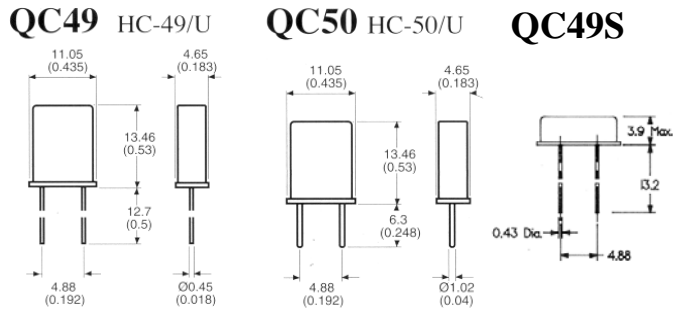


CRYSTALS



Mini-Kits has arranged a reliable supply of high quality Crystals that are made to our exact specifications, out of Europe. Please Note that, Non stock Crystals can take up to 8 weeks for us to supply, & special orders must be prepaid for us to add them to the next order. Any Special orders for Crystals must include the exact specifications required, as Mini-Kits is not able to work out what crystal type is required in non Mini-Kits products. We are no longer supplying HY-Q crystals. Please contact HY-Q if you want a frequency that we do not stock.

Most crystals are HC-49/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 20pF load, or series resonant types.

Most of our Kits use the 2 transistor Butler type oscillator commonly used in High Performance Microwave equipment, & Beacon transmitters. The Mini-Kits 60deg C types are +/-1ppm relative to the reference frequency at the reference temperature. These are an ideal choice when using a 60 deg C oven, or our EME177 oscillator Heater Kit .

GG05S	25deg C	+/-10ppm	Series Resonant
GJ05S	25deg C	+/-5ppm	Series Resonant
TS07S	50deg C	+/-5ppm	Series Resonant
TU07E	60deg C	+/-5ppm	30pF capacitor in series
5OT	5th Overtone		
AT	Cut of the Crystal		
SR	Series Resonant		

CRYSTALS

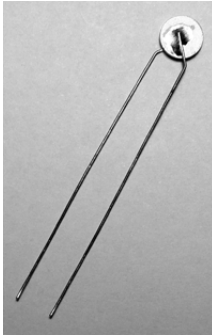
Order No	Description	Each
3.2MHz	HY-Q Micro PIC uP projects	\$1.65
4MHz	HY-Q Micro PIC uP projects	\$1.65
4.433619MHz	Pal Colour Crystal	\$1.65
6.0MHz	Low Profile, Teletext Gen Kit	\$5.45
6.4MHz	HY-Q Micro To Suit UNIPLL Ver1 Kit	\$1.65
8MHz	Low profile, QRP crystal filters	\$1.10
8.545MHz	HY-Q QC49/S +/-20ppm 20pF Load	\$1.30
8.886719MHz	HY-Q GJ05S QC49U (1pcs in stock)	\$20.00
9.0000MHz	HY-Q QC49S +/-50ppm 20pF Load	\$0.65
9.0000MHz/2	HY-Q GJ05S QC49U (2pcs in stock)	\$20.00 ea

CRYSTALS

Order No	Description	Each
10MHz	HY-Q Low Profile QC49/S	\$1.65
10.245MHz	HY-Q Low Profile QC49/S	\$1.65
22.000MHz	QC49/S +/-10ppm 18pF Load	\$1.65
24MHz	QC49 52/28MHz Transverter	\$5.50
44.545MHz	HY-Q GG05S FM 45MHz I/F	\$4.75
66.66667MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 50deg C Ageing 1ppm per year, 400MHz Oscillator	On Order
67.3333MHz	HY-Q GJ05S 432/28MHz Transverter	\$34.00
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
83.333333MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 50deg C Ageing 1ppm per year, 500MHz Oscillator	On Order
92.0667MHz	5668/144MHz Transverter	\$25.00
94.000MHz	HY-Q TS07S QC49 +/-5ppm SR 50deg C 2400/144MHz Transverter	\$30.00
94.08330MHz	HY-Q TU07E 1273/144MHz Transv	\$27.00
95.750000MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 1293/144MHz Transverter	\$30.00
95.91667MHz	HY-Q TS07S QC49 +/-5ppm SR 50deg C 1296/145MHz Transverter	\$27.00
96.000000MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 1296/144MHz Transverter	\$30.00
98.666666MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 5760/432MHz Transverter	\$30.00
98.933333MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 3400/432MHz Transverter	\$30.00
100.000MHz	HY-Q TS07S QC49 5ppm 50deg C	\$34.00
101.000000MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 25deg C Ageing 1ppm per year, 432/28MHz Transverter	\$34.00
103.500000MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 10368/432MHz Transverter	\$30.00
104.000000MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 5760/144MHz Transverter	\$30.00
106.500000MHz	Krystal AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year, 10368/144MHz Transverter	\$30.00
108.5333MHz	HY-Q TS07S 3400/144MHz Transverter	\$34.00
110.400MHz	HY-Q TS07S 3456/144MHz Transverter	Special Order
116.000MHz	HY-Q GJ05S 144/28MHz Transverter	\$34.00
120.000000MHz	Mini-Kits AT, 5OT, HC49-U, 20pF, 60deg C Ageing 1ppm per year	\$34.00
130.0000MHz	HY-Q TS07S QC50 +/-5ppm SR 50deg C	\$34.00

