

DIP TYPE

STD

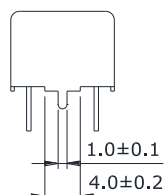
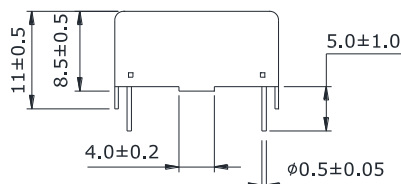
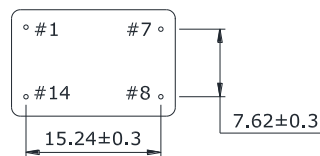
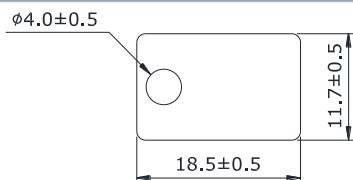
- Temperature Compensated Crystal Oscillator
- CMOS / TTL Output
- Clipped Sinewave Output
- 3.3 V, 5.0 V Supply Voltage



ELECTRICAL SPECIFICATIONS

ITEM	Value	
Output Logic Type	Clipped Sinewave	CMOS
Frequency Range	6.000 MHz to 190.000 MHz	1.000 kHz to 800.000 MHz
Supply Voltage(V _{DD})	3.3 V _{DC} ± 5 %, 5.0 V _{DC} ± 5 %	3.3 V _{DC} ± 5 %, 5.0 V _{DC} ± 5 %
Operating Temperature Range	-40 to +85 °C	-40 to +85 °C
Storage Temperature Range	-40 to +85 °C	-40 to +85 °C
Frequency Stability		
Vs. Temperature	±0.5 ppm to ±5.0 ppm Max.	±0.5 ppm to ±5.0 ppm Max.
Vs. Supply voltage (±5 %)	±0.3 ppm Max.	±0.3 ppm Max.
Vs. Load (±10 %)	±0.3 ppm Max.	±0.3 ppm Max.
Vs. Aging	±1.0 ppm Max. / year	±1.0 ppm Max. / year
Frequency Tolerance	±1.0 ppm Max.	±1.0 ppm Max.
Input Current	2 mA to 30 mA Max.	15 mA to 100 mA Max.
Frequency Deviation	±5.0 ppm, ±10 ppm Min.	±5.0 ppm, ±10 ppm Min.
Control Voltage(V _c)	1.65 V ± 1.5 V (V _{DD} : 3.3 V) 2.5 V ± 2.0 V (V _{DD} : 5.0 V)	1.65 V ± 1.5 V (V _{DD} : 3.3 V) 2.5 V ± 2.0 V (V _{DD} : 5.0 V)
Frequency Adjustment	±3.0 ppm Min. by internal Trimmer	±3.0 ppm Min. by internal Trimmer
Output Level		CMOS TTL
	0.8 V _{p-p} Min. (V _{DD} : 3.3 V) 1.0 V _{p-p} Min. (V _{DD} : 5.0 V)	90 % of V _{DD} Min. 2.4 V _{DC} Min. 10 % of V _{DD} Max 0.4 V _{DC} Max.
Output Load Condition	10 kΩ//10 pF	15 pF or 10 TTL
Phase Noise at 1kHz offset	-135 dBc/Hz	-135 dBc/Hz

MECHANICAL DIMENSIONS (mm)



CONNECTION
 #1 : V.C or N.C
 #7 : GND
 #8 : OUTPUT
 #14: V_{DD}

PART NUMBERING GUIDE

STD 33 20 H S 5 - 10.000M

SUPPLY VOLTAGE(V_{DD})

50 : 5.0 V
33 : 3.3 V

FREQUENCY STABILITY

TABLE 1

OPERATING TEMPERATURE RANGE

TABLE 1

OUTPUT

M : HCMOS
S : CLIPPED SINEWAVE

FREQUENCY

M : MHz

FREQUENCY DEVIATION

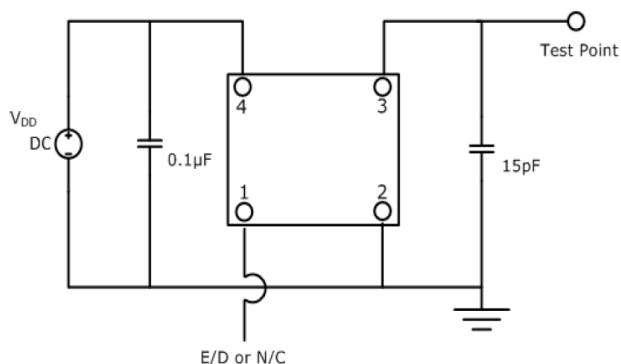
BLANK : TCXO
5 : ± 5 ppm min.
10 : ± 10 ppm min.

