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"e-news" The ECS Newsletter

Frequency Control Solutions That Meet The Needs Of The Future . . . Today!

Third Edition, April, 2001

Product Feature of the Month SMD Monolithic Crystal Filters!

ECS delivers pure filtering versatility with the ECS-96SMF Series monolithic crystal filter



This very low profile SMD filter addresses a broad range of applications including wide/low band filters for mobile, UHF and VHF telephony applications.

This 2 pole product is only 5x7x1.5mm and covers a frequency range from 21.4 Mhz ~ 110.00 Mhz. With passband widths from +/- 7.5 ~ 15KHz this component is ideal for high reliability mobile applications.

Please locate those accounts in your territory that design wireless products and find out what filtering requirements they may have.

This product is priced very competitively and comes on tape and reel for auto pick and place insertion.

FAQ'S

Do I need to be concerned about trimmer sensitivity?

A good question and the answer is an unequivocal "maybe". If the crystal unit in question has a significant value of trim sensitivity and if a fairly stringent value of frequency tolerance is imposed, it is likely that the manufactures tolerance on the load capacitors in use will result in actual values of load capacitance that will "pull" the crystal frequency beyond the desired tolerance. As an example, an 18.432000 Mhz crystal might easily have a trim sensitivity value at 20.0pF of +/-20.0ppm/pF. Let us suppose that a frequency tolerance of +/-10ppm is specified. If the load capacitor has a tolerance of +/-10%, or 2.0pF, it is entirely possible that an acceptable load capacitor will pull the frequency by +/-40ppm.

Why does it take so long to get a 2-5-piece sample?

Even a relatively simple, straightforward crystal or

Market Watch How far will this market slide?

The crystal market was considered ultra hot until the communications and networking equipment market began to weaken late last year.

OEM's and EMS companies are working hard to reduce stock levels and with no order visibility, push outs, cancellations, and requested returns are hurting crystal component manufacturers. The matter is becoming so severe that one industry analyst predicts negative double-digit revenue growth for the balance of this calendar year.

Internet commerce applications, mobile communications and wireless technologies will continue to provide a solid foundation for the frequency control market going forward. Nevertheless, it's unlikely that we will see positive growth returning to the industry until the first quarter of 2002. This growth however will dwarf that of the boom of 2000.

The absence of strong end-market demand for electronic goods through the next 2~3 quarters will mean the inventory burn-offs will take a lot longer than most analysts had originally predicted.

The go-go year of 2000 is gone and new management challenges are now the order of the day. We have been tested on who can go the fastest in a straight line; now we're going to find out whom can master the slalom course.

Tech Sector Under what conditions are crystal products manufactured?

All processes from etching of the crystal blank through sealing are performed in a class 10000 clean room environment with under hood class 1000 workstations



This type of environment is considered essential for the final stages of production of high performance crystals and oscillators as particle contamination can contribute

oscillator unit requires ten to fifteen separate and distinct manufacturing stages. If you specified the full range of your unique requirements, chances are that your samples had to be manufactured from scratch. In many cases, a "standard" stock crystal or oscillator could be used for prototyping. Then, if required, a full custom crystal could be manufactured.

What happens if I operate a crystal over its maximum drive level specification?

Exceeding the maximum drive level (power dissipation) of a crystal can lead to an increased rate of aging, Drive Level Dependency (DLD) problems, increased number and intensity of activity dips that can stop oscillation and, at very high drive levels, breakage of the crystal blank.

greatly to DLD (Drive Level Dependency), poor phase noise, micro-jumps and aging.

Process particle laser counters monitor the environment for liquid born particles and solid particulates at all critical process stages.



Excess Inventory that needs to find a home

Due to over zealous forecasts by OEM's and EMS companies, ECS has been blessed with some excess inventory.

This product can be procured at very attractive prices. Please contact an ECS sales representative for a quote.

The list of excess inventory is [available on our website](#).

Lead-times>>>>Where do we go from here?

A table showing showing the latest in lead-times is [available on our website](#). Forecasted trends are for the next 2 quarters.

Archived Newsletters

Starting this month, ECS will archive all newsletters on our web site for those whom may have missed a previous issue. Archived newsletters may be viewed by visiting the [NEWS](#) section of our website.

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