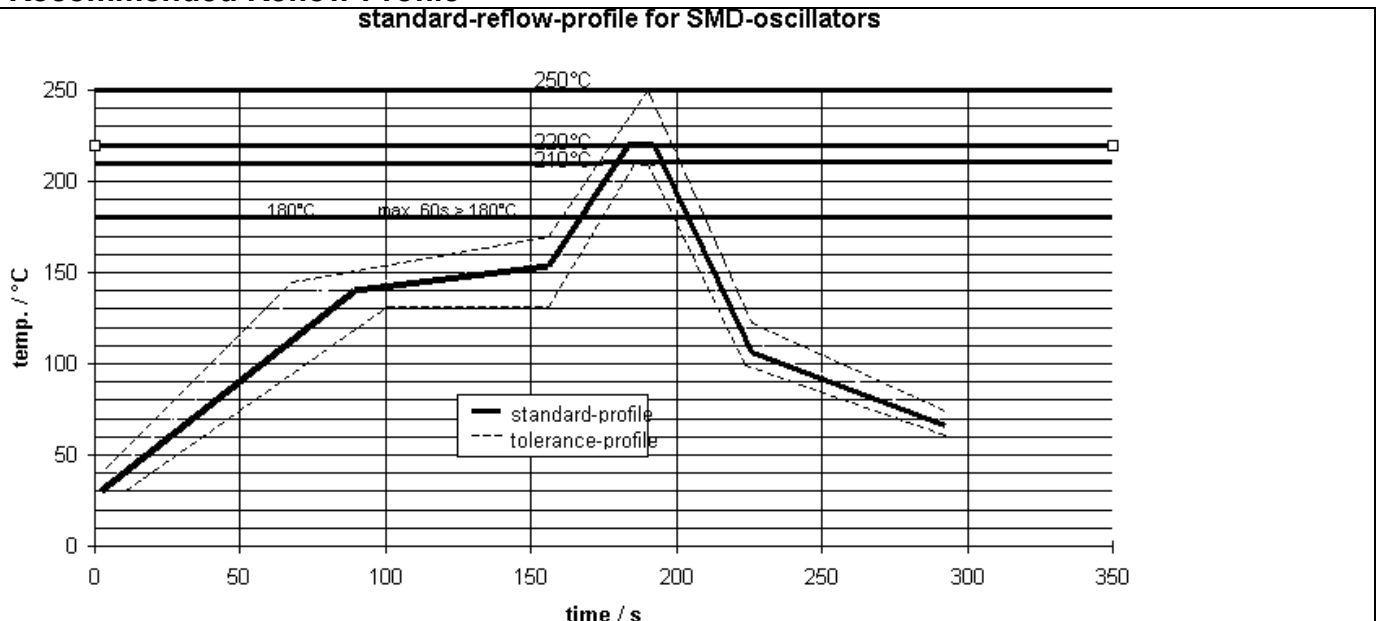
*bei $W \leq 24$ mm nur untere Lochreihe
*by $W \leq 24$ mm only lower hole line

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.

