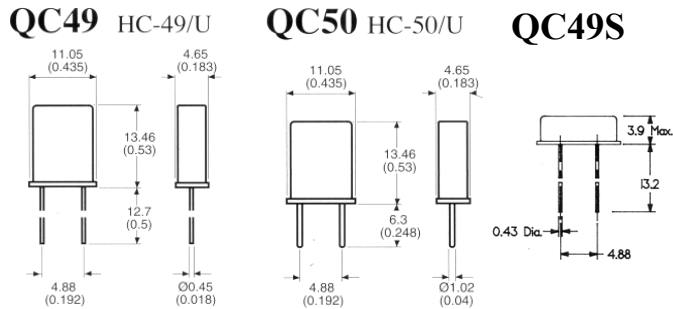


CRYSTALS



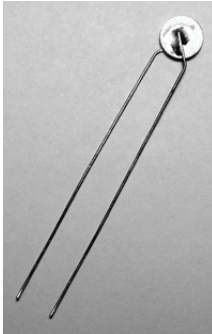
Due to substantial price increases from HY-Q Crystals to cover their manufacturing costs, we have had to increase our prices. Mini-Kits is committed to supporting long term suppliers like HY-Q, so that Crystal manufacturing can remain in Australia. Due to the high cost in stocking Crystals, we will no longer be able to stock every Crystal listed below, so when the less popular ones run out, they will not be restocked, & will have to be specially ordered. All crystals that are listed are normally always in stock. If there is a frequency that you require that is not listed, then the delay is around 3 to 4 weeks for us to get them from HY-Q. As Crystal specifications vary for different oscillator circuits, Mini-Kits will only supply Crystals to suit our own Kits. If you require a Crystal for another application, then you will have to contact one of the crystal manufacturers yourself. Most crystals are QC49 with wire leads, or QC50 plug in, & are suitable for most applications. QC49/S is a low profile version with wire leads. Crystals above 60MHz are generally 5th overtone series resonant types. Most Mini-Kits projects use the 2 transistor Butler type oscillator commonly used in High Performance Microwave equipment, & Beacon transmitters. Mini-Kits supplies high Stability series resonant Crystals from HI-Q. The GJ05S & TS07S are both 5 ppm relative to the reference frequency at the reference temperature. The TS07S is the ideal choice when using a 50deg C PTC Thermistor Heater or crystal oven.

CRYSTALS

Order No	Description	Each
3.2MHz	HY-Q Micro PIC uP projects	\$1.65
4MHz	HY-Q Micro PIC uP projects	\$1.65
4.433619MHz	Pal Colour Crystal	\$1.65
5.46875MHz	HY-Q GJ05S 2400MHz PLL Conv	No Stock
6.0MHz	Low Profile, Teletext Gen Kit	\$5.45
6.4MHz	HY-Q Micro To Suit UNIPLL Ver1 Kit	\$1.65
8MHz	Low profile, QRP crystal filters	\$1.10
8.984375MHz	HY-Q GJ05S 3400MHz ATV RX	No Stock
9.0000MHz	HY-Q GJ05S EME Kit PLL	\$28.55
9MHz	HY-Q QC49/S +/-50ppm QRP	\$1.00
9.1796875MHz	HY-Q GJ05S 5800MHz ATV RX	No Stock
10MHz	HY-Q Low Profile QC49/S	\$1.65
10.245MHz	HY-Q Low Profile QC49/S	\$1.65
22MHz	HY-Q QC49 50/28MHz Transverter	\$1.65
24MHz	QC49 52/28MHz Transverter	\$5.50
44.545MHz	HY-Q JE03C FM 45MHz I/F Kit	\$26.90
67.3333MHz	HY-Q GJ05S 432/28MHz Transv	\$34.00
71.0417MHz	NLA 426.250MHz use 444.250MHz	No Stock
72.3750MHz	HY-Q GJ05S 434.250MHz TV Trans	\$31.25
74.0417MHz	HY-Q GJ05S 444.250MHz TV Trans	\$29.90
82.000MHz	HY-Q TS07S 2400/432MHz Transv	\$34.00
90.44444MHz	HY-Q TS07S 3400/144MHz Transv	\$34.00
92.0667MHz	5668/144MHz Transverter	\$25.00
93.5994MHz	HY-Q TS07S 5760/144MHz Transv	\$34.00
94.000MHz	HY-Q TS07S 2400/144MHz Transv	\$34.00
94.0833MHz	HY-Q TS07S 1273/144MHz Transv	\$29.90
95.750MHz	HY-Q TS07S 1293/144MHz Transv	\$29.90
95.91667MHz	HY-Q TS07S 1296/145MHz Transv	\$34.00
96.0000MHz	HY-Q TS07S QC49 5ppm 50deg C	\$31.25
100.000MHz	HY-Q TS07S QC49 5ppm 50deg C	\$34.00
106.499MHz	HY-Q TS07S 10368/144MHz Transv	On Order
108.5333MHz	HY-Q TS07S 3400/144MHz Transv	\$34.00
110.400MHz	HY-Q TS07S 3456/144MHz Transv	No Stock
116.000MHz	HY-Q GJ05S 144/28MHz Transv	\$29.90

