

## Typical Applications

SONET/SDH  
 Synthesizers  
 Optimized for Semtech SONET / SDH Synchronization Sets

## Features

Stratum 3 Compliant  
 Tight Stability  
 Low Aging

## Previous Vectron Model Numbers

MC1200; TC-210

## Frequency Range

10 MHz – 200 MHz

## Standard Frequencies

12.8, 16.384, 20, 30.15, 37.5, 76.8 MHz

## Frequency stabilities<sup>1</sup> [ Stratum 3 TCXO]

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code
vs. operating temperature range (Referenced to +25°C)	-0.8		+0.8	ppm	-40 ... +85°C	F807
	-0.28		+0.28	ppm	-30 ... +85°C	G287
	-0.8		+0.8	ppm	-20 ... +70°C	D807
	-0.28		+0.28	ppm	-20 ... +70°C	D287
	-0.28		+0.28	ppm	0 ... +50°C	B287
Parameter	Min	Typ	Max.	Units	Condition	
Initial tolerance (w/ fixed frequency)	- 1.5		+1.5	ppm	at time of shipment, No EFC $V_S \pm 5\%$ Load $\pm 10\%$  *Stratum 3 per GR-1244-CORE: $\leq \pm 4.6$ ppm for all causes and 15 years aging, Holdover: $\leq \pm 0.37$ ppm over 24 hours (Codes: D287 & B287)	
vs. supply voltage change	- 0.1		+0.1	ppm		
vs. load change	- 0.1		+0.1	ppm		
vs. aging /15 Years	- 2.5		+2.5	ppm		
overall tolerance	- 4.6		- 4.6	ppm		

## Supply voltage (Vs)

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code
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	steady state @ +25°C & 3.3VDC	
			15	mA	steady state @ +25°C & 5.0VDC	

## RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code
Signal [Standard]	HCMOS					RFH
Load	13.5	15	16.5	pF	10% - 90% @ (Voh-Vol)/2	
Rise and Fall time			5	ns		
Duty cycle	40		50	%		
Signal [Standard]	sinewave					RFS
Load		50		Ohm		
Output power	0	3	6	dBm		
Harmonics			-30	dBc		
Sub harmonics			-30	dBc		If applicable

## Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code
Tuning Range	Fixed (No EFC)					0
Tuning Range	$\pm 8.0$	$\pm 12.0$	$\pm 20.0$	ppm	Standard Version	1
Linearity			20	%		
Tuning Slope	Positive					
Control Voltage Range (nominal frequency to occur at Typ $\pm 0.5V$ )	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			k $\Omega$		

## Additional parameters

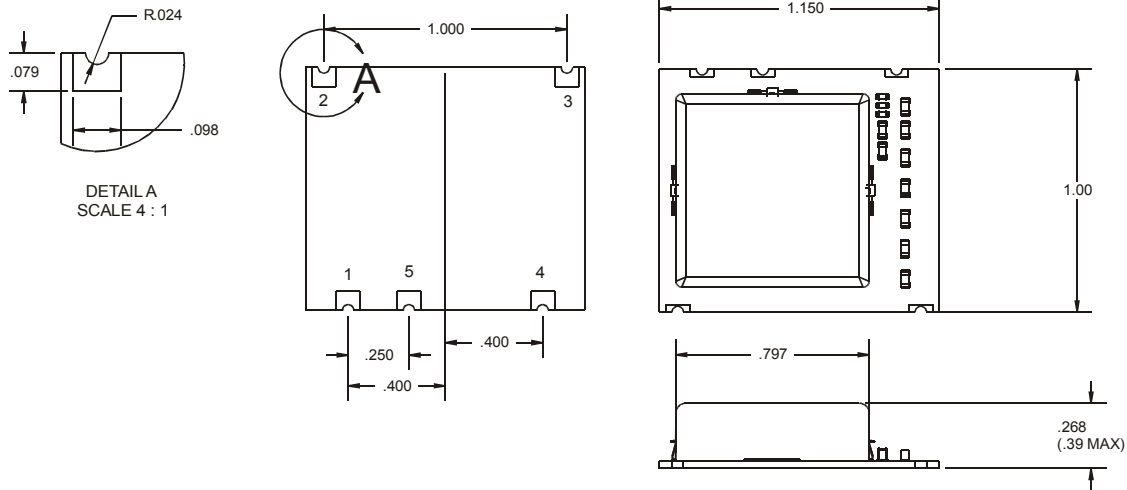
Parameter	Min	Typ	Max.	Units	Condition
Phase Noise <sup>3</sup>		-115		dBc/Hz	100 Hz
		-130		dBc/Hz	1 kHz
		-140		dBc/Hz	10 kHz
Allan Variance		1x 10 <sup>-9</sup>			Tau= 1 sec
Weight			9	g	
Processing & Packing	Handling & processing note				

## Enclosures

### Type A

Package Codes:

Code	Height "H"	Pin Length "L"
A1	6.8	NA



Dimensions: inches

#### Pin Connections

- 1 RF-Output
- 2 Vs (supply voltage)
- 3 GND
- 4 N.C./EFC
- 5 GND

Outline Drawing:

