

Typical Applications

2, 5, 10 Gbit/s standard
 Sonet / SDH

Features

Surface Mount Package
 Reflow Process Compatible
 Crystal-based Oscillator

Output Frequency Range

155.52 to 670MHz

Frequencies

622.08 & 624.694 MHz
 622.08 & 669.326 MHz
 155.52 & 166.628 MHz

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
Overall (vs. initial, vs. operating temperature range, vs. supply voltage change, vs. load change, vs. 15 years aging)	-40.0		+40.0	ppm	-5 ... +70°C	
vs. supply voltage change	-1.0		+1.0	ppm	Vs ± 5% load ± 10%	
vs. load change	-1.0		+1.0	ppm		
vs. activity dips	-1.0		+1.0	ppm		

Supply voltage

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Supply voltage (Vs)	3.135	3.3	3.465	VDC		SV033
Current consumption			120	mA	@ LVPECL (no load)	

RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Signal		PECL				RFP
Load		50		Ω	Vs - 2V 20 to 80 %	
Rise and Fall time			800	ps		
Duty cycle	45		55	%		

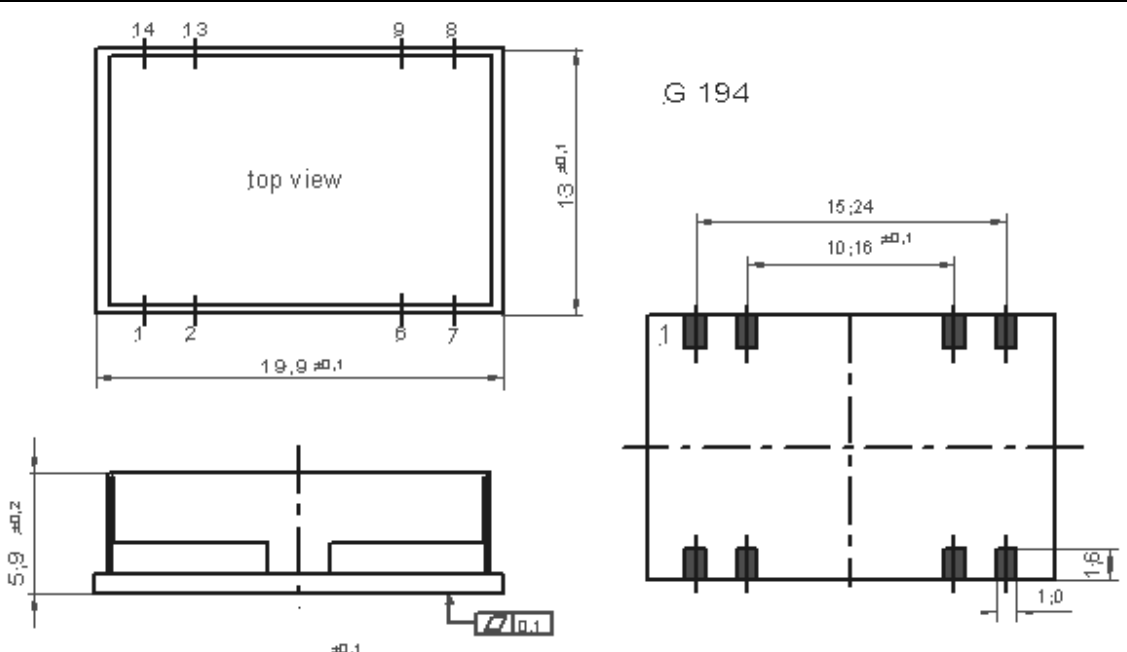
Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition
Tuning Range		±90.0		ppm	
Absolute Pulling Range (APR)	±50			ppm	
Linearity			10	%	
Tuning Slope		Positive			
Control Voltage Range	0.3	1.65	3.0	VDC	with Vs=3.3 VDC
Control Input Impedance	20			kΩ	
Modulation Bandwidth	0		20	kHz	Related to 1 kHz

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition
Phase Noise		-120		dBc/Hz	10 kHz @ 666 MHz
Jitter			1	ps RMS	@ 12 kHz to 20 MHz
Weight			4	g	
Processing & Packing	handling&processing note				

