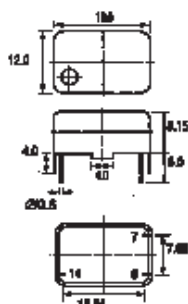


14-pin - Temperature Compensated Crystal Oscillator



A range of temperature compensated oscillators with high degree of frequency stability over a wide temperature range.



Supply voltage 5V ±0.25V
Supply current 2.0mA
Output 1Vp-p min.
Stability 2.5ppm

Pin Description
1. Output
2. Output
3. Output
4. +V

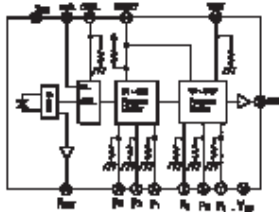
SEM816

Frequency MHz	Order Code	1+	Price Each	10+	100+
10.0	316-0488				
12.8	316-0490				
13.0	316-0506				
19.44	316-0518				

Programmable Crystal Oscillators

16 pin DIL — TTL/CMOS Output

SEIKO EPSON



Block Diagram

Programmable Crystal Oscillators that can generate 57 different frequencies in the range 0.005Hz to 1.0MHz.

Housed in a 16 pin DIL package the device contains a crystal oscillator with integral crystal and programmable frequency divider. Two outputs, base crystal frequency and divided frequency, are available simultaneously and both have TTL or CMOS capability.

Four versions are available with crystal base frequency of 60kHz, 600kHz, 768kHz and 1MHz. The normal calibration tolerance is ±100ppm with a temperature stability of ±150ppm from -10°C to +70°C.

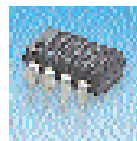
SEM64

Base Frequency	Order Code	1+	Price Each	10+	100+
60kHz	300-3097				
60kHz	300-3115				
600kHz	170-678				
768kHz	170-679				
1MHz	170-680				

Programmable Crystal Oscillators

8 pin DIL — HCMOS Output

KINSEKI



Pin 1 = F output
Pin 2 = D output
Pin 3 = Output disable
Pin 4 = GND
Pin 5 = A input
Pin 6 = B input
Pin 7 = C input
Pin 8 = +3 to +6V dc



These programmable crystal oscillators are housed in an 8 pin plastic DIL package. Each device has two outputs, the original crystal frequency and a divided output.

There is also an output disable control. The divider is controlled by three binary inputs as detailed on the table below.

Input	Output	Base Frequency (fo)					
		12.0	14.31818	16.0	16.384	19.6608	20.0
L L L	fo fo/2	6.0	7.15909	8.0	8.192	9.8304	10.0
L L H	fo fo/4	3.0	3.579545	4.0	4.096	4.9152	5.0
L H L	fo fo/8	1.5	1.789772	2.0	2.048	2.4576	2.5
L H H	fo fo/16	0.75	0.89488	1.0	1.024	1.2288	1.25
H L L	fo fo/32	0.375	0.44744	0.5	0.512	0.6144	0.625
H L H	fo fo/64	187.5	223.72	250	256	307.2	312.5
H H L	fo fo/128	93.75	111.86	125	128	153.6	156.25
H H H	fo fo/256	46.875	55.93	62.5	64	76.8	78.125

Output disable must be tied to VDD if not used.

Output rise time	15ns max.	Max. supply current	20mA
Output fall time	15ns max.	Duty cycle	40 to 60% max.
Temperature range	-10°C to +70°C	Mfrs. List No.	EXO-3C+
Temperature stability	+100ppm	Frequency in MHz	

SEM188

Frequency MHz	Order Code	1+	Price Each	10+	100+
12.0	221-715				
12.288	300-2962				
14.31818	221-727				
14.7456	300-2986				
16.0	221-739				
16.384	221-740				
19.6608	221-752				
20.0	221-764				
24.0	300-3036				

Quartz Crystals

Watch Crystals



Watch A/B

Frequency 32.76800 KHz
Load Capacitance 12.5pF

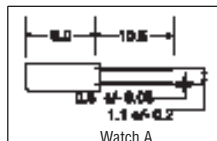


MC406/90SMX



MC306

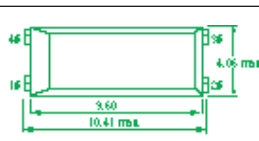
Frequency Accuracy
±ppm @ 25°C



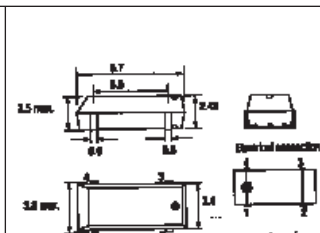
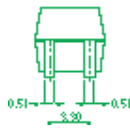
Watch A



Watch B



MC406/90SMX



85SMX

SEM257

Can Style	Mfr.	Frequency Accuracy ±ppm @ 25°C	Temperature Range °C
Watch A	CMAC	±20	-10 to +60
Watch A	SEIK	±20	-10 to +60
Watch A	AEL	±20	-10 to +60
Watch A	N'PORT	±20	-20 to +70
Watch B	CMAC	±20	-10 to +60
Watch B	AEL	±20	-10 to +60
85SMX	CMAC	±20	-20 to +70
90SMX	CMAC	±20	-10 to +60
MC306	SEIK	±20	-40 to +85
MC406	SEIK	±20	-40 to +85

Order Code	1+	10+	Price Each	100+	250+
103-868					
571-672					
569-914					
492-980†					
221-533					
569-926					
SMD316-0312					
SMD 571-635					
300-3127					
SMD563-249					

† Available until stocks are exhausted