QCO Series

SMD Oscillator, 5x7x1.6mm, TTL/HCMOS

Frequency	10 KHz to 170 MHz	
Output Level	TTL	HCMOS
Level	'0'= 0.4 Vdc Max., '1'=2.4 Vdc Min.	'0'=0.1 Vcc Max., '1'=0.9 Vcc Min.
Duty Cycle	Specify 50% ± 10% or ± 5%	
Rise/ Fall Time	5 nS Max. for Vcc = +3.3 Vdc, 10 nS Max. for Vcc= +5.0 Vdc	
Output Load	10 TTL	15 pF to 50 pF (Specify)
Stability: Overall Frequency Stability	See Table Frequency Stability	
Start-up Time	10mS max	
Enable/Disable Time	100nS max	
Supply: Voltage	3.3Vdc ±5%	
Current	10 mA to 40 mA Max	25 mA to 70 mA Max
Temperature: Operating	See Table Operating Temperature	
Storage	-55°C to +125°C	
Jitter:		
RMS (1 Sigma) 1 to 75 MHz	5pS RMS (1 sigma) Max. accumulated jitter (20K adjacent periods)	
76 to 80 MHz	3 pS RMS (1 sigma) Max. accumulated jitter (20K adjacent periods)	
Max Integrated 1 to 75 MHz	1.5 pS RMS (1 sigma -12KHz to 20MHz)	
76 to 80 MHz	1 pS RMS (1 sigma -12KHz to 20MHz)	
Max Total Jitter 1 to 75 MHz	50 pS p-p (100K adjacent periods)	
76 to 80 MHz	30 pS p-p (100K adjacent periods)	

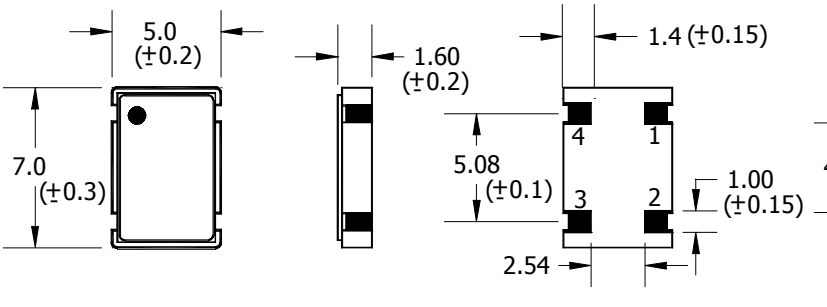
Part Number Guide **Sample Part #: QCO-5ATA1T-20.000**

	Input Voltage	Operating Temp	Symmetry (Duty Cycle)	Output	Stability (in ppm)	Tristate (Standby)	Frequency
QCO	5 = 5. 0V	A = 0°C ~ +70°C	T = 45/55 max	A = 10 TTL/15pF HCMOS	1 = ±100	T = Tristate	20.000 MHz.
	3 = 3. 3V	B = -10° ~ +70°C	S = 40/60 max	B = 2 ~ 10 TTL	2 = ±50		
	2 = 2. 5V	C = -20°C~ +70°C		C = 30 pF HCMOS	3 = ±25		
	1 = 1.8V	D = -35°C~ +80°C		D = 50 pF HCMOS **	4 = ±20*	* = not available for all temp ranges	
		E = -40°C~ +85°C			5 = ±15*	** = not available in 2.5V or 1.8V	
					6 = ±10*		

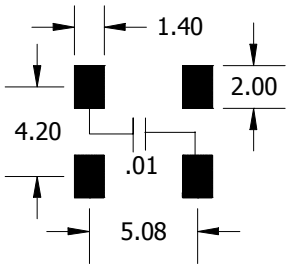
NOTE: A 0.01 µF bypass capacitor is recommended between Vcc (pin 4) and Gnd (pin 2) to minimize power supply noise

Tri-State Function	
Pin 1 Open	Enable
Pin 1 ≥ 2.2V	Enable
Pin 1 ≤ 0.8 V	Disable

DIMENSION UNITS: mm



Recommended Footprint



PIN	CONNECTIONS
1	NC/ED
2	Gnd
3	OUTPUT
4	Vdd

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