Type OF clock oscillator 4 pin(14 pin DIL layout) (0.001 ~ 156)MHz

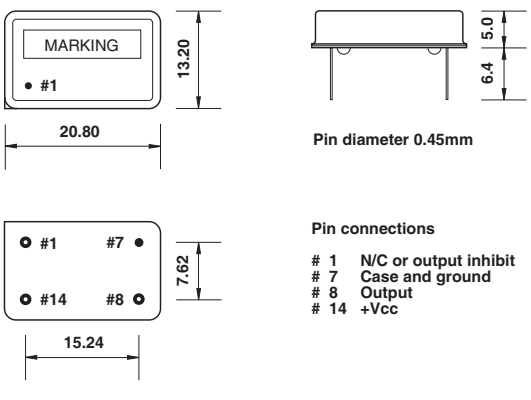
- # resistance weld package
- # standard and custom frequencies
- # +3.3Vd.c., +5.0Vd.c. supply

Electrical specification

Case style			4 pin(14 pin DIL layout): (20.8 x 13.2)mm, height 5.0mm
Frequency range			+5Vd.c.(0.001 ~ 156)MHz, +3.3Vd.c.(1 ~ 156)MHz
Stability *			±(25 ~ 100)ppm, temperature range dependent
Supply voltage V_{cc}		**+3.3Vd.c.**	**+5.0Vd.c.**
Supply current max.	(0.001 ~ 1.0)MHz		10mA
	(1.0 ~ 20)MHz	10mA	15mA
	(20 ~ 50)MHz	30mA	40mA
	(50 ~ 156)MHz	40mA	50mA
Rise and fall time max. **	(0.001 ~ 1.0)MHz		10ns
	(1.0 ~ 20)MHz	10ns	8ns
	(20 ~ 50)MHz	6ns	5ns
	(50 ~ 100)MHz	5ns	4ns
	(100 ~ 156)MHz	3ns	3ns
Operating temperature			(-20 +70)°C ~ (-40 +85)°C
Storage temperature			(-55 +125)°C
Output			TTL, CMOS
Symmetry			(45 ~ 55)%, (40 ~ 60)%
Tri-state			fixed frequency or tri-state
Ageing			±5ppm first year max.

* inclusive of calibration tolerance at +25°C, temperature tolerance, supply voltage variation, load variation, first year ageing, shock and vibration.
** measured, with an output load of 15pF, between (10 ~ 90)% V_{cc}

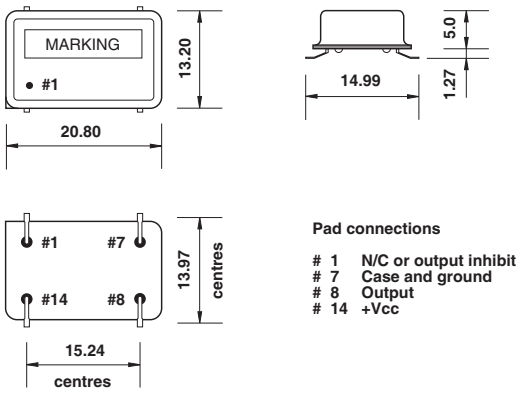
Dimensions(mm), through hole



Pin connections

1 N/C or output inhibit
7 Case and ground
8 Output
14 +Vcc

Dimensions(mm), gull wing



Pad connections

1 N/C or output inhibit
7 Case and ground
8 Output
14 +Vcc

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ISO9001: 2008
RS13124
ISO14001: 2004
EMS53965

Type OF clock oscillator

Ordering information

Example .... type F clock oscillator, 24.00MHz, +5.0Vd.c., 4 pin(14 pin DIL layout) through hole package, tri-state, ±25ppm(-20 +70)°C, CMOS 15pF, symmetry (45 ~ 55)%

TFC PART NUMBER .... OF 24.0M T T D C J

'OF' .... type number: OF = clock oscillator type F
'24.0M' .... frequency: 24.0M = 24.00MHz, frequency range from (0.0001 ~ 156)MHz
'T' .... supply voltage and package combination: T = +5Vd.c., 14 pin DIL through hole package
'T' .... tri state function pin #1: T = fixed frequency with tri-state
'D' .... frequency stability: D = ±25ppm
'C' .... temperature range: C = (-20 +70)°C
'J' .... output logic and symmetry: J = CMOS 15pF, (45 ~ 55)%

Supply voltage and package combination	*T: +5Vd.c., 14 pin DIL through hole* *G: +5Vd.c., gull wing package* *E: +3.3Vd.c., 14 pin DIL through hole* *F: +3.3Vd.c., gull wing package*
Tri-state function pin #1	*T: fixed frequency with tri-state* *F: fixed frequency without tri-state* *B: low frequency without tri-state* *(1kHz ~ 1MHz, = +5.0Vd.c. supply only)*
Frequency stability	*D: ±25ppm* *G: ±50ppm* *H: ±100ppm*
Temperature range	*C: (-20 +70)°C* *D: (-30 +80)°C* *L: (-40 +85)°C*
Output logic and symmetry	*A: TTL(45 ~ 55)%* *B: TTL(40 ~ 60)%* *R: TTL 50pF(40 ~ 60)%* *E: TTL 50pF(45 ~ 55)%* *J: CMOS 15pF(45 ~ 55)%* *K: CMOS 15pF(40 ~ 60)%* *F: CMOS 50pF(45 ~ 55)%* *G: CMOS 50pF(40 ~ 60)%*

Environmental test conditions (on request)

Mechanical shock	*1500g, half sine wave, 0.5ms, 3 directions*	*MIL STD 883D 2002.3, condition A*
Thermal shock	*(-55 ~ +125)°C, 20 cycles*	*MIL STD 883D 1011.9, condition B*
Vibration	*(10 ~ 2000)Hz, 1.25mm, sine wave, 20g, each of three planes, duration 4 hours*	*MIL STD 883D 2005.2, condition B*
Solderability	*+245°C ±5°C, 5 seconds ±0.5 seconds*	*MIL STD 883D 2003.7*
Fine leak	*Mass spectrometer leak rate less than 2^{10-8} atm.cc/sec. helium*	*MIL STD 883D 1014.9, condition A*
Gross leak	*Leak test in de-ionised water, vacuum 70cm/Hg*	
Humidity	*85% relative humidity, +85°C, 500 hours*	*JIS-C 7022 B-5, conditionC*

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