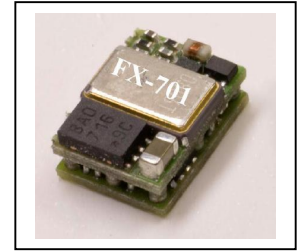


## Typical Applications

Base Stations  
 Test + Measurement

## Features

Surface Mount Package  
 Reflow Process Compatible  
 Low Phase Noise  
 Build in PLL-Circuit



## Output Frequency range

10 MHz – 185 MHz

## Standard frequencies

10; 25; 52; 56; 61.44; 77.76; 104 MHz  
 122.88; 153.6; 155.52; 160; 179,2; 184,32 MHz

## Reference Frequency

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
Input frequency	2		65	MHz	± 10 ppm	
Parameter	Min	Typ	Max.	Units	Condition	
Signal		HCMOS				IFH
Reference Level	0.5		4	V <sub>pp</sub>	HCMOS / similar sinewave	
Reference Input Impedance	2			kΩ		

## Output Frequency

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
output frequency	10		185	MHz		
Signal	HCMOS					RFH
Load		15.0		pF	@ 15 pF 10 to 90 % @ Vs/2	
Rise and Fall time			5	ns		
Duty cycle	40		60	%		

## Supply voltage (Vs)

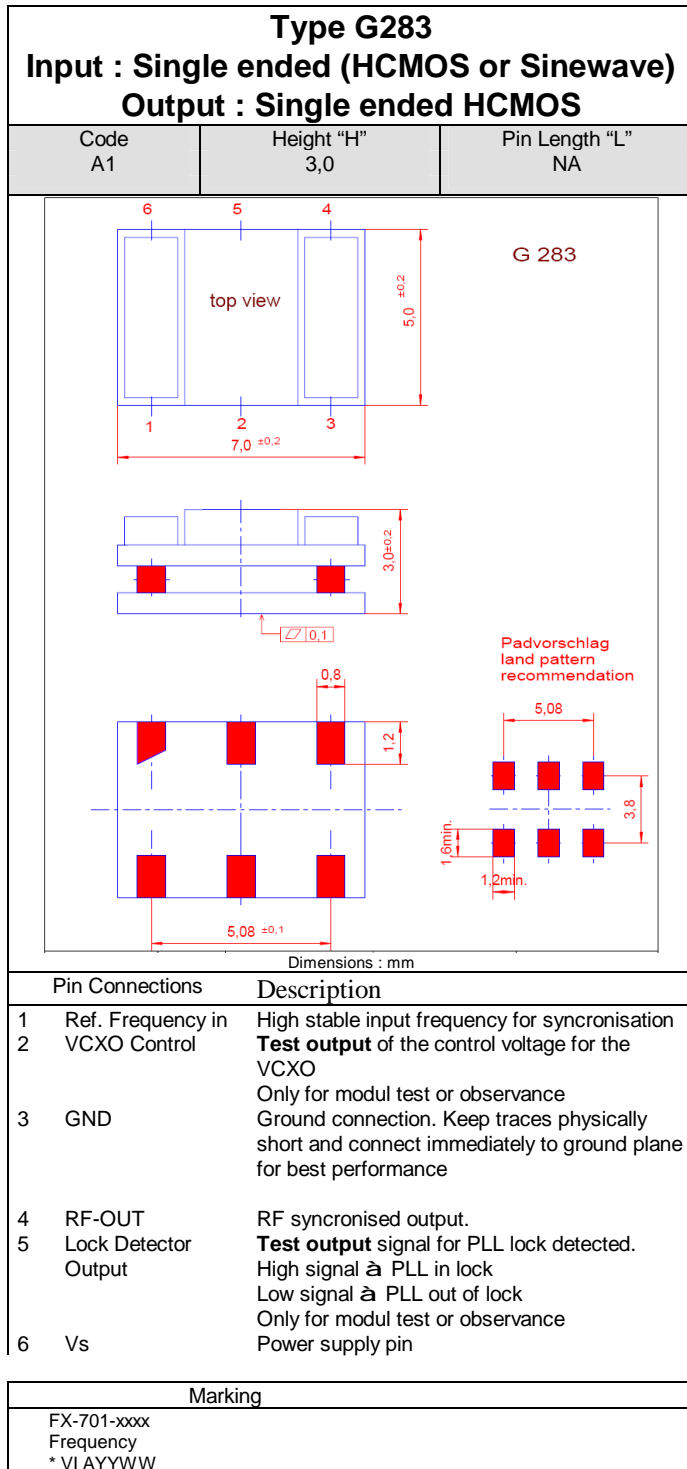
Parameter	Min	Typ	Max.	Units	Condition	Ordering Code <sup>5</sup>
Supply voltage [Standard]	3.135	3.3	3.465	VDC		SV033
Current consumption			50	mA	steady state @ +25°C & 3.3VDC	

