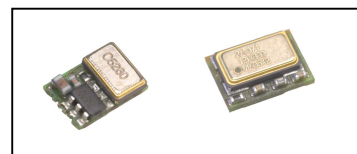


Typical Applications

Base Stations
 Test Equipment
 Switching
 Portable Equipment

Features

Surface Mount FR4 based Package
 Reflow Process Compatible
 AT-Cut Crystal
 Low Phasenoise



Frequency range

1 MHz – 160 MHz

Standard frequencies

16.384; 30.720; 32.768; 38.880 MHz;
 51.840; 52.00; 68.736; 77.760; 155,52 MHz

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	-15.0		+15.0	ppm	-20 ... +70°C	D105
Parameter	Min	Typ	Max.	Units	Condition	
Initial tolerance	-10.0		+10.0	ppm	@vc=Vs/2	
vs. supply voltage change	-3.0		+3.0	ppm	V _S ± 5%	
vs. load change	-1.0		+1.0	ppm	Load ± 10%	
vs. aging /1. Year	-3.0		+3.0	ppm		
vs. aging / year (following Years)	-1.0		+1.0	ppm		

Frequency stabilities¹

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code ⁵
vs. operating temperature range (Referenced to +25°C)	-30.0		+30.0	ppm	-40 ... +85°C	F305
Parameter	Min	Typ	Max.	Units	Condition	
Initial tolerance	-15.0		+15.0	ppm	@vc=Vs/2	
vs. supply voltage change	-3.0		+3.0	ppm	V _S ± 5%	
vs. load change	-2.0		+2.0	ppm	Load ± 10%	
vs. aging /1. Year	-3.0		+3.0	ppm		
vs. aging / year (following Years)	-1.0		+1.0	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	
Current consumption			90	mA	@ PECL	
Supply voltage (Vs)	3.135	3.3	3.465	VDC		SV033
Current consumption			30	mA	@ LVHCMOS	
Current consumption			80	mA	@ LVPECL	
Current consumption			25	mA	@ LVDS	

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	
Signal		PECL				RFP
Load		50		Ω		
Rise and Fall time			1	ns	V _S - 2V	
Duty cycle	45		55	%	20 to 80 %	
Signal		LVDS				RFL
Load		100		Ω		
Rise and Fall time			1	ns		
Duty cycle	40		60	%	10 to 90 %	

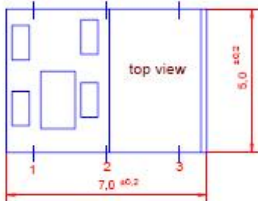
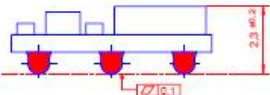
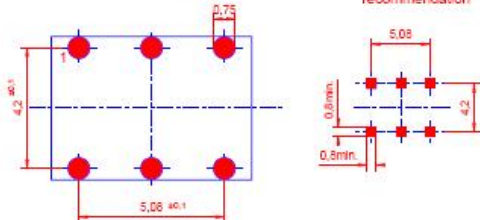
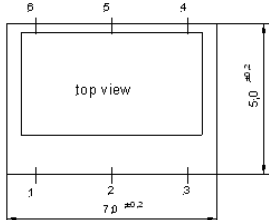
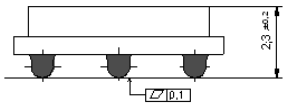
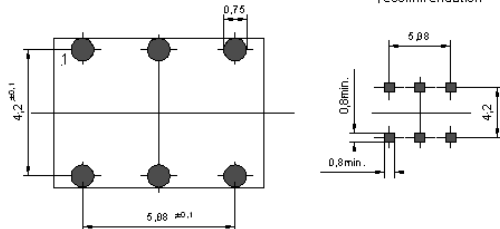
Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition
Tuning Range	± 75.0 ± 100.0	± 90.0 ± 140.0	$+200.0$ ± 200.0	ppm ppm	Frequency > 53MHz Frequency < 53MHz
Linearity			10	%	
Tuning Slope	Positive				
Control Voltage Range	0.0 0.5	1.65 2.5	3.3 4.5	VDC VDC	with Vs=3.3VDC with Vs=5.0VDC
Frequency control input impedance	10			k Ω	

