

QWO Series

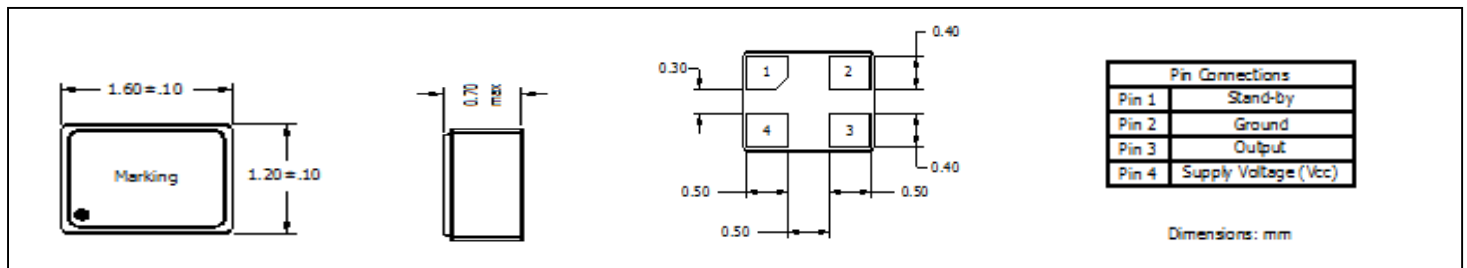
SMD Oscillator, 1.6x1.2mm, CMOS

Frequency	1.000000 MHz to 80.000000 MHz
Output Level CMOS	Logic "0" = 0.4 V max Logic "1" = Vcc - 0.4 V min
Duty Cycle	See Duty Cycle Table in Part Number Guide
Rise / Fall Time	4.5 nSec max (10% to 90% of waveform)
Output Load	15pF max
Frequency Stability	See Frequency Stability Table in Part Number Guide (Note 1)
Start-up Time	2.0 mSec max with Vcc = +3.30 VDC 5.0 mSec max with Vcc = +1.80 VDC
Stand By Terminal Function (Pin 1)	0.7 Vcc min = Output enable 0.3 Vcc max = Oscillation stop and High impedance output
Supply Voltage (Vcc)	See Input Voltage Table in Part Number Guide (Tolerance = ±10%)
Current	
During Standby	10 µA max 2.5 typ., 3.5 mA max (1.8 V, 15 pF load @ 50.000MHz) 3.5 typ., 5.0 mA max (1.8 V, 15 pF load @ 80.000MHz)
During Operation	4.2 typ., 6.0 mA max (3.3 V, 15 pF load @ 50.000MHz) 6.0 typ., 8.5 mA max (3.3 V, 15 pF load @ 80.000MHz)
Aging	± 3.0 ppm max @ +25°C First Year
Temperature Range	
Operating	See Operating Temperature Table in Part Number Guide
Storage	-40°C to +105°C
Random Jitter (RJ)	2.9 pSec typ
Total Jitter (TJ)	40.0 pSec typ TJ = n x RJ where n ≈ 14.1, BER = 10 ⁻¹²
Phase Jitter	1.0 pSec max Offset frequency = 12 kHz to 5.000MHz
Notes:	1) Includes room temperature tolerance and stability over operating temperature. 2) A 0.01 µF bypass capacitor is recommended between Vcc (Pin 4) and GND (Pin 2) to minimize power supply noise.

Part Number Guide Sample Part Number: QWO-3ETA2-20.000

Package	Input Voltage	Operating Temperature	Duty Cycle (Symmetry)	Output	Stability (in ppm)	Frequency
	1 = +1.8V	A = 0°C to +70°C	T = 45/55 max	A = 15 pF	1 = ±100	
QWO	2 = +2.5V	B = -20°C to +70°C	S = 40/60 max		2 = ±50	-20.0000
	3 = +3.3V	E = -40°C to +85°C			3 = ±25*	
					4 = ±20*	

*Not available for all temperature ranges



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Specifications subject to change without notice.

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