## Additional parameters

Parameter	Min	Typ	Max.	Units	Condition	
Phase Noise <sup>3</sup>		-70		dBc/Hz	10 Hz	@ 122,88 MHz
		-103		dBc/Hz	100 Hz	HCMOS
		-132		dBc/Hz	1 kHz	
		-147		dBc/Hz	10 kHz	
		-155		dBc/Hz	100 kHz	
Jitter		-156		dBc/Hz	1 MHz	
		0.2		ps RMS	@ 12kHz .. 20MHz	

## Additional parameters

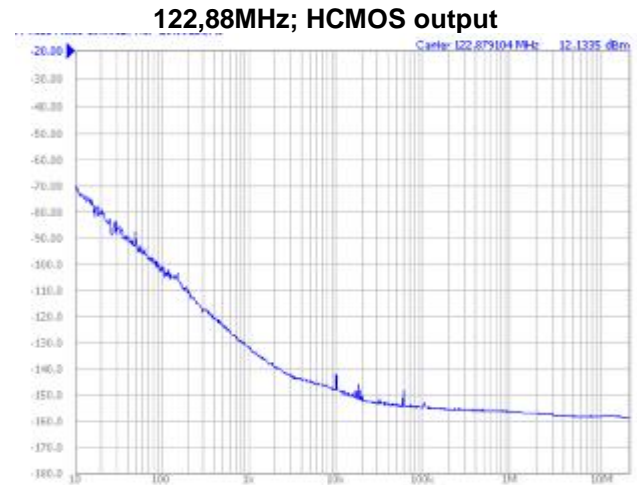
Parameter	Min	Typ	Max.	Units	Condition
Weight			1	g	
Processing & Packing	Handling & processing note				
Operating temperature range	-20		+70	°C	
Operable temperature range	-30		+85	°C	
Storage temperature range	-55		+125	°C	



## Absolute Maximum Ratings

Parameter	Min	Typ	Max.	Units	Condition
Supply voltage (Vs)			6.0	V	

## Typical Phase Noise and Jitter



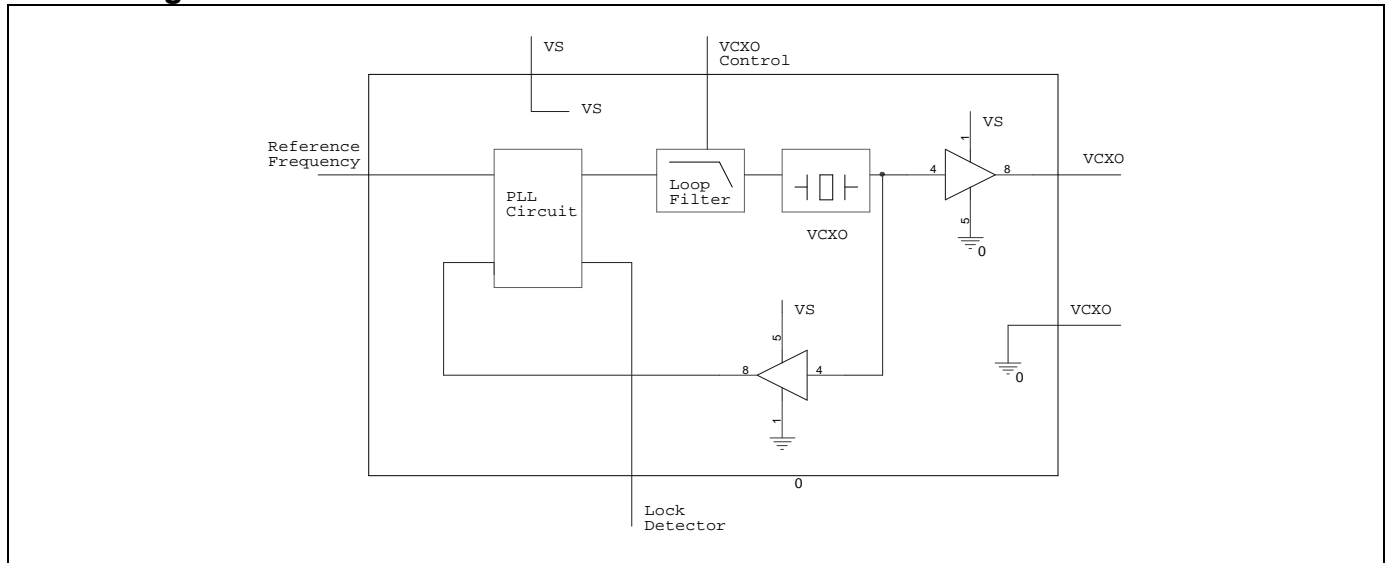
Frequency range [Hz]

