

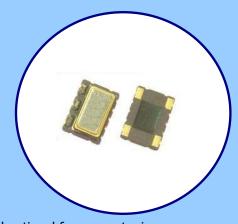
MODEL 585



TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

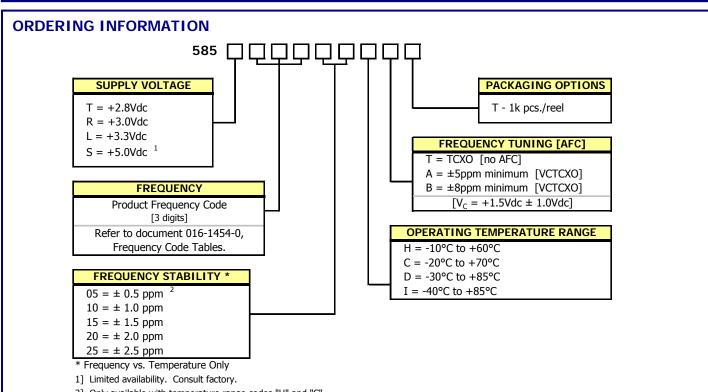
FEATURES

- Clipped Sine Wave Output
- Optional Voltage Control for Frequency Tuning [VCTCXO]
- 7.0mm x 5.0mm Surface Mount Package
- Frequency Range 5 52 MHz
- Fundamental Crystal Design
- Frequency Stability, Options from, ±0.5ppm ~ ±2.5ppm
- Operating Voltage, +2.8Vdc ~ +5.0Vdc
- Operating Temperature to -40°C to +85°C
- Tape & Reel Packaging Standard, EIA-418
- RoHS/Green Compliant [6/6]



APPLICATIONS

The Model 585 is a quartz based analog TCXO with a Clipped Sine output and optional frequency tuning. M585 is suitable for applications such as wireless communications, base stations, small cells, broadband access and test equipment.



2] Only available with temperature range codes "H" and "C".

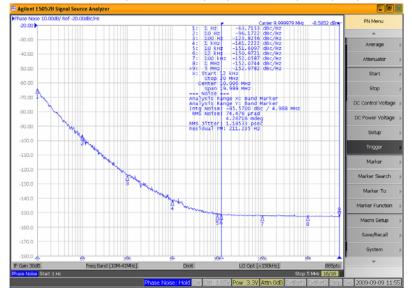
Not all performance combinations and frequencies may be available. Contact your local CTS Representative or CTS Customer Service for availability.

ELECTRICAL CHARACTERISTICS

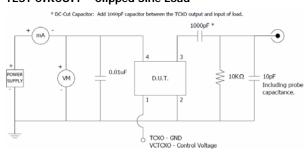
	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT	
	Maximum Supply Voltage	V_{CC}	-	-0.5	-	6.0	V
	Maximum Control Voltage	V_{C}	-	-0.5	-	V_{CC}	V
	Storage Temperature	T_{STG}	-	-55	-	+125	°C
	Frequency Range	f_0	Std frequencies listed in Ordering Information	5	- 0.5,1.0	52	MHz
	Frequency Stability	Δf/f _O	Frequency vs. Temperature Only	1	± ppm		
	Frequency Stability vs. Initial Calibration vs. Reflow Shift vs. Supply Voltage	_	@ +25°C 1 hour after reflow ±5% change	- - -		1.0 2.0 0.1	± ppm
	vs. Load		±10% change	-	-	0.2	
	vs. Aging		1st year	-	-	1.0	
	vs. Aging		10 year [Except stability code 05]	-	-	8.0	
ELECTRICAL PARAMETERS	Operating Temperature Order Code 'H' Order Code 'C' Order Code 'D' Order Code 'I'	T _A	-	-10 -20 -30 -40	+25	+60 +70 +85 +85	°C
ELECTRIC	Supply Voltage Order Code 'T' Order Code 'R' Order Code 'L' Order Code 'S'	V _{cc}	±5%	2.66 2.85 3.14 4.75	2.8 3.0 3.3 5.0	2.94 3.15 3.47 5.25	V
	Supply Current	I _{CC} -			-	3.5	mA
	Control Voltage	V_{C}	-	0.5	1.5	2.5	V
	Frequency Tuning [VCTCXO Only]	-	$V_C = 1.5V \pm 1.0V$	A = 5 minimum B = 8 minimum			± ppm
	V _C Input Impedance	ZV_C	-	100	-	-	kOhm
	Output Waveform		AC coupled Clipped Sinewave				
	Output Voltage Levels	V_{O}	-	0.8	-	-	Vp-p
	Output Load	$R_L // C_L$	-	10 kG			
	Start Up Time						ms
	Phase Noise ¹	-	-				dBc/Hz

Notes:

1. Phase Noise performance may vary based on output frequency. See example plot at 10 MHz below.



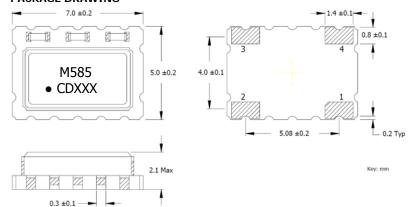
TEST CIRCUIT - Clipped Sine Load



MODEL 585 TCXO/VCTCXO - CLIPPED SINE WAVE

MECHANICAL SPECIFICATIONS

PACKAGE DRAWING



MARKING INFORMATION

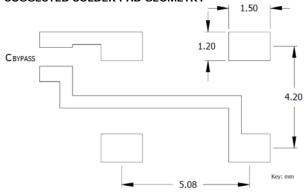
- 1. M585 CTS Model Series.
- 2. − Pin 1 identifier.
- 3. C CTS identifier.
- 4. D Date code. See Table II for codes.
- 6. xxx Frequency Code.

Refer to document 016-1454-0, Frequency Code Tables.

NOTES

- DO NOT make connections to non-labeled pins or castellations as they may have internal connections used in the manufacturing process.
- 2. Termination pads (e4); barrier plating is nickel [Ni] with gold [Au] flash plate.
- Reflow conditions per JEDEC J-STD-020, 260°C maximum.
- 4. MSL = 1.

SUGGESTED SOLDER PAD GEOMETRY



D.U.T. PIN ASSIGNMENTS

	PIN	SYMBOL	DESCRIPTION					
	1	Vc	Control Voltage – VCTCXO [Note 1]					
		v C	GND - TCXO					
	2	GND	Circuit & Package Ground					
	3	Output	Clipped Sine Wave Output					
	4	V_{CC}	Supply Voltage					

NOTES

- 1. Connect to ground for TCXO [no AFC] option.
- DC-Cut Capacitor Required.
 Add 1000pF capacitor between TCXO output and input of load.

TABLE II - DATE CODE

	MONTH					FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC
	YEAR		JAN	FEB	WAK	AFK	IVIAT	JOIN	JUL	AUG	JLF	001	NOV	DEC		
2001	2005	2009	2013	2017	Α	В	С	D	Е	F	G	Н	J	K	L	М
2002	2006	2010	2014	2018	N	Р	Q	R	S	Т	U	V	W	Χ	Υ	Z
2003	2007	2011	2015	2019	а	b	С	d	е	f	g	h	j	k		m
2004	2008	2012	2016	2020	n	р	q	r	s	t	u	٧	w	х	У	Z

PACKAGING INFORMATION [reference]

Device quantity is 1k pcs. maximum per 180mm reel.

