TOYOCOM

Crystal Clock Oscillator

TCO-711A7

FULL DIP Double-Sealed TTL

Feature

- TTL logic output
- DIP-14 pin package compatible
- Hermetically double-sealed metal package
- Case ground 7-pin for minimizing RF radiation

Absolute Maximum Ratings

Parameter	Symbol	Rating
Supply voltage	V_{CC}	-0.5 to +7.0 V
Input voltage	V_{IN}	-0.5 to V_{CC}+0.5 V
Output voltage	V_O	-0.5 to V_{CC}+0.5 V
Output current	I_O	±25 mA
Storage temperature	T_{stg}	-55 to +125 °C

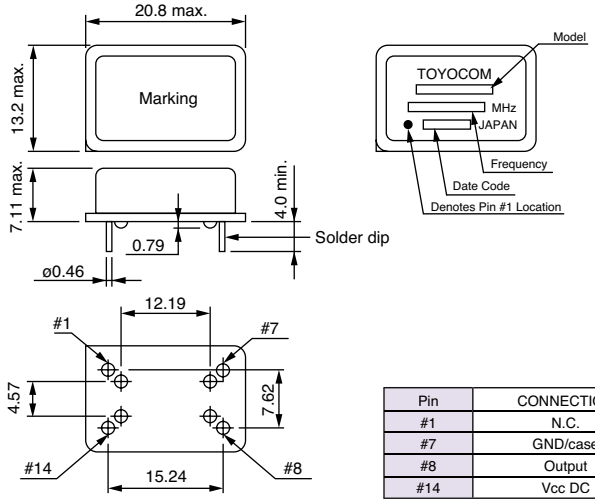
Specifications

Parameter		TCO-711A7	Conditions
Frequency	fo	1.5 to 100 MHz	
Frequency Stability	Δf/fo	±100 ppm max.	(*1)
Operating Temperature	Topr	0 °C to +70 °C	
Supply Voltage	Vcc	+5.0V±10%	DC
Supply Current	Icc	See Table A (max.)	Vcc= +5.5V
Output Voltage	V_{OH} V_{OL}	V_{OH}=+2.4 V min. / V_{OL}=+0.4 V max.	I_{OH}= -0.4mA , I_{OL}= +16mA
Symmetry	SYM	45 to 55 % 40 to 60 %	1.5 to 60MHz at +1.4V 60 to 100MHz at +1.4V
Rise/Fall time	tr/tf	See Table A (max.)	TTL logic output at +0.4 to +2.4V
Fanout	n	10 max. 5 max.	1.5 ≤ to ≤ 60 MHz 60 < fo ≤ 100 MHz
Start-up time	tst	4 ms max. 10 ms max.	1.5 ≤ fo ≤ 26MHz 26 < fo ≤ 100MHz (*2)

*1 Inclusive of calibration tolerance at +25°C, operating temperature, operating voltage range.

*2 Rise time (0 to +4.5V) of Vcc >150μs

Package Outlines [Dimensions in mm]



Pin	CONNECTION
#1	N.C.
#7	GND/case
#8	Output
#14	Vcc DC

Table A

Freq. (MHz)	1.5 ≤ fo ≤ 9	9 < fo ≤ 23	23 < fo ≤ 32	32 < fo ≤ 60	60 < fo ≤ 80	80 < fo ≤100
Icc (mA)	30	30	40	50	70	90
tr,tf (ns)	15	10	10	5	5	4

Test Circuit

See Test Circuit page TEST-1

(2002. 1.)