12kHz to 20MHz

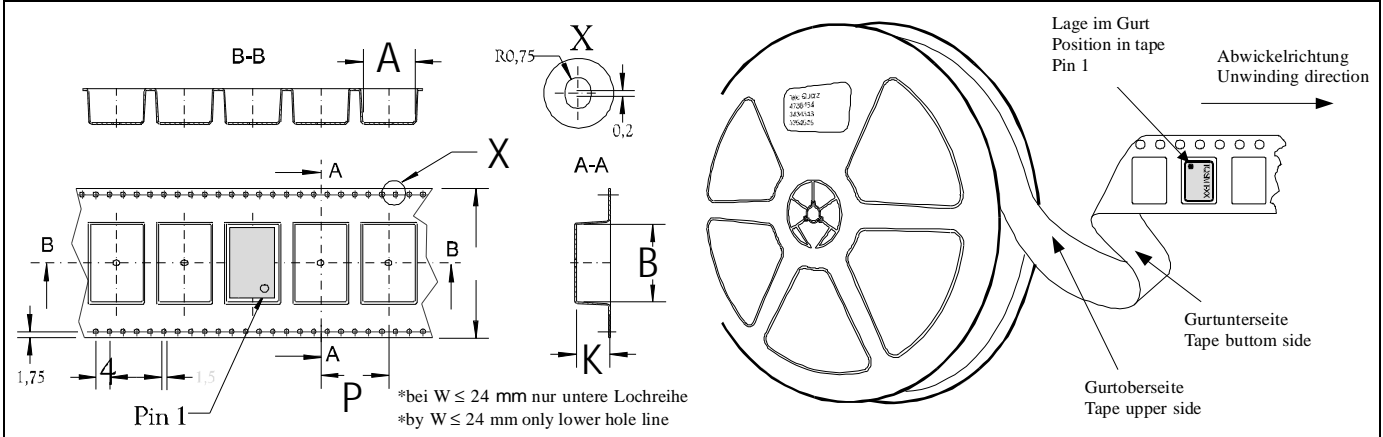
Jitter [ps rms]

2ps

## Block Diagramm



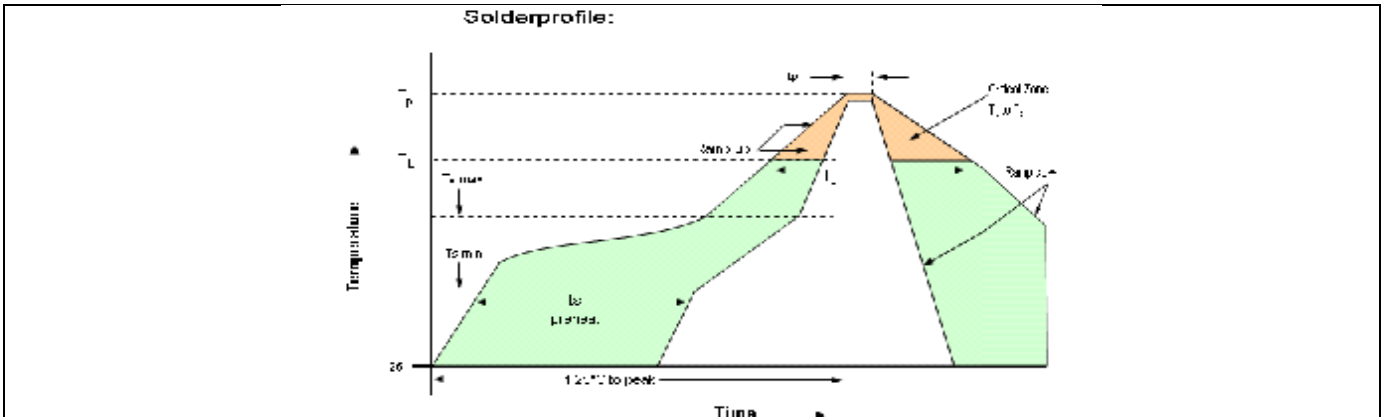
## Standard Shipping Method



Production tolerance complying DIN IEC 286-3

Enclosure Type	Tape width W [mm]	Quantity per meter	Quantity per reel	Dimension P
G283	tbd	tbd	1000	tbd

## Recommended Reflow Profile



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

Note: All temperatures refer to topside of the package, measured on the package body surface.  
SMD oscillators must be on the top side of the PCB during the reflow process.

## How to Order this Product:

Model	Input Frequency	Output Frequency	Supply Voltage Code	RF Output Code	Package Code		
FX-701			SV033	RFH	A1		

**Supply:**

SV033: 3.3V

**Signal:**

RFH: HCMOS