C2530 TCXO

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

Features
Wide Frequency range
EFC Standard
Standard Surface Mount Package
Meets Stratum 3

Previous Corning Model Numbers STO200

Frequency range 30 MHz – 900 MHz

Standard frequencies 67.584; 69.12; 79.488; 155.52, 242.733, 278.08 MHz

Frequency stabilities[1] [Standard TCXO]

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code[5]
vs. operating temperature range	-2.0		+2.0	ppm	-20 … +70°C	D206
(Referenced to +25°C)	-1.0		+1.0	ppm	-20 … +70°C	D106
	-1.0		+1.0	ppm	0 … +50°C	B106
	-0.5		+0.5	ppm	0 … +50°C	B507
Parameter	**Min**	**Typ**	**Max.**	**Units**	**Condition**	
Initial tolerance	- 1.0		+1.0	ppm	at time of shipment, nominal EFC	
vs. supply voltage change	- 0.2		+0.2	ppm	V_S ± 5%	
vs. load change	- 0.2		+0.2	ppm	Load ± 10%	
vs aging /1. Year	- 1.0		+1.0	ppm		

Frequency stabilities[1] [Stratum 3 TCXO]

Parameter	Min	Typ	Max.	Units	Operating temp range	Ordering Code[5]
vs. operating temperature range	-0.8		+0.8	ppm	-40 … +85°C	F807
(Referenced to +25°C)	-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	- 1.0		+1.0	ppm	at time of shipment, nominal EFC	
vs. supply voltage change	- 0.2		+0.2	ppm	V_S ± 5%	
vs. load change	- 0.1		+0.1	ppm	Load ± 10%	
vs aging /15 Years	- 2.5		+2.5	ppm		
overall tolerance	-4.6		-4.6	ppm	(*Stratum 3 per GR-1244-CORE: <±4.6 ppm for all causes and 20 years aging,Holdover: <±0.37 ppm over 24 hours (Code: D287 & B287)	

Supply voltage (Vs)

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

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RF output

Parameter	Min	Typ	Max.	Units	Condition	Ordering Code[5]
Signal [Standard]		HCMOS				RFH
Load	13.5	16.5		pF		
Signal Level (Vol)			0.3	VDC	with Vs=3.3V and 15pF load	
Signal Level (Voh)	3.0			VDC	with Vs=3.3V and 15pF load	
Rise and Fall time			5	ns		
Duty cycle	40	50	60	%	@ (Voh-Vol)/2	
Subharmonics	-45			dBc		
Signal [Standard]		PECL				RFP
Load		50		Ω	to Vs-2V	
Rise and Fall time			1	ns	20 to 80%	
Duty cycle	45	50	55	%		
Subharmonics	-45			dBc		

Frequency Tuning (EFC)

Parameter	Min	Typ	Max.	Units	Condition
Tuning Range	± 8.0	±14.0	± 20.0	ppm	Standard Version
Tuning Range	± 5.0	±12.0	± 20.0	ppm	Stratum 3 Version
Linearity			10	%	
Tuning Slope		Positive			
Control Voltage Range	0.3	1.65	3.0	VDC	with Vs=3.3VDC
Freq. control input impedance	10			kΩ	

Additional parameters

Parameter	Min	Typ	Max.	Units	Condition	
Phase Noise[3]		-70		dBc/Hz	10 Hz	Standard TCXO @
		-100		dBc/Hz	100 Hz	79.483 MHz
		-120		dBc/Hz	1 kHz	
		-128		dBc/Hz	10 kHz	
		-135		dBc/Hz	100 kHz	
Phase Noise[3]		-60		dBc/Hz	10 Hz	Stratum3 TCXO @
		-96		dBc/Hz	100 Hz	155.52MHz
		-115		dBc/Hz	1 kHz	
		-122		dBc/Hz	10 kHz	
		-129		dBc/Hz	100 kHz	
Weight			9	g		
Processing & Packing		Handling & processing note				

Absolute Maximum Ratings

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

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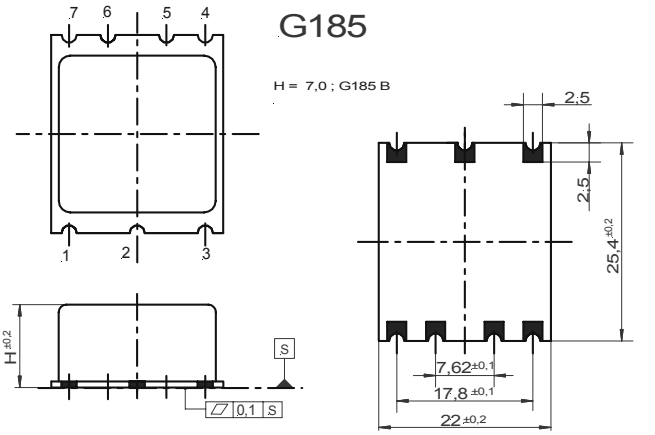
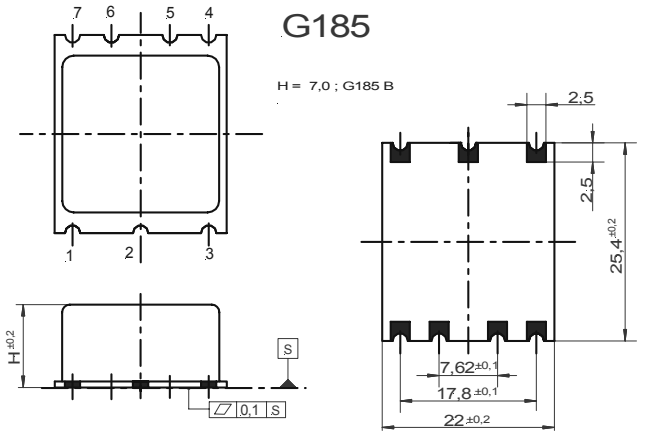
Enclosures