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition
Phase Noise		-75 -110 -135 -142 -142		dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	10 Hz 100 Hz 1 kHz 10 kHz 100 kHz @155 MHz PECL 3,3V
Jitter		1		ps RMS	@ 10 kHz to 20 MHz
Weight			2	g	
Processing & Packing	handling&processing note				

Enclosures

Type G241 < 53 MHz			Type G251 > 53 MHz		
Package Codes:					
Code A1	Height "H" 2,3 mm		Code B1	Height "H" 2,3 mm	
 top view G 241  The four stand offs are brass balls plated with 2-3µm Ni and 6-10µm Sn Padvorschlag land pattern recommendation  Dimensions: mm			 top view G 251  The stand offs are brass balls plated with 2-3µm Ni and 6-10µm Sn Padvorschlag land pattern recommendation  Dimensions: mm		

Pin Connections	Pin Connections				
1 Control Voltage (Vc) 2 N/C / Enable (optional) 3 Ground 4 RF Output 5 N/C 6 Supply Voltage Input (Vs)	1 Control Voltage (Vc) 2 N/C / Enable (optional) 3 Ground 4 RF Output 5 Complementary RF Output 6 Supply Voltage Input (Vs)				
	true table	LVDS		LVPECL	
	Pin 2	Pin 4	Pin 5	Pin 4	Pin 5
	High	Data	compl. Data	Low	High
	Open	Data	compl. Data	Data	compl. Data
	Low	High Tristate	High Tristate	Data	compl. Data
Marking					
5A1-xxx frequency * VI AYYWW					

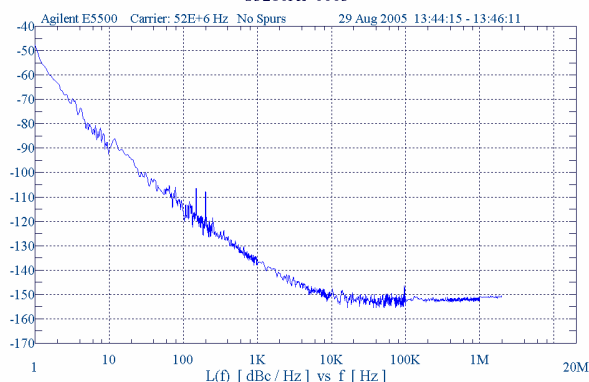
Absolute Maximum Ratings

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

Typical Phase Noise and Jitter

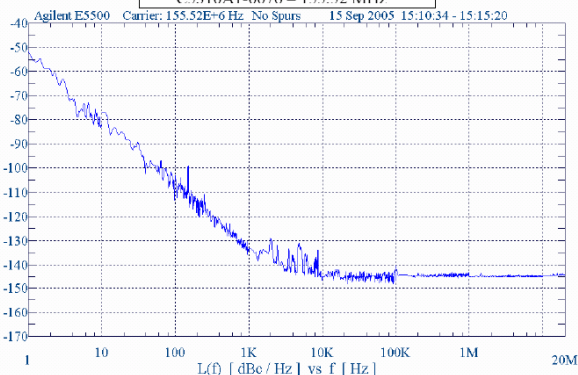
(52 MHz; HCMOS output)

C5260A1-0005



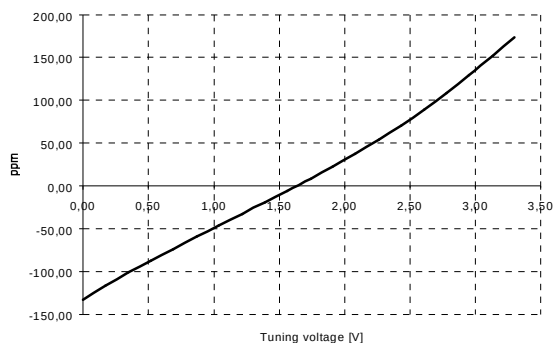
(155,52 MHz; PECL output)

