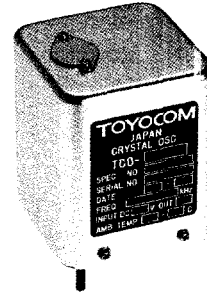
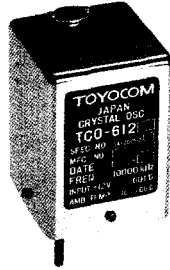


OCXO

TCO-612, 613, 615 Series

Features

- Excellent long and short term stability
- Low SSB phase noise
- Excellent warm-up
- Compact size

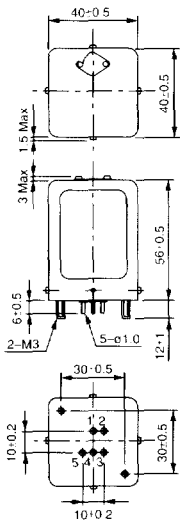


Specifications

Type	TCO-612A	TCO-612B	TCO-612C	TCO-613A	TCO-615A	TCO-615B
Standard frequency	5MHz or 10MHz			5 MHz	5MHz or 10MHz	5 MHz
Stability vs Temperature	$\pm 1 \times 10^{-7} / -10 \text{ to } +60^\circ\text{C}$	$\pm 5 \times 10^{-8} / -10 \text{ to } +60^\circ\text{C}$		$\pm 1 \times 10^{-8} / -10 \text{ to } +60^\circ\text{C}$		$\pm 5 \times 10^{-8} / -10 \text{ to } +60^\circ\text{C}$
Stability vs Supply voltage	$\pm 1 \times 10^{-7} / \pm 10\%$	$\pm 3 \times 10^{-8} / \pm 10\%$		$\pm 5 \times 10^{-8} / \pm 5\%$	$\pm 2 \times 10^{-8} / \pm 5\%$	$\pm 1 \times 10^{-8} / \pm 5\%$
Aging	$\pm 5 \times 10^{-6} / \text{day}$	$\pm 2 \times 10^{-6} / \text{day}$	$\pm 5 \times 10^{-6} / \text{day}$	$\pm 2 \times 10^{-6} / \text{day}$	$\pm 2 \times 10^{-6} / \text{day}$	$\pm 5 \times 10^{-6} / \text{day}$
	$\pm 2 \times 10^{-7} / \text{year}$	$\pm 1 \times 10^{-7} / \text{year}$	$\pm 8 \times 10^{-8} / \text{year}$	$\pm 5 \times 10^{-8} / \text{year}$	$\pm 5 \times 10^{-8} / \text{year}$	$\pm 2 \times 10^{-8} / \text{year}$
Warm-up	after 24 hours operation			after 48 hours operation		
	$\pm 1 \times 10^{-7}$	$\pm 5 \times 10^{-8}$		$\pm 2 \times 10^{-8}$	$\pm 5 \times 10^{-8}$	
	within 10 minutes at +25°C			within 30 minutes at +25°C		
Output	TTL Compatible (Fanout - 2)			2 Vp-p / 50Ω Sinewave	TTL Compatible (Fanout - 2)	
Supply voltage	$+12\text{V} \pm 10\%$					
Current drain	Warm-up	330 mA Max		400 mA Max	550 mA Max	
	Steady state at 25°C	150 mA Max		200 mA Max	300 mA Max	
Frequency adjustment	$\pm 5 \times 10^{-1} \text{ Min}$		$\pm 2.5 \times 10^{-1} \text{ Min}$		$\pm 1 \times 10^{-1} \text{ Min}$	
Weight	100g			200g		
Available frequency range	1 to 10MHz			5 to 7MHz	5 to 10MHz	-

Outline Drawing [mm]

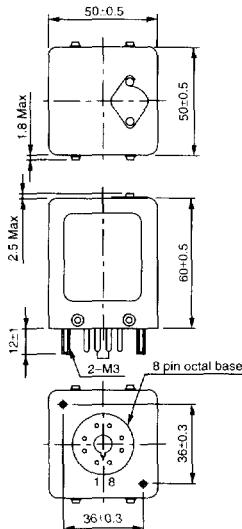
[TCO-612A, B, C]



Pin connections

1	Output
2	Vcc
3	NC
4	NC
5	GND/case

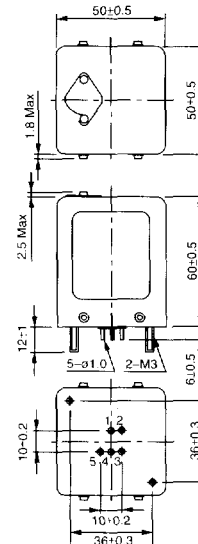
[TCO-613A]