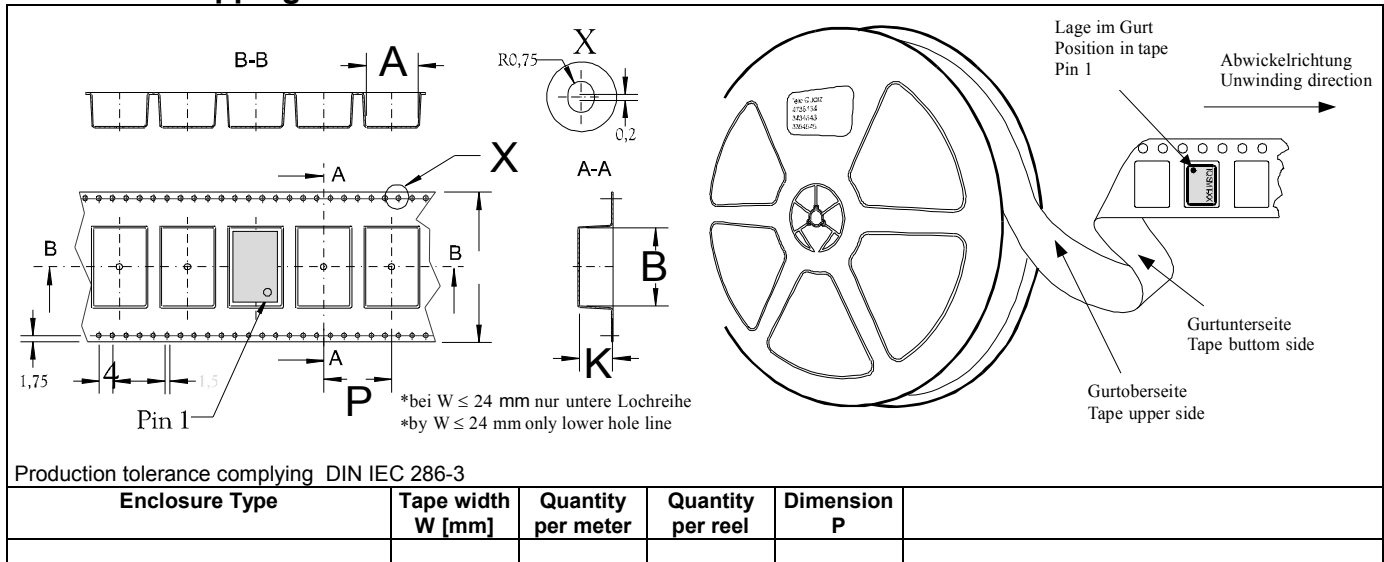
#### Marking

C2560Ax-xxxx  
 Frequency  
 \* C AYYWW

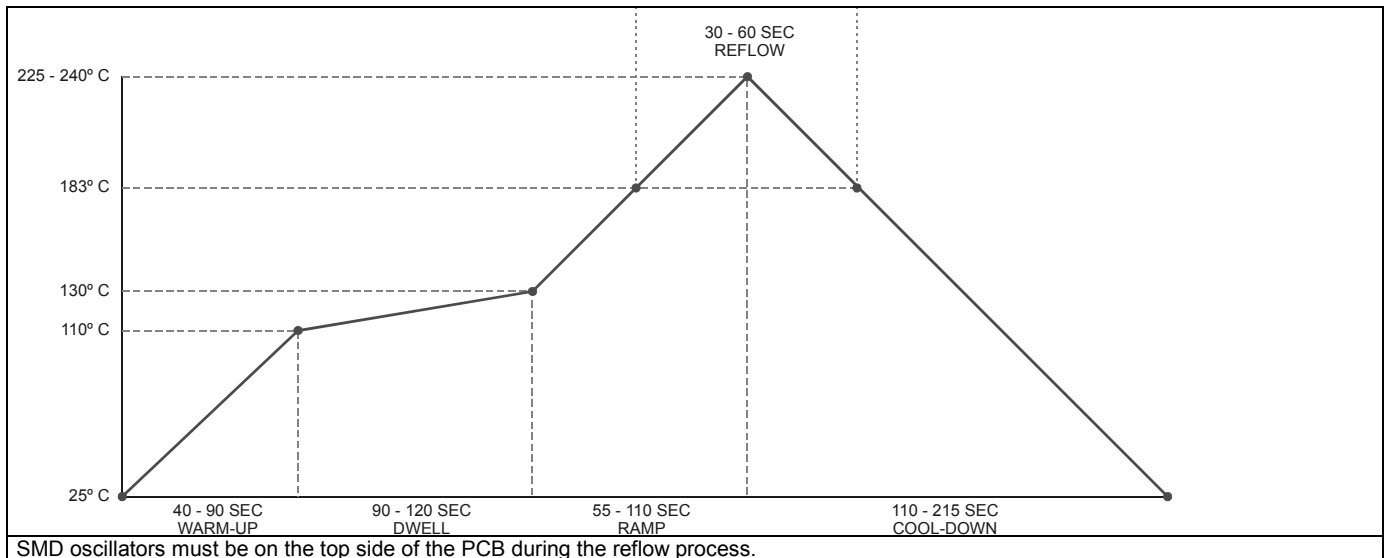
## Absolute Maximum Ratings

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

## Standard Shipping Method



## Recommended Reflow Profile



## 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	EFC Code	Package Code	Frequency
C2560						

*Example:* C2560                          D206                          SV033                          RFH                          1                          A1                          12.800 MHz

Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:		
Model	Package Code	Dash	Dash Number
C2560	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

*Typical P/N = C2560A1-0001*

### 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.