

12. TCXO / OCXO



FEATURE

- Tight Stability over Temperature
- Low Phase Noise
- HCMOS/TTL Compatible
- Clipped Sinewave(Optional)
- Sinewave Output Signal

APPLICATION

- Marine Navigation Instrumentation
- Digital System
- Cable TV System, GPS
- Telecommunication Mobile



■ TCXO / OCXO

TCXO (Tx Series)

Part Number	Frequency (MHz)	Output Logic	Supply Voltage (VDC, mA)	Stability vs Aging (ppm/Y)	Package (mm)
TX1	1~140	TTL/HCMOS	5, 10	1	18.30x12.00x10.80
TX-10S	10.0	SINE	5, 10	1	13.50x14.50x6.65
TX1-12.8S	12.8	SINE	5, 10	1	13.50x14.50x6.65
TX4	128KHz~160	TTL/HCMOS	5, 20	1	20.00x20.00x10.00
TX2	45~130	TTL/HCMOS	5, 30	1	25.78x25.78x12.70
TX3	55~130	TTL/HCMOS	12, 30	5	25.78x25.78x12.70
TX1A	10	SINE/CLIPPED SINE	5, 20	1	20.00x20.00x10.00
TX1B	10	SINE/CLIPPED SINE	5, 10	1	18.30x12.00x10.80
TX3-100	100	SINE/CLIPPED SINE	12, 30	1	25.78x25.78x12.70
TX3-125	125	SINE/CLIPPED SINE	12, 30	1	25.78x25.78x12.70

SELECTION GUIDE

[TX1 Series, TX3-100 Series, TX3-125 Series]

Temperature	0.5ppm	1ppm	1.5ppm	2ppm	2.5ppm
0~50℃	√	√	√	√	√
0~70℃	NA	√	√	√	√
-10~+60℃	NA	√	√	√	√
-20~+70℃	NA	√	√	√	√
-30~+70℃	NA	√	√	√	√
-40~+85℃	NA	√	√	√	√

[TX2 Series, TX4 Series, TX3-100 Series]

Temperature	0.5ppm	1ppm	1.5ppm	2ppm	2.5ppm
0~50℃	√	√	√	√	√
0~70℃	√	√	√	√	√
-10~+60℃	√	√	√	√	√
-20~+70℃	√	√	√	√	√
-30~+70℃	√	√	√	√	√
-40~+85℃	NA	√	√	√	√

√: Available NA: Not Available

OCXO (MH25 Series)

Absolute Maximum Rating

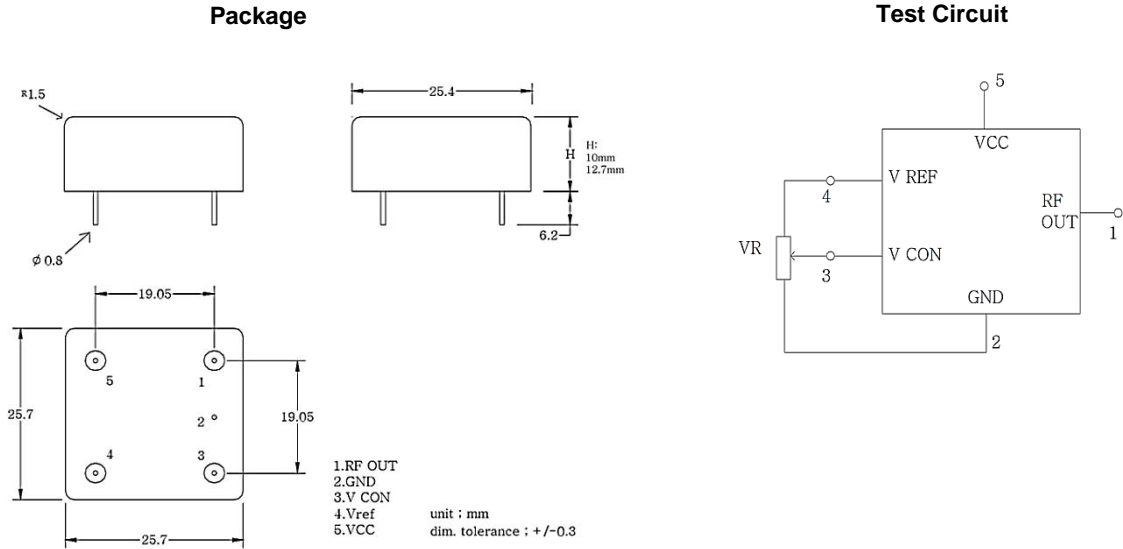
Parameter	Condition	Min.	Typ.	Max.	Unit	Note
Operating Temperature	-	-40		+85	°C	
Storage Temperature	-	-50		+125	°C	
Input Break Down Voltage	3.3V	-0.5		3.6	VDC	
	5V	-0.5		5.5		
	12V	-0.5		13		

Electrical Specification

Parameter	Condition	Min.	Typ.	Max.	Unit	Note
Frequency	-	10		130	MHz	
Frequency Stability	-30~+70°C	0.01			ppm	10PPB
Aging	per Day	$\pm 1 \times e^{-10}$			-	After 30days Operation
	per Year	$\pm 5 \times e^{-10}$				
SSB Phase Noise @10MHz	1Hz		-110		dBc	
	10Hz		-140			
	100Hz		-155			
	1KHz		-165			
	10KHz		-172			
	100KHz		-172			
SSB Phase Noise @100MHz	10Hz		-112		dBc	
	100Hz		-135			
	1KHz		-162			
	10KHz		-172			
	100KHz		-175			
	1MHz		-175			
Input Voltage	-	4.75	5	5.25	VDC	
Current	25°C, Steady State		0.65		Watt	5VDC
	Start-up		2.5			
Warm Time	Room Temp.			3	Minute	0.1ppm Max.
Output	Sine(50Ω)	+10			dBm	
	HCMOS				-	
Control Voltage	-	0		4.5	VDC	
Full Range	From Normal Frequency	0.3			ppm	
MTBF		60,000			Hour	

OCXO (MH25 Series)

Drawing



Ordering Information

MH25-5C10-XS-□□MHz

Code	Spec	Code	Temperature	Code	Stability	Code	Height	Code	Wave Form
3	3.3V	B	-10~60	05	0.005ppm	X	10mm	S	Sine
5	5.0V	C	-20~70	10	0.01ppm	Y	12.7mm	H	HCMOS
12	12.0V	D	-30~70	20	0.02ppm				
		E	-40~80	30	0.03ppm				
		F	-40~85						