C5310A1-0076 - 155.52 MHz

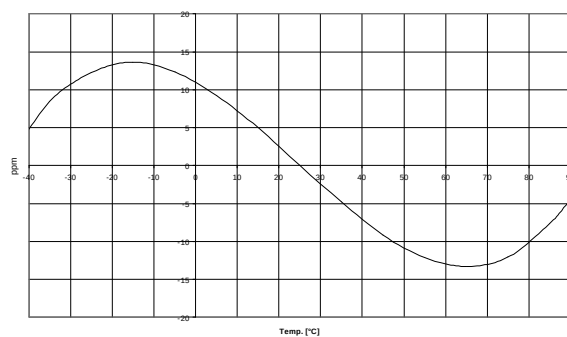


Frequency range [Hz]	S _φ (f) [dB]	Jitter [ps rms]	Frequency range [Hz]	S _φ (f) [dB]	Jitter [ps rms]
100Hz to 1.5MHz	-81dB	0.26ps	500Hz to 1.5MHz	-73.96dB	0.205ps
50kHz to 1.5MHz	-87dB	0.14ps	65kHz to 1.5MHz	-75.87dB	0.165ps
12kHz to 20MHz	-85dB	0.16ps	12kHz to 20MHz	-65.34dB	0.553ps

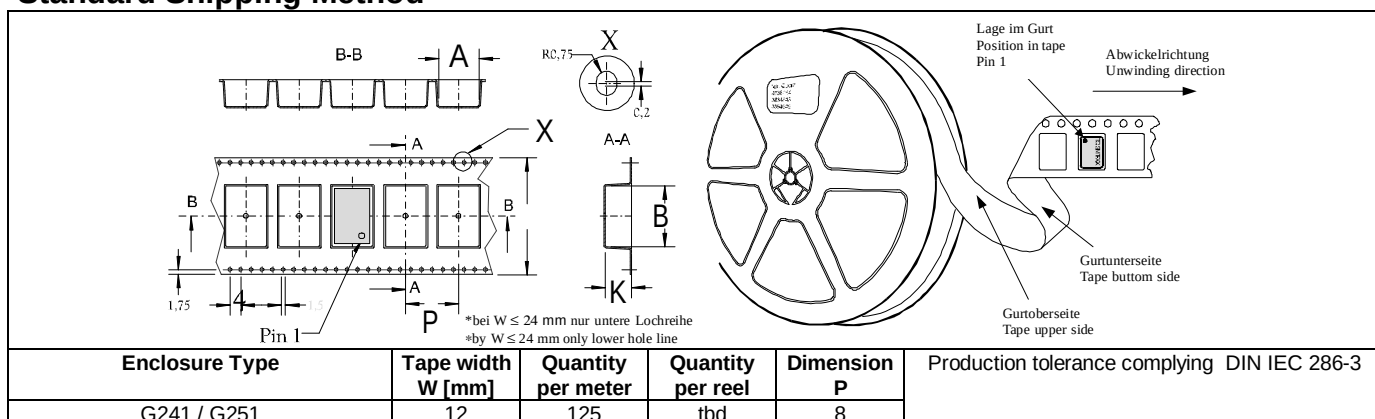
Typical tuning slope



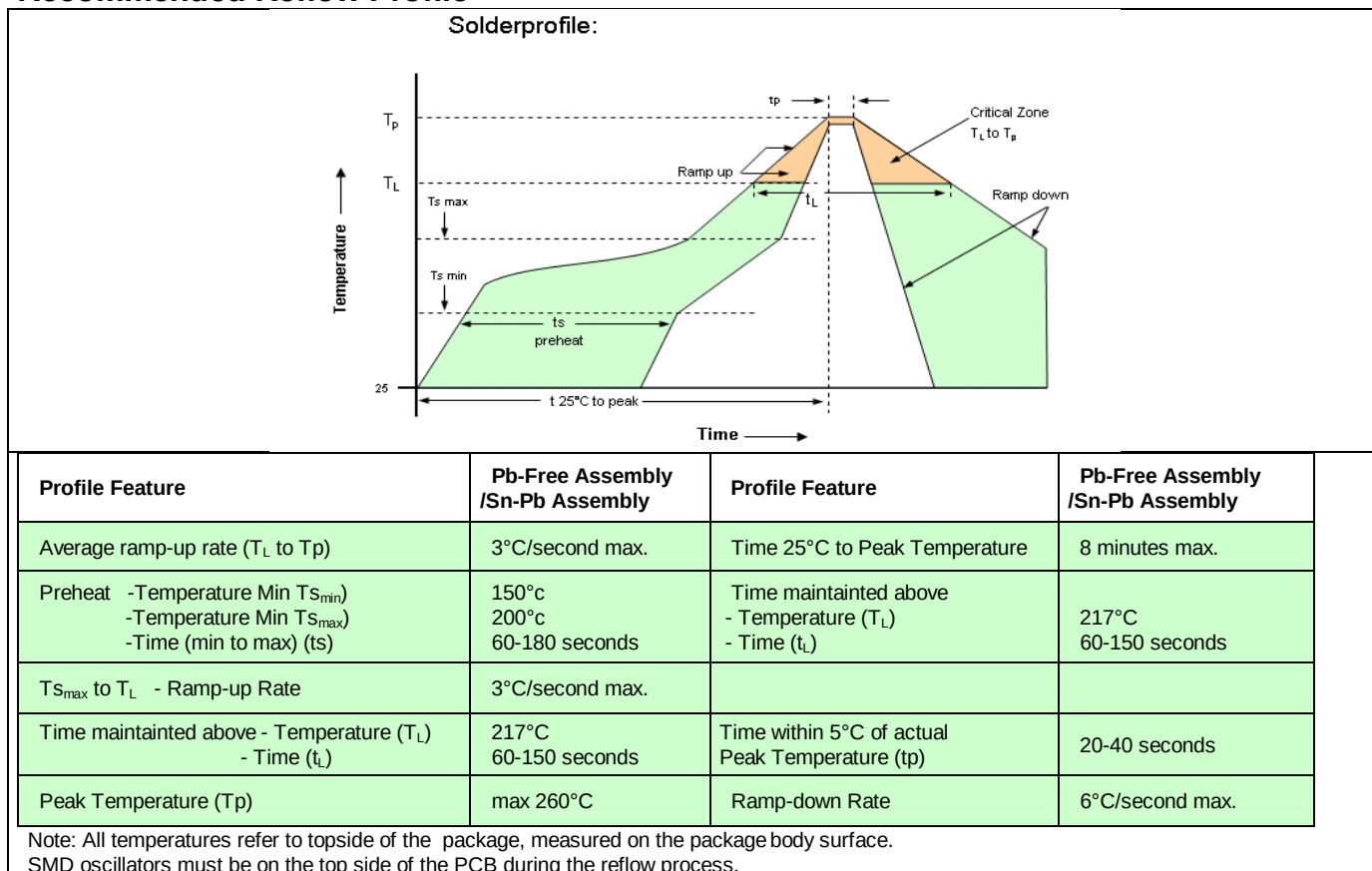
Typical frequency stability vs temperature



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	Package Code
	C5260				
	Example: C5260	D105	SV050	RFH	A1
Step 2	The factory representative will then respond with a Vectron Model Number in the following Configuration:				
	Model	Package Code	Dash	Dash Number	
	C5260	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]	

Typical P/N = C5260A1-0001

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.