



**Distributor of CTS Electronic Components: Excellent Integrated System Limited**

Datasheet of MXO45-2C-66M66666 - OSC XO 66.66666MHZ HCMOS TTL PIN

Contact us: [sales@integrated-circuit.com](mailto:sales@integrated-circuit.com) Website: [www.integrated-circuit.com](http://www.integrated-circuit.com)

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## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[CTS Electronic Components](#)

[MXO45-2C-66M66666](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

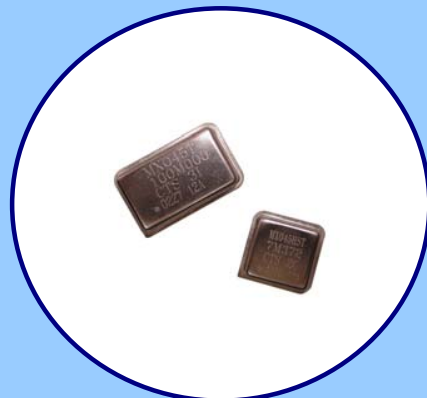
# MXO45 & MXO45HS

## HCMOS/TTL CLOCK OSCILLATOR



### FEATURES

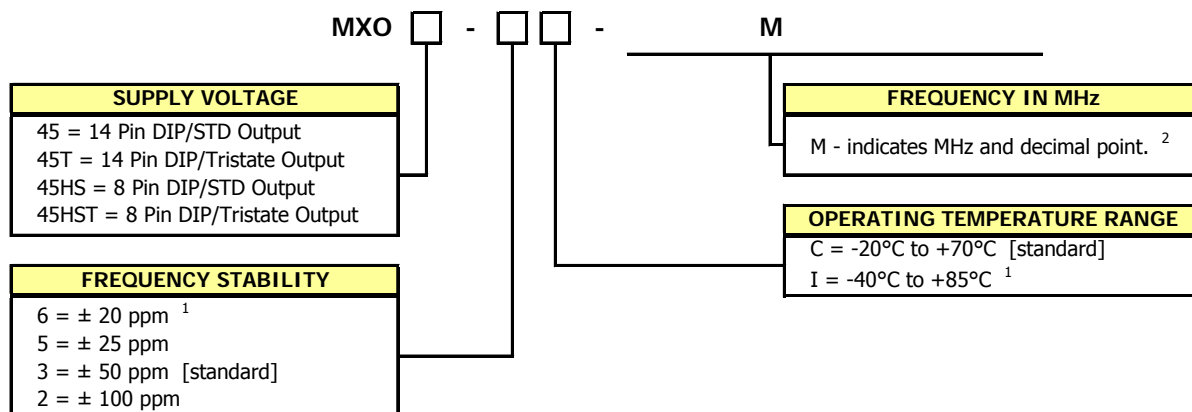
- Standard 14 Pin or 8 Pin DIP Packages
- HCMOS/TTL Compatible Output
- Fundamental and 3<sup>rd</sup> Overtone Crystal Designs
- Frequency Range 1 – 200 MHz
- Frequency Stability  $\pm 50$  ppm Standard
- Operating Voltage +5.0Vdc
- Operating Temperature to  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Output Enable Standard
- Plastic Tray Packaging
- **RoHS/Green Compliant (6/6)**



### APPLICATIONS

Applications for MXO45 and MXO45HS include microprocessors/DSP/FPGA, networking equipment, broadband access, storage area networks, computers and peripherals, test and measurement, Ethernet/Gigabit Ethernet.

### ORDERING INFORMATION



1] 6I Stability/Temperature combination is not available. Check availability for 6C combination.  
 2] Frequency is recorded with only leading significant digits before the 'M' and 4 - 6 significant digits after the 'M' (including zeros).  
 [Ex. XMXXXXXX (3M579545), XXMXXXXX (14M31818), XXXMXXXX (125M0000)]

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

### PACKAGING INFORMATION [reference]

Product is packaged in plastic trays. Typical packaging format is as follows:

- 50 pcs./Plastic Tray.  
Tray size is approximately 180 x 136 x 18mm [LxWxH].
- 2 Trays per Anti-Static Bag [100 pcs.] or 10 Trays per Anti-Static Bag [500 pcs.].  
Bag height for 10 Trays is approximately 175mm.
- 1 anti-static bag per cardboard carton.
- Master-pack multiple cardboard cartons in a larger carton.  
8 cardboard cartons [10 trays per carton] is approximately 460 x 380 x 400mm [LxWxH].

