

Dip type CMOS output  
20.2 x 12.8 x 7.5 mm



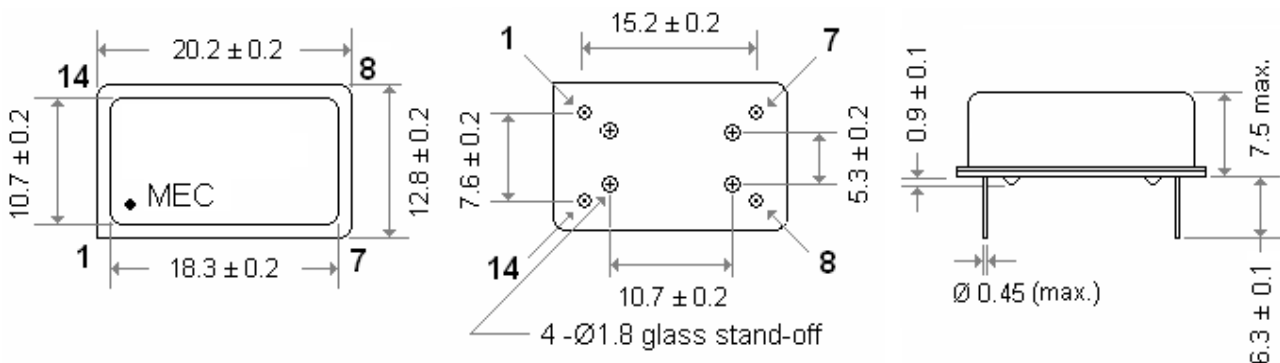
Features

- Ultra Small SMD seam sealed Temperature Compensated Crystal Oscillator units.

General Specifications

Parameters		Electrical Spec.							
Input Voltage ( V <sub>DD</sub> )		3.3 V ± 5 %							
Frequency Range		1.25 MHz ~ 156.0 MHz							
Output Wave Form		TTL / CMOS output							
Initial Calibration Tolerance		Models without mechanical trimmer : < ± 2.0 ppm at +25°C ±2°C.							
Frequency Stability ( ppm )		± 0.5 ppm	± 1.0 ppm	± 1.5 ppm	± 2.0 ppm	± 2.5 ppm	± 3.0 ppm	± 5.0 ppm	
Frequency Stability vs Temperature  ○ : available △ : please contact us X : not available	0°C to 50°C	○	○	○	○	○	○	○	
	-10°C to 60°C	△	○	○	○	○	○	○	
	-20°C to 70°C	X	○	○	○	○	○	○	
	-30°C to 75°C	X	○	○	○	○	○	○	
	-40°C to 85°C	X	○	○	○	○	○	○	
Frequency Stability	vs Aging	±1.0 ppm / year max. at 25C							
	vs Voltage Change	± 0.3 ppm max. , for a ±5% input voltage change .							
	vs Load Change	± 0.3 ppm max. , for a ±10% load condition change .							
	vs Reflow ( SMD type )	± 1.0 ppm max. , 1 reflow and measured 24 hours afterwards .							
Current Consumption ( max. )		10.0 MHz	77.760 MHz	155.520 MHz					
		4.0 mA	18.0 mA	35.0 mA					
Output Logic Levels	Logic High " 1 "	90% of V <sub>DD</sub> min.							
	Logic Low " 0 "	10% of V <sub>DD</sub> max.							
Electronical Freq. Tuning ( EFC ) by external control voltage	Control Voltage Center	Standard: +1.5 V ± 1.0 V for all Input voltages.							
	Frequency Deviation Range	± 5.0 ppm ( min. ) , V <sub>control</sub> = +1.5 V±1.0 V							
	Linearity	10 % max.							
	Input Impedance	1.0 MΩ min.							
	Modulation Bandwidth	3 KHz min. Measured at -3 dB , V <sub>control</sub> = +1.5 VDC							
Output Load		15 pF							
Start - Up Time ( Ts )		5.0 m sec. ( typ. ) , 10.0 m sec. ( max. )							
Output Format		DC block , AC coupled							
Rise Time ( Tr ) / Fall Time ( Tf )		10 n sec.(max.)							
Duty Cycle		Standard: 50 % ± 10 % ; Option: 50 % ± 5 % ; Measured at 50% V <sub>DD</sub> .							
Storage Temperature		- 50°C to 100°C							
Aging		± 3 ppm per year (max.)							
Phase Noise ( typical ) [ 10.000 MHz ]		Offset	10 Hz	100 Hz	1K Hz	10 KHz	100KHz	1 MHz	10 MHz
		dBc / Hz	-80	-115	-135	-138	-142	-148	-150

General Specifications ( Unit : mm )



Pin Connections :

- Pin 1 : Voltage control for VCTCXO , No physical pin 1 for TCXO
- Pin 7 : Ground
- Pin 8 : Output
- Pin 14 : Supply Voltage