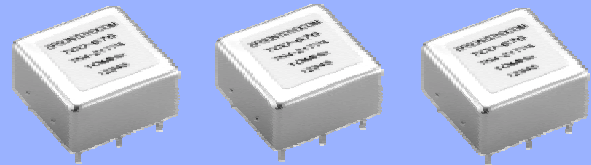




## Oven Controlled Crystal Oscillator (OCXO)

## TCO - 676 series

- Features : Compact and low profile
- : Very fast warm-up
- : SC-Cut Crystal unit

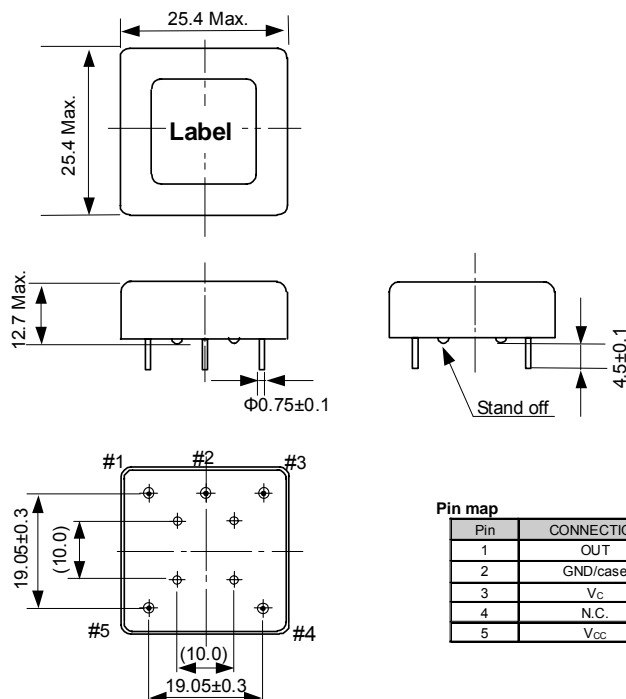


## Specifications (characteristics)

Item	Symbol	Specifications			Remarks
		TCO-676R3	TCO-676R2	TCO-676R	
Output frequency range	$f_o$	10 MHz to 20 MHz			Standard frequency
		17 MHz	10 MHz		
Supply voltage	$V_{cc}$	3.3 V $\pm$ 0.165 V	5 V $\pm$ 0.25 V	12 V $\pm$ 0.6 V	
Storage temperature range	$T_{stg}$	-20 °C to +80 °C			During transport only. Long term storage: Room Temperature.
Operating temperature range	$T_{use}$	-10 °C to +70 °C			
Frequency/temperature coefficient	$f_o-T_c$	$\pm 2 \times 10^{-8}$ Max.			-10 °C to +70 °C
Frequency/voltage coefficient	$f_o-V_{cc}$	$\pm 5 \times 10^{-9}$ Max. $V_{cc}=3.3 \text{ V} \pm 0.165 \text{ V}$	$\pm 5 \times 10^{-9}$ Max. $V_{cc}=5 \text{ V} \pm 0.25 \text{ V}$	$\pm 5 \times 10^{-9}$ Max. $V_{cc}=12 \text{ V} \pm 0.6 \text{ V}$	
Frequency aging	$f_{aging}$	$\pm 1 \times 10^{-8}$ / day Max. $\pm 1 \times 10^{-7}$ / year Max.			
Warm-up	—	$\pm 5 \times 10^{-8}$ / 5 min Max.			+25 °C
Current consumption	Warm-up	1150 mA Max.	700 mA Max.	300 mA Max.	at +25 °C
	Steady state	650 mA Max.	300 mA Max.	130 mA Max.	
Frequency control range	$f_{cont}$	$\pm 1 \times 10^{-6}$ Min. $V_c=1.65 \text{ V} \pm 1.65 \text{ V}$	$\pm 1 \times 10^{-6}$ Min. $V_c=2.5 \text{ V} \pm 2.5 \text{ V}$		
Symmetry	SYM	45 % to 55 %			$(V_{OH}-V_{OL})/2$
High output voltage	$V_{OH}$	2.4 V Min.	4.0 V Min.	4.0 V Min.	$V_{cc}=3.3 \text{ V}$ : 3.3 V Level CMOS $V_{cc}=5 \text{ V}, 12 \text{ V}$ : 5 V Level CMOS
Low output voltage	$V_{OL}$	0.4 V Max.	0.5 V Max.	0.5 V Max.	
Output load condition	L CMOS	10 k $\Omega$ // 10 pF			
Weight	—	20 g Max.			

## External dimensions

(Unit:mm)



Pin map

Pin	CONNECTION
1	OUT
2	GND/case
3	$V_c$
4	N.C.
5	$V_{cc}$