Type G185B				Type G185B (PECL)			
Package Codes :				Package Codes :			
Code A1	Height “H” 7.0	Pin Length “L” NA		Code B1	Height “H” 7.0	Pin Length “L” NA	



Dimensions : mm



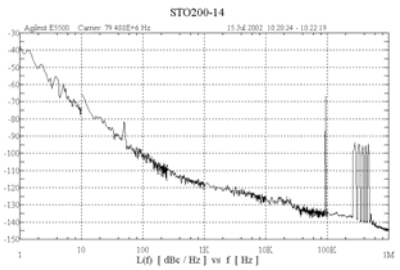
Pin Connections	
1	Voltage Control
2	I.C
3	Vs (supply voltage)
4	RF-Output
5	I.C.
6	I.C.
7	GND

1	Vs (supply voltage)
2	I.C
3	GND
4	I.C.
5	RF-Output
6	RF-Output compl.
7	GND

Typical measurement data

Phase Noise and Jitter

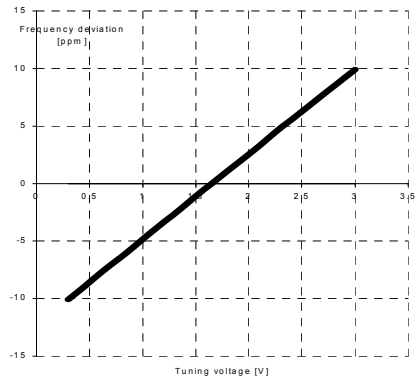
C2530A1 @79.488 MHz



Frequency range [Hz]	Sϕ(f) [dB]	Jitter [ps rms]
100 Hz to 1.5 MHz	-61,86	1.616 ps
50 kHZ to 1.5MHz	-62,07	1.578 ps

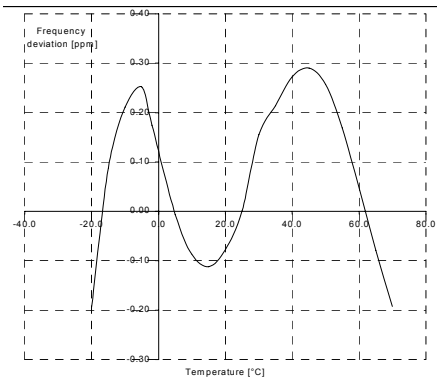
Tuning Slope

C2530A1 @79.488 MHz



Frequency stability vs temp

C2530A1 @79.483 MHz



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How to Order this Product:

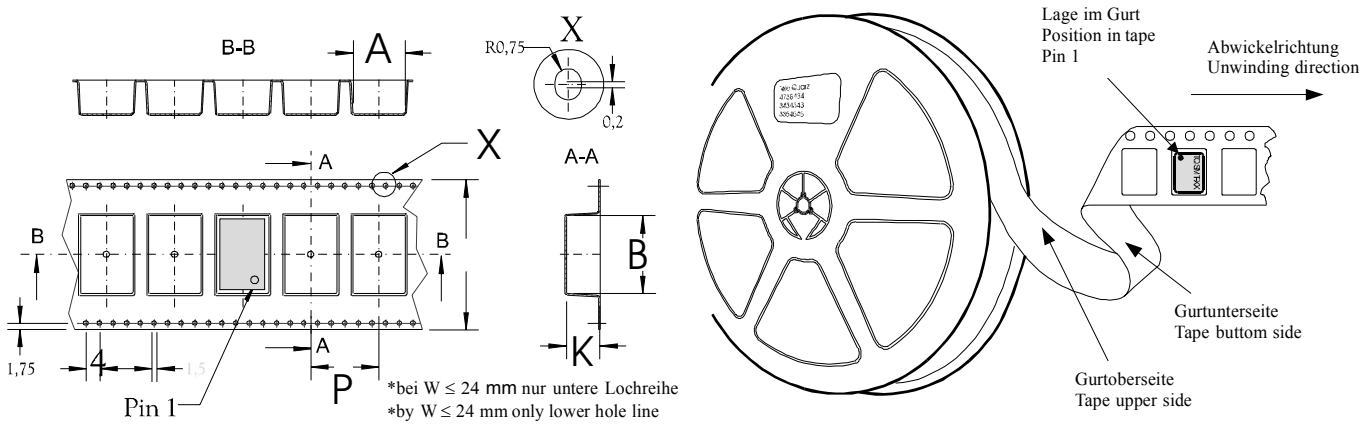
Step 1	Use this worksheet to forward the following information to your factory representative:				
Model	**Stability Code**	**Supply Voltage Code**	**RF Output Code**	**Package Code**	**Frequency**
C2530					
Example: C2530	*D206*	*SV033*	*RFC*	*A1*	*12.800MHz*

Step 2	The factory representative will then respond with a Corning Model Number in the following Configuration:		
Model	**Package Code**	**Dash**	**Dash Number**
C2530	[Customer Specified Package Code]	-	[Factory Generated 4 digit number]

Typical P/N = C2530A1-0001

Marking
C2530A1-xxxx Frequency * C AYYWW

Standard Shipping Method



Production tolerance complying DIN IEC 286-3

Enclosure Type	Tape width W [mm]	Quantity per meter	Quantity per reel	Dimension P	
G185B	44	37.5	230	32	

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.

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