CRYSTAL HEATERS

PTC THERMISTORS



50 degree C PTC thermistor suitable for using as a Crystal Heater. Suits TS07S 50 deg QC49/50 case style crystals only. Suitable for stabilizing the Crystal frequency of 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	\$1.85

CRYSTAL OSCILLATOR HEATER

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

CERAMIC RESONATORS

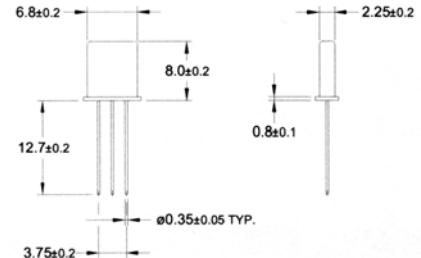


Common ceramic resonators suitable for oscillators & I/F to audio demodulators.

Order No	Description	Each
CSB455E	455kHz Resonator	\$1.10 ea
CSB465E	465kHz Resonator	\$1.50 ea

FILTERS / OSCILLATOR MODULES

HY-Q XTAL FILTERS



45MHz 2 & 4 Pole Crystal Filters suitable for FM voice Receiver circuits.

Order No	Description	Each
45M15A	2 Pole 45MHz +/-7.5kHz @3dB -15dB @ +/-30kHz Max Loss 2dB Ripple 1dB	\$8.90
45M15B	4 Pole 45MHz +/-7.5kHz @3dB -25dB @ +/-25kHz Loss 2dB Ripple 1dB	\$13.90

44.545MHz crystals to suit a 45MHz I/F are listed on the previous catalogue page1.

HY-Q XTAL MODULES

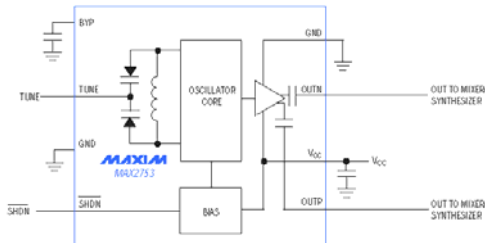


Standard Computer 5 volt Crystal Oscillator modules, suitable for use in the AD9850/51 DDS Synthesizer Kits. CMOS & TTL compatible

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	\$5.45

VCO MODULES

MAXIM VCO IC'S

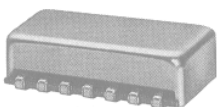


The MAX2753 is a low cost self contained 2.4GHz VCO that requires minimal external components . The VCO has an internal inductor & varicap diodes & is factory tuned. An internal low dropout regulator supplies a regulated supply to the VCO over a 2.7 to 5.5volt powersupply range. A buffered 50ohm output 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

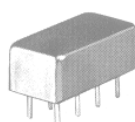
Order No	Description	Each
MAX2753EUA	2400-2500MHz VCO Tuning 1-2 volts SMD 8/Umax	\$8.70
MAX2754EUA	1145-1250MHz VCO Tuning 1-2 volts SMD 8/Umax	\$7.50

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 2 in stock	\$30.00
CM1353SM	5600-6000MHz, +5dBm O/P, Tuning 1-10volts, Modulation Bandwidth 20MHz (3pcs only Available)	\$35.00