

Typical Applications

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

Features

EFC Standard
 Wide frequency range

Previous Vectron Model Numbers

CC

Frequency range

1 MHz – 22 MHz

Standard frequencies

12.8; 13; 14.4 MHz;

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	-5.0		+5.0	ppm	-30 ... +75°C	K506
	-2.5		+2.5	ppm	-30 ... +75°C	K256
	-5.0		+5.0	ppm	-20 ... +70°C	D506
	-2.5		+2.5	ppm	-20 ... +70°C	D256
	-1.5		+1.5	ppm	20 ... +70°C	D156
	-5.0		+5.0	ppm	-10 ... +60°C	J506
	-2.5		+2.5	ppm	-10 ... +60°C	J256
	-1.5		+1.5	ppm	-10 ... +60°C	J156
Parameter	Min	Typ	Max.	Units	Condition	
vs. supply voltage change	- 0.3		+0.5	ppm	V _s ± 5%	
vs aging /1. Year	- 1.0		+1.0	ppm		

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			3	mA	@ +25°C & 3.3VDC & clipped sinewave	
			3	mA	@ +25°C & 5.0VDC & clipped sinewave	

RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code ⁵
Signal [Standard]		clipped Sinewave				RFC
Load R	9	10	11	kΩ		
C	9	10	11	pF		
Output power	0.7			V _{pp}	@ 10kΩ 10pF	

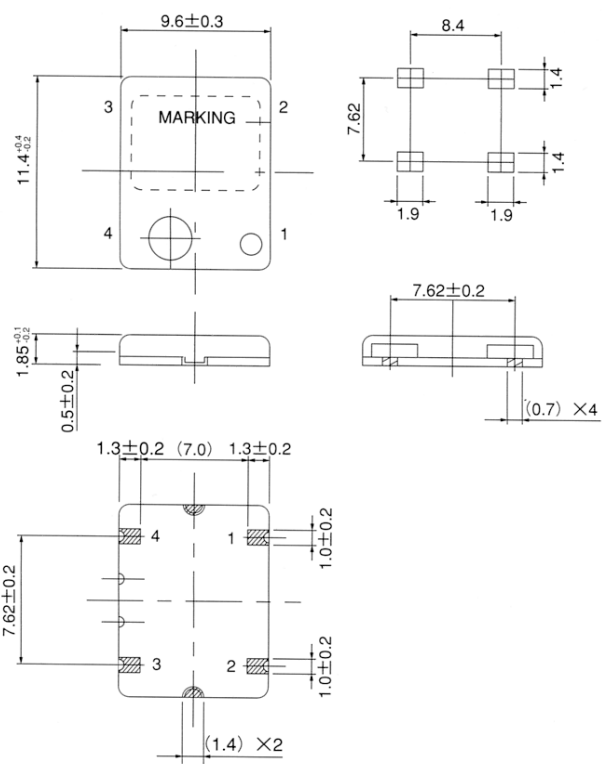
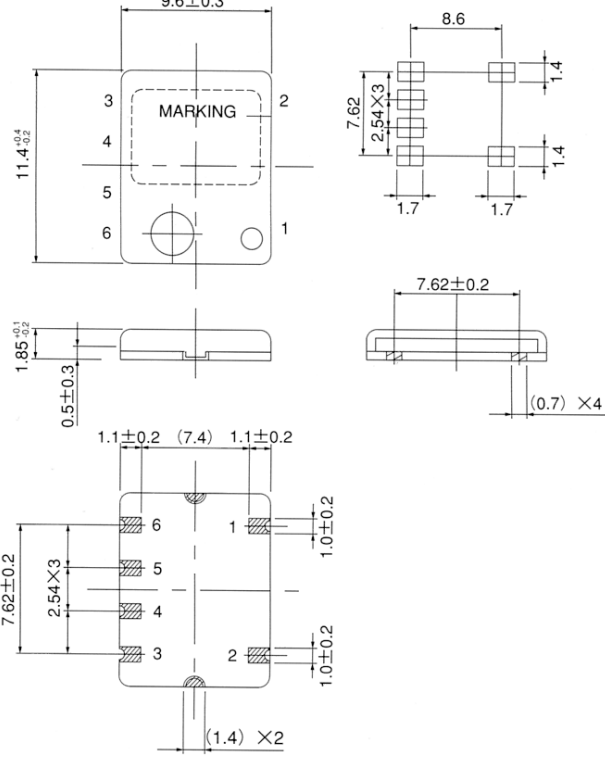
Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition
Mechanical (No EFC)	± 3.0				
Tuning Range	± 5.0		± 20.0	ppm	Standard Version
	± 8.0		± 20.0	ppm	Standard Version without mechanical tuning
Linearity			10	%	
Tuning Slope	Positive				
Control Voltage Range	0.5	1.5	2.5	VDC	with Vs=3.3VDC
	0.5	2.5	4.5	VDC	with Vs=5.0VDC

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition
Weight			6	g	
Processing & Packing	Handling & processing note				

Enclosures

Type G207			Type G208		
Package Codes:					
Code A1	Height "H" 1.85	Pin Length "L" NA	Code B1	Height "H" 1.85	Pin Length "L" NA
 <p>Dimensions: m</p>			 <p>Dimensions: mm</p>		
<p align="center">Pin Connections</p> <p>1 Electronic Frequency Control Input (EFC) or N.C. 2 Ground (Case) 3 RF Output 4 Supply Voltage Input (Vs)</p>			<p align="center">Pin Connections</p> <p>1,2,4 Ground (Case) 3 RF Output 5 Electronic Frequency Control Input (EFC) or N.C. 6 Supply Voltage Input (Vs)</p>		
<p align="center">Marking</p> <p>C2299A1-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	
Operable temperature range	-40		+85	°C	
Storage temperature range	-55		+125	°C	

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	Frequency
C2299					

Example: C2299 D256 SV033 RFC A1 12.8Mhz

Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:		
Model	Package Code	Dash	Dash Number
C2299	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

Typical P/N = C2299A1-0001

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.