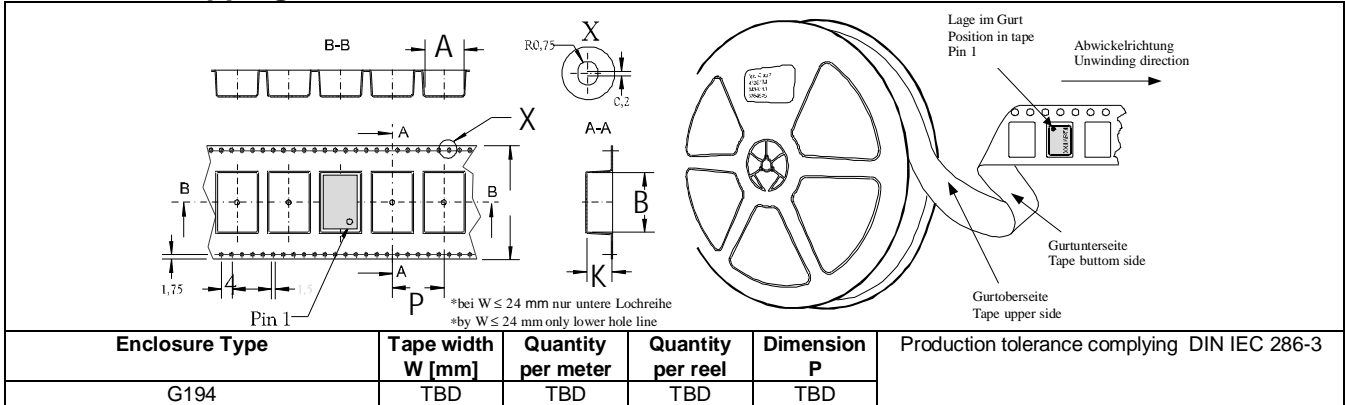
Enclosures

Type G194		
Code A1	Height "H" 5,9	Pin Length "L" NA
 <p style="text-align: center;">Dimensions: mm</p>		
Pin Connections		
<ul style="list-style-type: none"> 1 Control Voltage (Vc) 2 Frequency select f1/f2 6 Enable / Disable 7 Ground (Case) 8 RF Output 9 Complementary RF Output 13 N/C 14 Supply Voltage Input (Vs) 	<ul style="list-style-type: none"> Low (0) = 622.08 Mhz High (1) = 624.494 MHz Low (0) = Enable High (1) = Disable 	
Marking		
C5430A1-xxxx 622M08/624M694 * VI AYYWW		

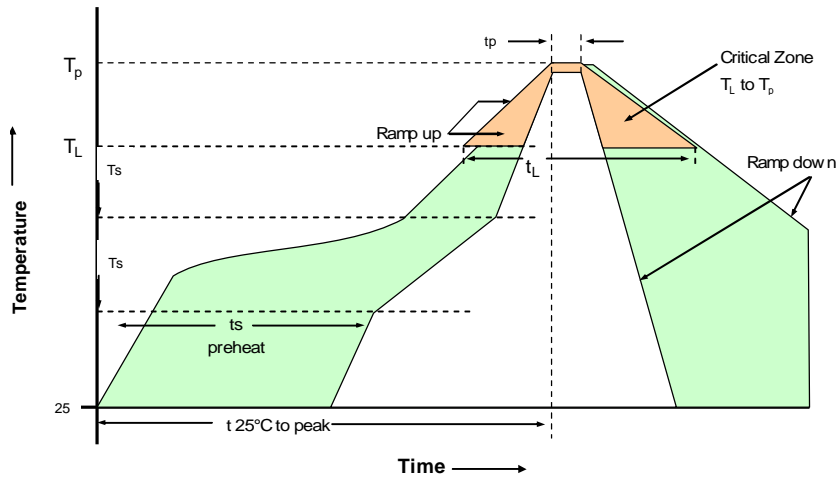
Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			7	V	
Operable temperature range	-40		+85	°C	
Storage temperature range	-40		+90	°C	

Standard Shipping Method



Recommended Reflow Profile



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

Profile Feature	Pb-Free Assembly/Sn-Pb Assembly
Average ramp-up rate (T_L to T_p)	3°C/second max.
Preheat -Temperature Min $T_{s_{min}}$ -Temperature Min $T_{s_{max}}$ -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{s_{max}}$ to T_L - Ramp-up Rate	3°C/second max.
Time maintained above - Temperature (T_L) - Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_p)	max 260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Note: All temperatures refer to topside of the package, measured on the package body surface.

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
	C5430				

Example: C5430

SV033

RFP

A1

Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:			
	Model	Package Code	Dash	Dash Number
	C5430	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

Typical P/N = C5430A1-0001

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.