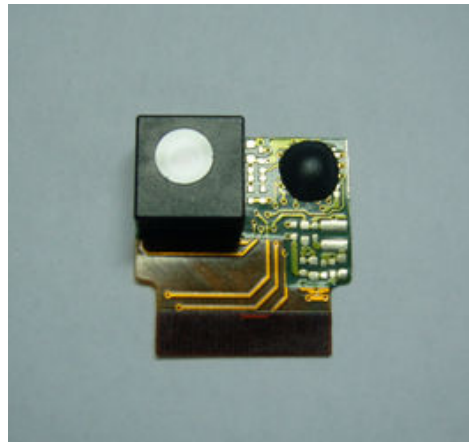
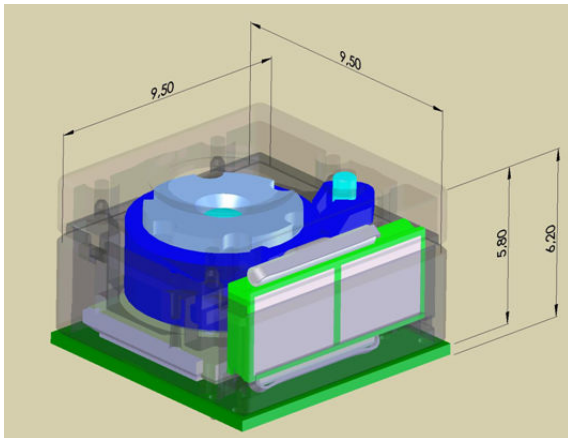


IN-AF9502 Auto Focus Module for Cell Phone Cameras

Datasheet



The IN-AF9502 is a novel auto-focus camera module based on Insynco's proprietary solid-state piezo ceramic motor technology.

Specifications

Size:	9.5 x 9.5 x 5.8 mm
Sensor:	2M (OV2640) (other sensors on request)
Life time:	> 1,000,000 AF cycles
Focussing Time:	~ 0.3s
Focussing Range:	5 cm - ∞
Lens Size:	M6
Energy consumption	33 mJ per AF cycles (typ.) (no energy consumption to hold lens position)
Drop Resistance:	1.5m drop height
Driving voltage:	2.6 ~ 4.5V
Driver:	Proprietary ASIC
Driving interface:	2 single lines for direction and motion (I ² C compatible)
Operation conditions:	-30°C ~ 60°C
Storage conditions:	-40°C ~ 85°C