**ELECTRICAL CHARACTERISTICS**

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Supply Voltage	V <sub>CC</sub>	-	-0.5	-	+7.0	V
Storage Temperature	T <sub>STG</sub>	-	-40	-	+100	°C
Frequency Range	f <sub>o</sub>	-	1.0	-	200	MHz
Frequency Stability	Δf/f <sub>o</sub>	See Note 1 and Ordering Information	-	-	20,25,50 or 100	± ppm
Aging	Δf	First year	-	3	5	± ppm
Operating Temperature Commercial Industrial	T <sub>A</sub>	-	-20 -40	+25	+70 +85	°C
Supply Voltage	V <sub>CC</sub>	±10%	4.5	5.0	5.5	V
Supply Current	I <sub>CC</sub>	Frequency Range Tested load condition noted for typical values.				
		1.0MHz to 20MHz C <sub>L</sub> =50pF	-	10	26	mA
		20.001MHz to 40MHz C <sub>L</sub> =30pF	-	20	40	
		40.001MHz to 80MHz C <sub>L</sub> =30pF	-	30	60	
		80.001MHz to 125MHz C <sub>L</sub> =15pF	-	40	70	
		125.001MHz to 200MHz C <sub>L</sub> =15pF	-	55	80	
Output Load						
CMOS	C <sub>L</sub>	1.0MHz to 50MHz	-	-	50	pF
		50.001MHz to 80MHz	-	-	30	
		80.001MHz to 200MHz	-	-	15	
TTL		1.0MHz to 200MHz	-	-	10	TTL
Output Voltage Levels Logic '1' Level	V <sub>OH</sub>	CMOS Load 10 TTL LOAD	90%V <sub>CC</sub> 2.4	-	-	V
Logic '0' Level	V <sub>OL</sub>	CMOS TTL Load	-	-	10%V <sub>CC</sub> 0.4	
Output Current Logic '1' Level	I <sub>OH</sub>	V <sub>OH</sub> = 3.9V V <sub>CC</sub> = 4.5V	-	-	-16	mA
Logic '0' Level	I <sub>OL</sub>	V <sub>OL</sub> = 0.4V V <sub>CC</sub> = 4.5V	-	-	16	
Output Duty Cycle	SYM	@ 50% Level	45	-	55	%
Rise and Fall Time	T <sub>R</sub> T <sub>F</sub>	@ 10% - 90% Levels Tested load condition noted for typical values.				
		1.0MHz to 20MHz C <sub>L</sub> =50pF	-	8	10	ns
		20.001MHz to 80MHz C <sub>L</sub> =30pF	-	5	8	
		80.001MHz to 125MHz C <sub>L</sub> =15pF	-	2.5	5	
		125.001MHz to 200MHz C <sub>L</sub> =15pF	-	-	2	
Start Up Time	T <sub>S</sub>	Application of V <sub>CC</sub>	-	-	10	
Enable Function						
Enable Input Voltage	V <sub>IH</sub>	Pin 1 Logic '1', Output Enabled	2.0	-	-	V
Disable Input Voltage	V <sub>IL</sub>	Pin 1 Logic '0', Output Disabled	-	-	0.8	
Enable Time	T <sub>PLZ</sub>	Pin 1 Logic '1'	-	-	200	ns
Standby Current	I <sub>ST</sub>	Pin 1 Logic '0', Output Disabled	-	-	10	μA
Period Jitter, Pk-Pk	-	-	-	-	50	ps
Period Jitter, RMS	-	-	-	-	5	
Phase Jitter, RMS	-	Bandwidth 12kHz - 20MHz	-	-	1	