Pin connections

1-3	NC
4	Output(hot)
5	Output(cold)
6	GND/case
7	Vcc
8	NC

[TCO-615A, B]



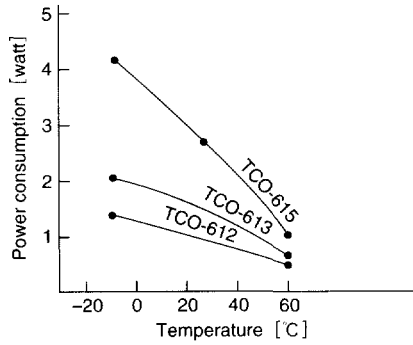
Pin connections

1	Output
2	Vcc
3	NC
4	NC
5	GND/case

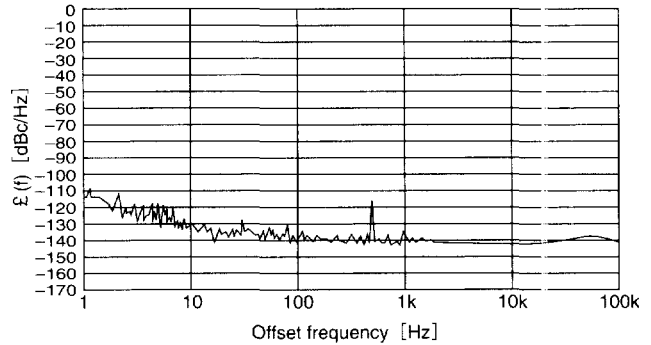
Electrical Data

TCO-613A

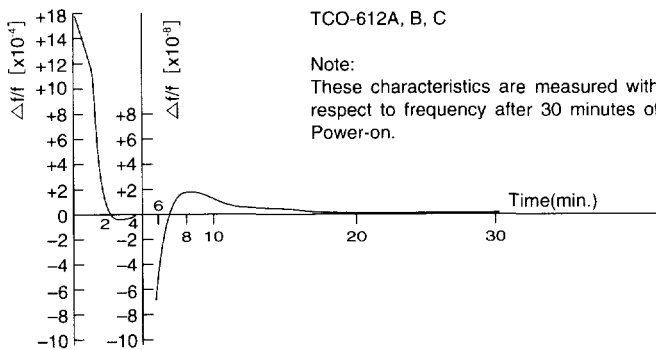
Power consumption vs. Ambient temperature



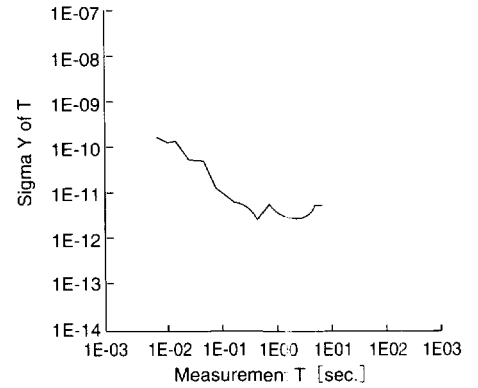
TCO-613A 5MHz SSB phase noise



Warm-up characteristics

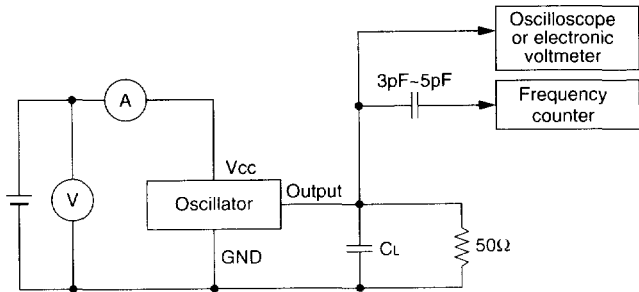


TCO-639 10MHz Short-term stability



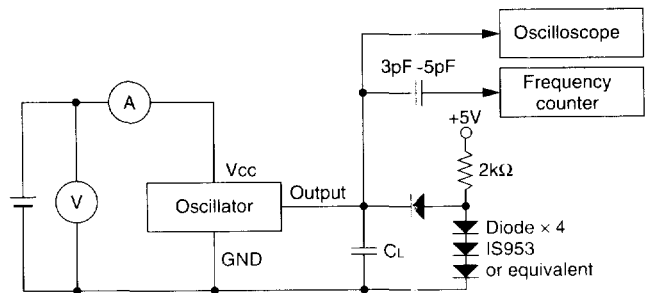
Test Circuit

TCO-613



CL: Total fixture and probe capacitance

TCO-612, 615



CL: Total fixture and probe capacitance= 15pF Max