TABLE 1

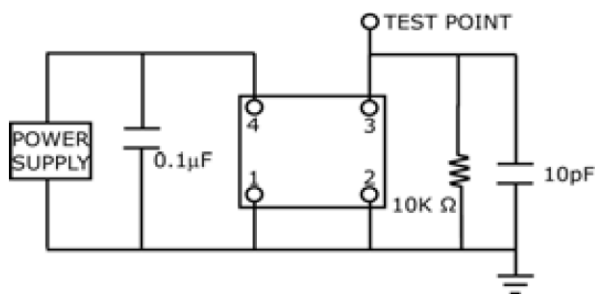
FREQUENCY STABILITY VS. TEMPERATURE RANGE

Temp	Stability	±0.5	±1.0	±1.5	±2.0	±3.0	±5.0
		05	10	15	20	30	50
0~50°C	A	*	*	*	*	*	*
-10~60°C	B	*	*	*	*	*	*
-10~70°C	C	*	*	*	*	*	*
-20~70°C	D	*	*	*	*	*	*
-30~60°C	E	*	*	*	*	*	*
-30~70°C	F	*	*	*	*	*	*
-30~75°C	G	*	*	*	*	*	*
-40~80°C	H		*	*	*	*	*
-40~85°C	I		*	*	*	*	*

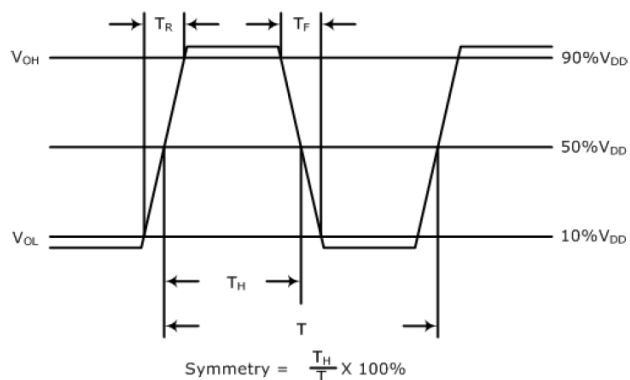
TEST CIRCUIT (CMOS)



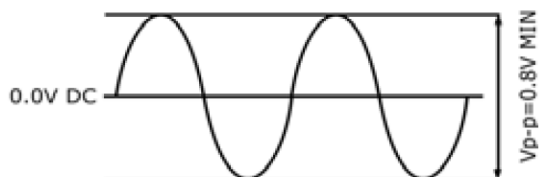
TEST CIRCUIT (Clipped Sinewave)



WAVEFORM (CMOS)

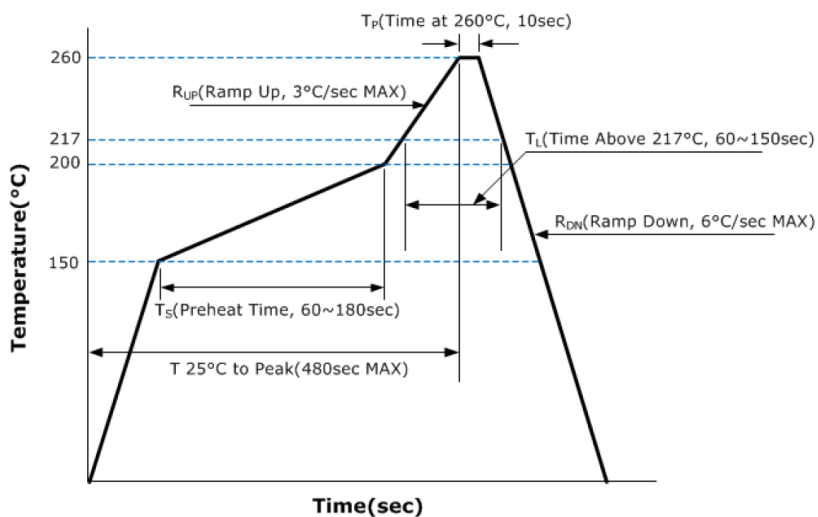


WAVEFORM (Clipped Sinewave)



REFLOW PROFILE

MARKING GUIDE



Frequency in MHz
 Model Name

LINE 1 : STD25DM
LINE 2 : XX.XXX MHz
LINE 3 : YY.MM
LINE 4 : SUNNY

Year
 Month

ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Solderability	MIL-STD-883, Method 2003