

SoftStep

The New Art of Stepper Motor Control

MODEL SS-483-x

HIGH PERFORMANCE MICROSTEPPING DRIVER

HARDWARE FEATURES

- 12-45v input Power
- Current Drive 0.4 to 3A (Rms), Resistor Selectable
- Opto Isolated Logic Inputs, Step Clock, Direction, Enable, Reset
- Step Frequency to 10 mHz
- Bi-polar 4-wire D-Mos Drive
- 20 kHz Chopper Drive
- Electronic fusing any fault
- Thermal Shutdown
- Status Indicator, Axis On
- Mechanical, 2.75(69.9)x3.00(76.2),1.20(30.5)
- Operating 0 to 70 C at Heatsink
- Switching PS for +5v user power.
- Dual 10bit D/A
- Flash Waveform Tables
- Flash Programmable Logic
- Crystal Controlled Clock
- I/O Connector Options

FIRMWARE FEATURES

- ◆ Microstep Resolutions 1/2 1/4 1/5 1/8 1/10 1/16 1/25 1/32 1/50 1/64 1/125 1/128 1/250 1/256
- ◆ Current Reduction, 0.5sec after last step input.
- ◆ Motor drive waveform matching to eliminate velocity and torque ripple.
- ◆ On the fly step size changes
- ◆ OEM Customizable to add various

SOFTSTEP OPTION (-S)

- ◆ Step Resolutions 1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256
- ◆ This option allows you to use fine (1/256) microstepping even though your controller outputs at a coarser rate. Systems that were noisy now become silky smooth. Performance is enhanced by reduction of resonance effects caused by the coarse step rate.

NOTE: The Testra SS-483 is fully compatible with the IMS-483 Driver

OEM Custom Solutions

We will work with original equipment manufacturers to either integrate our standard motion controllers into their product or do custom solutions.

When volume justifies it we will license our design and assist in your system development. We can also do turnkey designs and manufacturing of your product in its entirety including ASIC development to put it all on a chip.

Custom software solutions are also available. We have done complex drivers in DOS, Windows, and various 8051 embedded environments.

\$195 @ Qty 1

SyncroStepping * All of our motion systems and drivers utilize a method that synchronously, microstep, sample and correct the current on multiple motor windings at a 20-50 kHz rate resulting in stable, quiet, smooth control of a stepper motor.

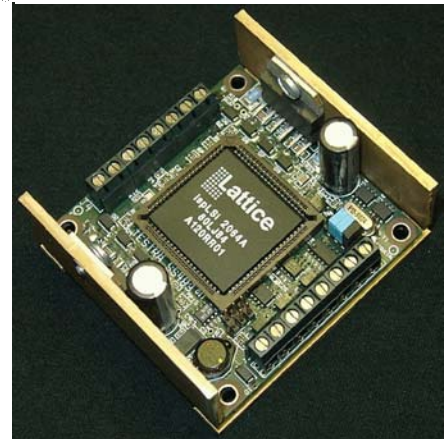


Photo of SS-483 Module

Motion Systems Division

* US Patent
5,650,705

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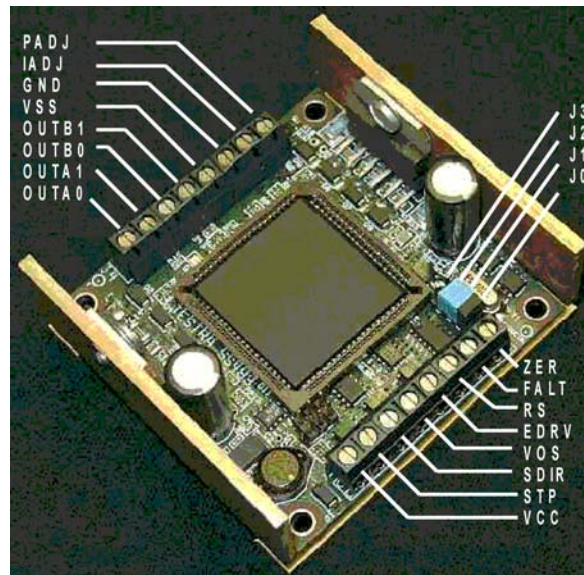
Nov 2001

ss483

ss483S

ss483E

MICROSTEP
MOTOR
DRIVER



MICROSTEP JUMPER SETTINGS

J3	J2	J1	J0	STEP
Out	Out	Out	Out	Full
In	In	In	In	1/2
In	In	In	Out	1/4
In	In	Out	In	1/8
In	In	Out	Out	1/16
In	Out	In	In	1/32
In	Out	In	Out	1/64
In	Out	Out	In	1/128
In	Out	Out	Out	1/256

J4 PIN	SIGNAL	DESCRIPTION
1	PADJ	Current Reduction Resistor Ra. Reduced current is $(Ra * Rp / (Ra + Rp)) / 500$. GND is return. This feature not available on the SoftStep and Economy Versions.
2	IADJ	Driver Current Adjustment Resistor Rp. Driver current is $Rp / 500$ amps. GND is the return and should be connected directly to the GND screw terminal.
3	GND	Ground Return for Power and Signals. GND is also connected to heatsink.
4	VSS	Power for the module and motor,. 12v to 44v working with 48v absolute maximum.
5	OUTB1	Stepmotor phase B-
6	OUTB0	Stepmotor phase B+
7	OUTA1	Stepmotor phase A-
8	OUTA0	Stepmotor phase A+
J3 PIN	SIGNAL	DESCRIPTION
1	VCC	+5v 100ma supply for user functions
2	STP	Step Clock. Opto-Isolated 8ma load to VOS.
3	SDIR	Step Direction. Opto-Isolated 8ma load to VOS.
4	VOS	Opto Supply In. +5v from user equipment 32ma max load.
5	EDRV	Enable Driver. Opto-Isolated 8ma load to VOS.
6	RS	Reset Driver. Opto-Isolated 8ma load to VOS.
7	FALT	Driver Fault Output
8	ZER	Driver on full step Output.

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