

## SPXOS

- Date code (Year/Week)

### Minimum Order Information Required

- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

- HCMOS/TTL

- ## Package Outline

- ### Standard Frequency Stabilities

- ### Frequency Tolerance at 25°C (Optional)

- $\pm 5\text{ppm}$ ,  $\pm 10\text{ppm}$ ,  $\pm 25\text{ppm}$

### Operating Temperature Range

- 0 to 70°C (IQXO-350)
- -40 to 85°C (IQXO-350I)

### Storage Temperature Range

- -55 to 125°C

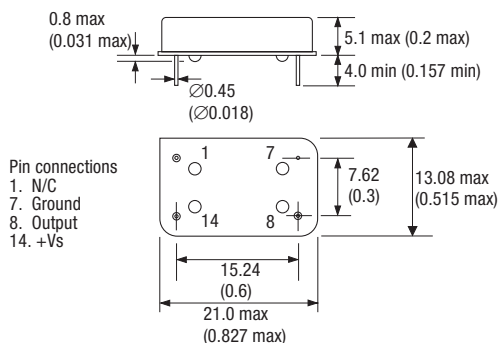
## Environmental Specification

- Terminal Strength: 0.91kg max. Force perpendicular to top & bottom.
- Hermetic Seal: not to exceed  $1 \times 10^{-8}$  mBar litres of Helium leakage
- Solderability: MIL-STD-202E, Method 208C
- Vibration: 10 to 55Hz 0.76mm displacement, sweep 60 seconds, duration 2 hours.
- Rapid Change of Temperature over Operating Temperature Range: 10 cycles
- Shock:  $981\text{m/s}^2$  for 6ms, three shocks in each direction along the three mutually perpendicular planes

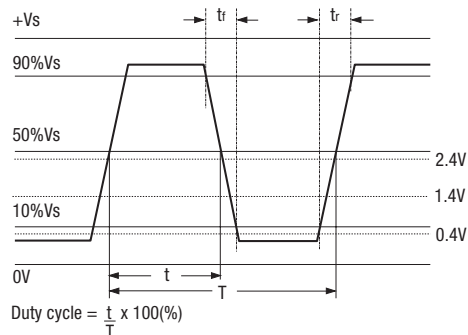
### Marking

- Model number (+ Operating Temperature Code; if applicable)
- Frequency Stability Code
- Frequency Tolerance Code (Optional)
- Frequency

### Outline in mm (inches)



### Output Waveform - HCMOS/TTL/LS TTL



# Electrical Specification – maximum limiting values when measured in HCMOS test circuit

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	*Rise Time ( $t_r$ )	*Fall Time ( $t_f$ )	**Duty Cycle	Model Number
1.0 to < 100.0kHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	10mA	10ns	10ns	45/55%	IQXO-350, -350I
100.0 to < 250.0kHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	10mA	15ns	15ns	45/55%	IQXO-350, -350I
250.0kHz to < 5.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	30mA	15ns	15ns	45/55%	IQXO-350, -350I
5.0 to < 16.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	15mA	10ns	10ns	45/55%	IQXO-350, -350I
16.0 to < 30.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	30mA	10ns	10ns	45/55%	IQXO-350, -350I
30.0 to < 50.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	40mA	8ns	8ns	45/55%	IQXO-350, -350I
50.0 to 80.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$5V \pm 0.25V$	50mA	6ns	6ns	40/60%	IQXO-350, -350I

## Ordering Example

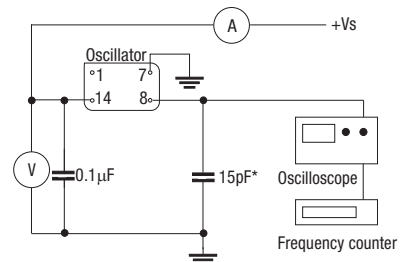
Frequency 22.0MHz    IQXO-350I    B    F  
 Model No \_\_\_\_\_  
 Operating Temperature Code: I = -40 to 85°C Not applicable for 0 to 70°C \_\_\_\_\_  
 Frequency Stability: A =  $\pm 25\text{ppm}$ ; B =  $\pm 50\text{ppm}$ ; C =  $\pm 100\text{ppm}$  \_\_\_\_\_  
 Frequency Tolerance @ 25°C: D =  $\pm 5\text{ppm}$ ; E =  $\pm 10\text{ppm}$ ; F =  $\pm 25\text{ppm}$  \_\_\_\_\_

Please note: Code combination A F is not available

## Test Circuit - HCMOS

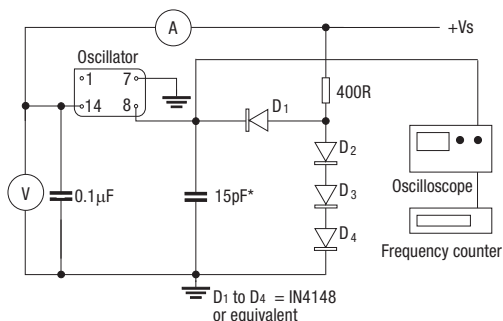
\* Rise & Fall times will be 6ns max in TTL cct.

\*\* Duty Cycle will be 40/60% in TTL cct for  $\geq 5.0\text{MHz}$



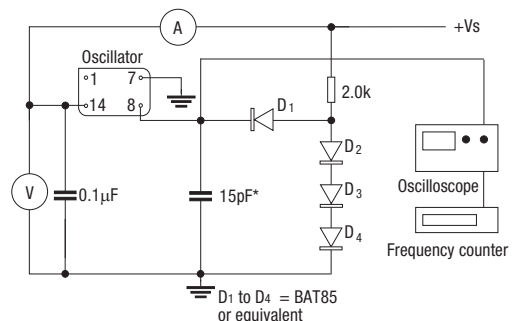
\*Inclusive of jigging & equipment capacitance

## Test Circuit - TTL



\*Inclusive of jigging & equipment capacitance

## Test Circuit - LS TTL



\*Inclusive of jigging & equipment capacitance