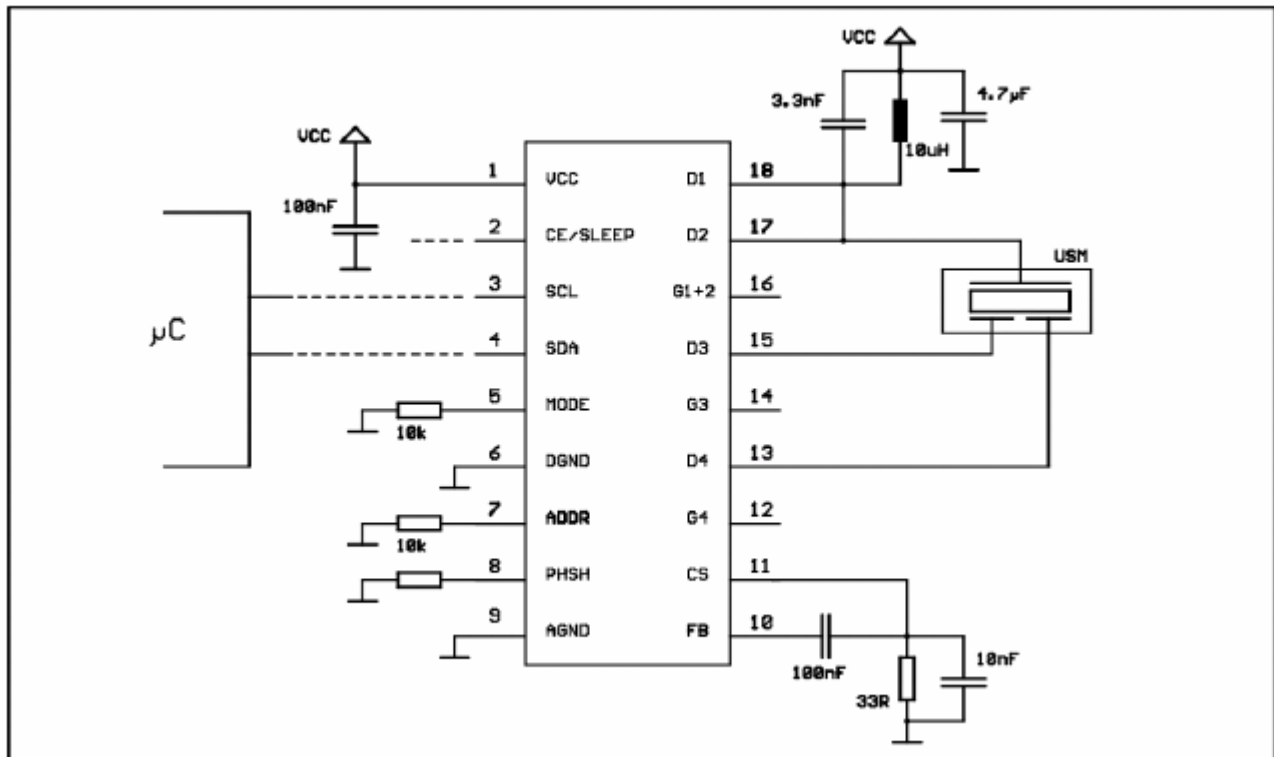


Driver ASIC Pin Description

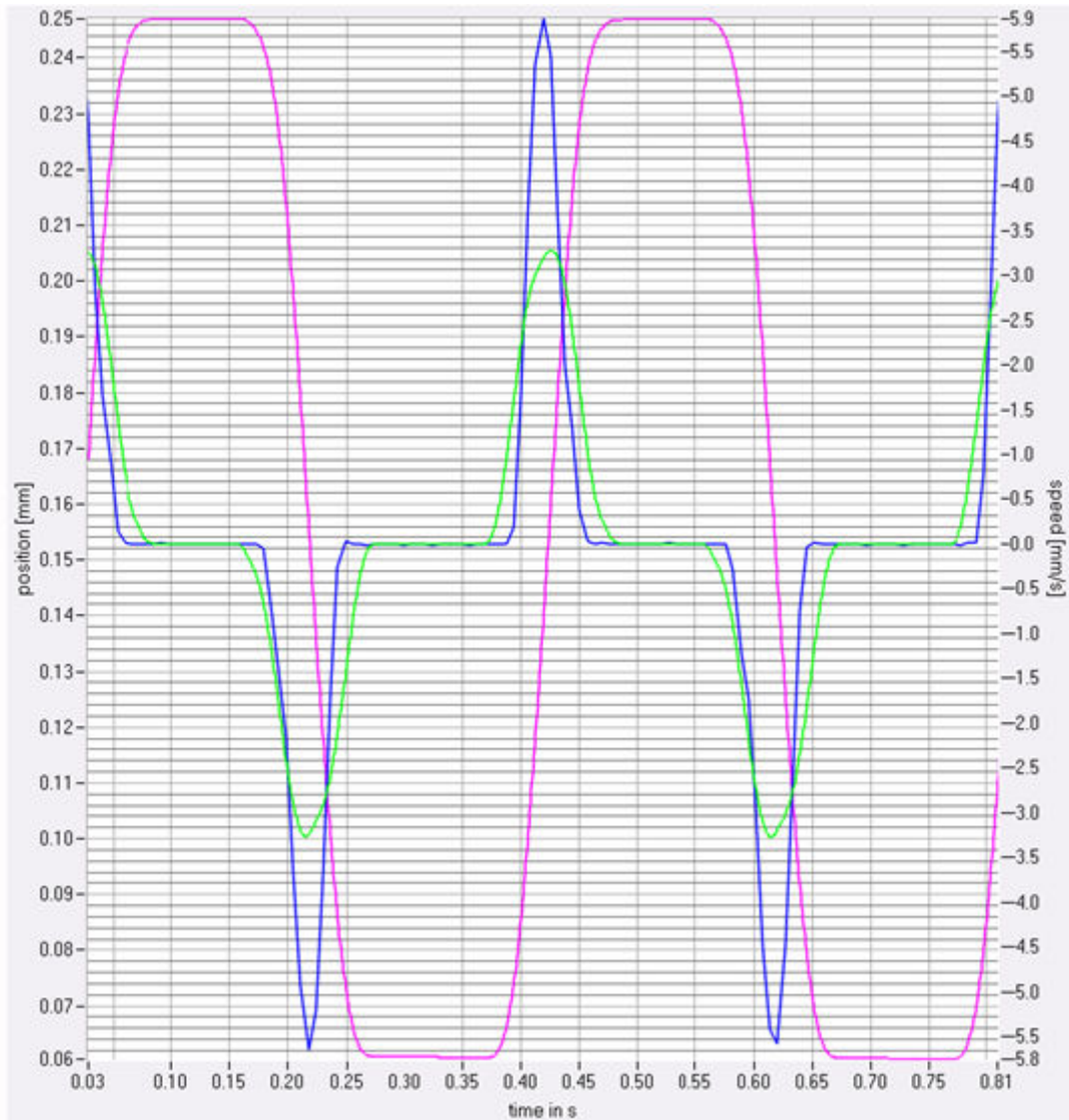
1	UCC	D1	18
2	CE/SLEEP	D2	17
3	SCL	G1+2	16
4	SDA	D3	15
5	MODE	G3	14
6	DGND	D4	13
7	ADDR	G4	12
8	PHSH	CS	11
9	AGND	FB	10

Pin No.	Name	Description
1	VCC	Supply input
2	CE/SLEEP	Enable/sleepmode
3	SCL (On/Off)	I2C serial clock signal
4	SDA (For/Back)	I2C serial data signal
5	MODE	Mode select
6	DGND	Digital ground pin
7	ADDR	Address pin
8	PHSH	Phaseshift control
9	AGND	Analog ground pin
10	FB	Feedback
11	CS	Current sense
12	G4	Gate output 4
13	D4	Drain 4
14	G3	Gate output 3
15	D3	Drain 3
16	G1+2	Gate output 1+2
17	D2	Drain 2
18	D1	Drain 1

Typical Application Circuit



Motion Characteristics in Step Mode 2ms step, 6ms rest



red: lens position
 blue: step velocity
 green: average velocity



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