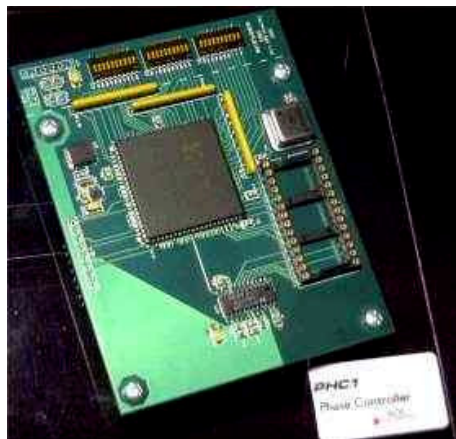


Phase Controller Board

FEATURES

- Synchronously locked f,2f and 3f TTL outputs
- Independently phase controlled f,2f and 3f outputs
- 9 bit phase control on each channel (0.7°)
- Dedicated analogue O/P synchronised with f output
- 6.051kHz fundamental at 9 bits resolution
- Single +5 volt power requirement
- 0 – 2 volt DAC output for experimental drive
- ROM written analogue output function



APPLICATIONS

Designed as a primary source of modulation control and excitement for Phase Sensitive Detection (PSD) based experiments and equipment. Specifically designed as a key component in the AOS Derivative Spectroscopy System. This component board is useful in any application that requires precise control of a number of individual frequency components (f, 2f and 3f) which are derived from the same crystal standard.

DESCRIPTION

This board provides synchronised and phase delay controlled TTL signals at a fundamental frequency (nominally ~6kHz), the first harmonic (2f) and the second harmonic (3f). It also allows the user to define an output voltage waveform (written in ROM) which can be used to drive the modulation input to laser diodes and other experimental apparatus. Designed as an OEM module for inclusion in dedicated PSD based equipment this board forms part of an ideal value-for-money integrated measurement solution.

The fundamental frequency and hence the harmonics are set by a combination of crystal frequency and required bit resolution. Nominally the module is sold with a fundamental frequency of 6.051kHz although this frequency may be easily reduced by judicious selection of the main crystal frequency. It is also possible to increase the operational frequency albeit with a reduction in phase control bit resolution.

AOS Technology is always very happy to here and discuss individual OEM requirements and as such this board really forms part of a extremely flexible PSD measurement system which can be tailored to individual needs.

AOS TECHNOLOGY LIMITED

T. +44 (0)1664 567711
F. +44 (0)1664 567712
E. mail@aost.co.uk
www.aost.co.uk

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46 Pate Rd
MELTON MOWBRAY
LE13 0RG
United Kingdom
Registration No. 3266182
VAT No. 684 1011 56

Phase Controller

BASIC SPECIFICATION

Parameter	Symbol	Ratings	Unit
Operating Temperature	T_{stg}	0 to +70	°C
Maximum Supply Voltage	V_{supp}	5.5	V
Maximum Supply Current	I_{supp}	180	mA
Nominal Fundamental frequency		6.501	kHz
Frequency stability		±100	ppm
D/A bits		8	
D/A Linearity Error		±0.25	LSB
Settling time (±1/2 LSB)		0.01	µs
D/A Power Dissipation		160	mW
Dimensions (L x W)		100 x 80	mm

Order Code

PHC1-xxxxx A specific part number will be issued in response to your detailed requirements. Please contact AOS Technology Ltd

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