

IQEXO-3

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Delivery Options

- Common frequencies are available from stock

Output Compatibility

- HCMOS

Package Outline

- 8-pin DIL compatible plastic encapsulated

Frequency Stability

- ± 100 ppm

Operating Temperature Range

- 10 to 70°C

Storage Temperature Range

- 55 to 125°C

Mechanical Specification

- Mechanical Shock: 1000g, $\frac{1}{2}$ sine wave impulse for 0.35ms in three directions
- Resistance to Soldering Heat: Leads dipped in soldering bath @ 260°C for 10 secs
- Resistance to Solvent: Dipping in fluoric solvent for 90 secs
- Solderability: 90% of soldered surface masked with new solder after dipping in solder bath @ 230°C for 3 secs
- Vibration: 10 to 55Hz 1.5mm displacement, 50 to 2000Hz 20g acceleration, 1 hour in each of three mutually perpendicular planes

Handling & Operational Precautions

- Observe anti-static handling precautions
- A decoupling capacitor of $<0.01\mu\text{F}$ should be connected between Pin 8 and Ground

Terminal Connections

- 1: Crystal frequency output (f_o)
- 2: Divided frequency output ($f_o/2^n$)
- 3: Standby terminal; Logic '1' to pin 3 enables oscillator output; logic '0' to pin 3 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- 4: GND
- 5: Programs division ratio
- 6: Programs division ratio
- 7: Programs division ratio
- 8: Power supply voltage

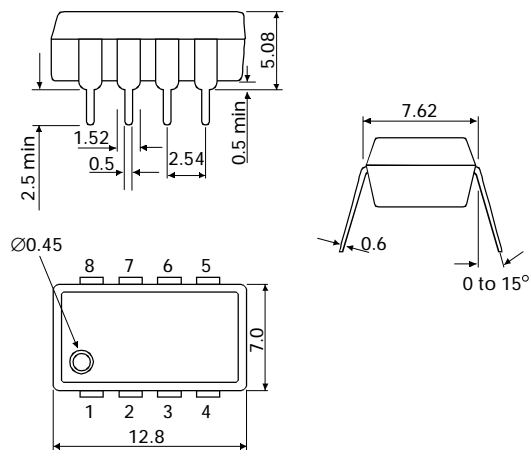
Marking

- Model number
- Frequency

Minimum Order Information Required

- Frequency + Model Number

Outline in mm



Frequency Programming

Input				Output	
Select			Pin 3 ST	Pin 1 Fundamental Oscillation	Pin 2 Divided Frequency
Pin 7 C	Pin 6 B	Pin 5 A			
L	L	L	H	f_o	$f_o/2$
L	L	H	H	f_o	$f_o/4$
L	H	L	H	f_o	$f_o/8$
L	H	H	H	f_o	$f_o/16$
H	L	L	H	f_o	$f_o/32$
H	L	H	H	f_o	$f_o/64$
H	H	L	H	f_o	$f_o/128$
H	H	H	H	f_o	$f_o/256$

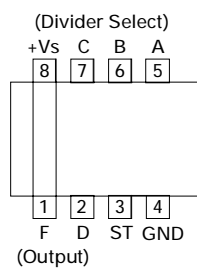
Electrical Specification - maximum limiting values

Supply Voltage	Input Voltage		Output Voltage		Rise Time(t _r)	Fall Time (t _f)	Current		Start-up Time		Duty Cycle	Ageing
	High	Low	High	Low			Supply	Standby	Supply	Standby		
5.0V±1V	3.6V min	0.8V max	4.5V min	0.5V max	15ns max	15ns max	20mA	10.0µA	1.5ms	1.5ms	40/60%	±5ppm

Crystal Frequency (MHz)

Fundamental Frequency (fo)	Divided Frequency (fo/2 ⁿ)							
	fo÷2 (MHz)	fo÷4 (MHz)	fo÷8 (MHz)	fo÷16 (kHz)	fo÷32 (kHz)	fo÷64 (kHz)	fo÷128 (kHz)	fo÷256 (kHz)
12.0	6.0	3.0	1.50	750.0	375.0	187.50	93.750	46.8750
12.2880	6.1440	3.0720	1.5360	768.0	384.0	192.0	96.0	48.0
12.80	6.40	3.20	1.60	800.0	400.0	200.0	100.0	50.0
14.318180	7.159090	3.579545	1.789772	894.880	447.440	223.720	111.860	55.930
14.74560	7.37280	3.68640	1.84320	921.60	460.80	230.40	115.20	57.60
16.0	8.0	4.0	2.0	1000.0	500.0	250.0	125.0	62.50
16.3840	8.1920	4.0960	2.0480	1024.0	512.0	256.0	128.0	64.0
17.73447	8.867238	4.433619	2.216809	1108.4	554.20	277.10	138.550	69.2750
18.4320	9.2160	4.6080	2.3040	1152.0	576.0	288.0	144.0	72.0
19.66080	9.83040	4.91520	2.45760	1228.80	614.40	307.20	153.60	76.80
20.0	10.0	5.0	2.5	1250.0	625.0	312.50	156.250	78.1250
24.0	12.0	6.0	3.0	1500.0	750.0	375.0	187.5	93.75

Terminal Connections



Circuit Diagram