CRYSTAL HEATERS

PTC THERMISTORS



50 degree C PTC thermistor suitable for using as a Crystal Heater.
Suits TS07S 50 deg QC50 case style crystals only. Suitable for stabilizing the Crystal frequency of high performance local oscillators used in Microwave equipment. Measured temperature stability, +/-3 degrees C with a 8 – 14volt supply.
 30mA @ 12volts typically but varies with ambient temperature changes.

Order No	Description	Each
50DEG	PTC Thermistor	\$2.35

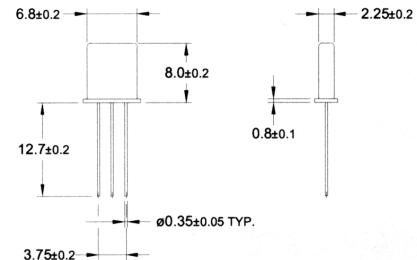
Supplied with a length of Heat shrink to attach the heater to the crystal.

CRYSTAL OSCILLATOR HEATER

Please refer to the EME177 Oscillator Heater KIT on www.minikits.com.au/kits3.html#eme177

FILTERS / OSCILLATOR MODULES

HY-Q XTAL FILTERS



45MHz 2 Pole Crystal Filters suitable for FM voice Receiver circuits.

Order No	Description	Each
45M15A	2 Pole 45MHz +/-7.5kHz @3dB +/-15kHz @ -15dB Max Loss 2dB Ripple 1d	\$11.40

HY-Q XTAL MODULES

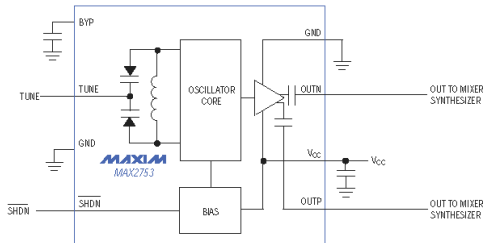


Standard Computer 5 volt Crystal Oscillator modules, suitable for use in the AD9850/51 DDS Synthesizer Kits. CMOS & TTL compatible

Order No	Description	Each
OSC1	100.000MHz 10ppm 3.3v QSMO-4210B SMD 5x7	\$4.60
OSC3	100.000MHz 100ppm 5V QXO-14CAA DIP 14	\$6.70
OSC4	30.000MHz 50ppm 5V QXO-14BAA DIP 14 B QC44 Package	\$5.45

VCO MODULES

MAXIM VCO IC'S

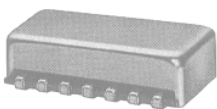


The MAX2753 is a low cost self contained 2.4GHz VCO that requires minimal external components . The VCO has an internal inductor & varicap diodes & is factory tuned. An internal low dropout regulator supplies a regulated supply to the VCO over a 2.7 to 5.5volt powersupply range. A buffered 50ohm output provides -8dBm . Maximum tuning range is 2200-2600MHz, (0-3volts). Use as a local oscillator or miniature 2400MHz video transmitter. The IC comes in a very tiny 8/uMAX package

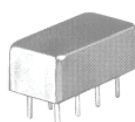
Order No	Description	Each
MAX2753EUA	2400-2500MHz VCO Tuning 1-2 volts SMD 8/Umax	\$8.70
MAX2754EUA	1145-1250MHz VCO Tuning 1-2 volts SMD 8/Umax	\$9.40

Data Sheets on Maxim WEB site

MINI-CIRCUITS / MODCO VCOS



JTOS



POS

A range of VCO modules suitable for use in PLL circuits or freerunning for wideband applications with minimal drift.

Order No	Description	Each
JTOS-3000P	2300-2600MHz, +11dBm O/P, Tuning 0.5-5 volts, Modulation Bandwidth 20MHz, suitable for 2400MHz FM ATV TX.	\$30.00 2 in stock
CM1353SM	5600-6000MHz, +5dBm O/P, Tuning 1-10volts, Modulation Bandwidth 20MHz (3pcs only Available)	\$35.00