

PAS (Pierce Analyzer System)

A fantastic sales tool for Field Sales Engineers!!!

PAS service now also available in EMEA

Abracon started conducting end-customer's Pierce Oscillator assessment/optimization in the early 1990's. This process was manually intensive & was primarily offered to Automotive Customer base.

In 2010, AAEG developed the PAS System which enabled us to offer a comprehensive, automated assessment of the Pierce Oscillator loop, in concert with a Quartz Crystal. This service is offered to customers at-large.

How does it work?

Performs a full characterization of the customer's selected crystal and the associated closed-loop oscillator response

The PAS System contains:

- A Programmable power supply
- High Precision Frequency counter (tuned to GPS)
- High Precision Network Analyzer
- Custom Firmware for Crystal & Oscillator Characterization

Features:

- Industry's Best-In-Class, Automated Characterization-Optimization Approach; yielding the absolute best match between Quartz Crystal, Oscillator loop and associated components
- Eliminates probability of oscillator start-up issues related to inadequate design or marginal component performance
- Eliminates production launch issues related to crystal oscillator based timing circuit
- Solves for design margin uncertainty
- Provides customer's oscillator circuit overview in the form of a detailed report, which could be an ideal 3rd party assessment for the design history file or PPAP documentation. This report encompasses both the stand-alone crystal performance, as well as in-circuit behavior outlining safety factor as a function of crystal's ESR, etc.

PAS provides an ideal means to secure Associated Sales. FAE's recommend ucontrollers/processors anyways - suggest PAS and register an Abracon Crystal; while optimizing the customer's timing Circuit A WIN-WIN !!!



Deliverables:

- Abracon provides a detailed test report encompassing:
- Stand alone Quartz Crystal characteristics including:
 - Motional parameters (C_m , L_m , ESR & C_o)
 - Narrow Band Frequency Response Plot
 - Wide Band Frequency Response Plot
 - Admittance versus Susceptance Plot
 - Frequency dependence versus load capacitance plot
 - Circuit Design Margin Calculation