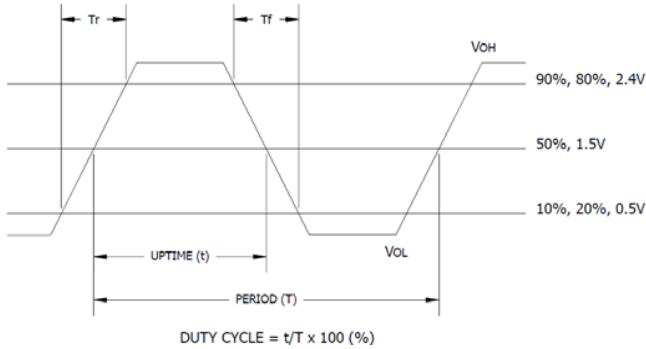
Notes:

- Inclusive of initial tolerance at time of shipment, changes in supply voltage, load, temperature and 1st year aging.

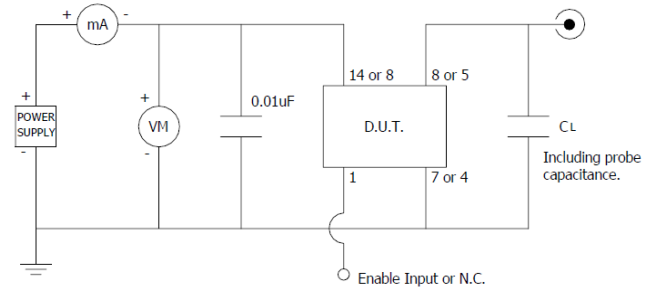
**MXO45 & MXO45HS  
 METAL DIP LOW COST  
 HCMOS/TTL CLOCK OSCILLATOR**

**ELECTRICAL CHARACTERISTICS**

**LVC MOS OUTPUT WAVEFORM**



**TEST CIRCUIT, CMOS LOAD**



**ENABLE TRUTH TABLE**

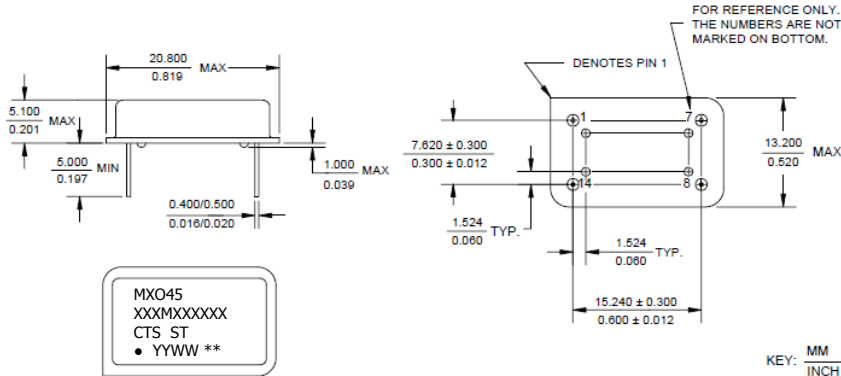
PIN 1	PIN 5 or PIN 8
Logic '1'	Output
Open	Output
Logic '0'	High Imp.

**D.U.T. PIN ASSIGNMENTS**

PIN	SYMBOL	DESCRIPTION
1	EOH	Enable Input or No Connect
7 or 4	GND	Circuit & Package Ground
8 or 5	Output	RF Output
14 or 8	V <sub>CC</sub>	Supply Voltage

**MECHANICAL SPECIFICATIONS**

**PACKAGE DRAWING  
 DIP-14**



**MARKING INFORMATION**

- Model Name:  
 DIP-14 – MXO45 or MXO45T.  
 DIP-8 – MXO45HS or MXO45HST.
- XXXXXXXX – Frequency is marked with only leading significant digits before the 'M' and 4 – 6 digits after the 'M' (including zeros).  
 Ex. XMXXXXXX [3M579545]  
 XXMXXXXX [14M31818]  
 XXXMXXXX [125M0000]
- ST – Frequency stability/temperature code.  
 [Refer to Ordering Information.]
- YYWW – Date code, YY – year, WW – week.
- \*\* – Manufacturing Site Code.

**NOTES**

- Lead finish [e1], SnAgCu.
- Reflow conditions per JEDEC J-STD-020, 260°C maximum.
- Moisture Sensitivity Level 1, per JEDEC J-STD-020.

**DIP-8**

