TRINAMIC
MOTION CONTROL

mey
ELEKTRONIK SERVICE GMBH

stealthChop™ - Exceptionally Quiet Stepper Motor Performance

Shhh! TRINAMIC Motor Drivers at Work

discover more on trinamic.com

TRINAMIC
MOTION CONTROL

stealthChop™ family

smooth.silent.easy to use.

TRINAMICs stealthChop™ is a new patent pending technology which delivers exceptionally quiet stepper motor performance.

Motors operating at low speed exhibit a phenomenon known as magnetostriction, which causes an audible low frequency 'hum.' This low-frequency noise is well known as the 50 or 60Hz hum that emanates from transmission lines and transformers. Trinamic's stealthChop minimizes magnetostriction by implementing a PWM algorithm that relies predominantly on voltage modulation for motor control at lower speeds. This technology minimizes PWM current fluctuation, which is the primary cause of low-speed hum.

Noise limitations are especially desirable in applications that normally occur in close proximity to human operators, in applications where multiple stepper motors are in use, in video surveillance applications where installations near walls and ceilings amplify noise, and in consumer applications, like home automation and air conditioning, where users expect minimal noise.

TRINAMIC devices that implement this new stealthChop technology have achieved measured noise levels 10 dB below traditional stepper motor drive ICs.



PRODUCT	TMC2100-LA	TMC2130-LA	TMC5130A-TA
Stepper motor type	2-Phase bipolar	2-Phase bipolar	2-Phase bipolar
Phase current (RMS)	1.2A	1.2A	1.4A
Motor supply voltage	4.75...46V	4.75...46V	4.75...46V
Max. microstep resolution	256	256	256
Controller interface	S/D	SPI + S/D	SPI + UART
Interface Voltage	3.3…5V	3.3…5V	3.3…5V
sixPoint™ ramp generator	-	-	✓
dcStep™	-	✓	✓
chopSync2™	-	✓	✓
stallGuard2™	-	✓	✓
coolStep™	-	✓	✓
stealthChop™	✓	✓	✓
spreadCycle™ chopper	✓	✓	✓
S/D with microPlyer™	✓	✓	✓
MOSFET Type	int.	int.	int.
Package	QFN32 (5x6)	QFN32 (5x6)	QFP48
Status	preview	preview	active

ELEKTRONIK SERVICE GMBH

VERSION 1.0 | 2015