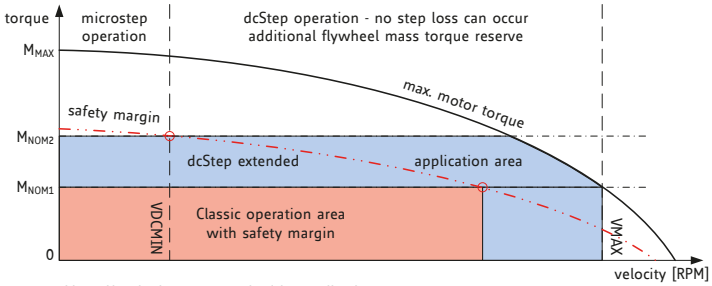
TRINAMIC
MOTION CONTROL

ELEKTRONIK SERVICE GMBH

dcStep™ - drives Stepper Motors as fast as possible

Self sensing load adaptive velocity control



M_{NOM}: Nominal torque required by application

M_{MAX}: Motor pull-out torque at v=0

Safety margin: Classical application operation area is limited by a certain percentage of motor pull-out torque

- Motor does not loose steps
- Increased output by maximum motor velocity
- Highest possible acceleration and dynamics
- Highest energy efficiency at speed limit
- Cheaper motor does the same job
- Safety margins may be reduced
- Integrated dedicated motion controller
- Full protection and diagnostics

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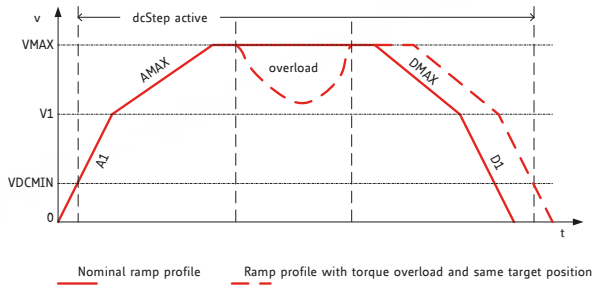
dcStep™ family

efficient.dynamic.reliable.

The dcStep addresses the need for stepper motor drives to maintain positional self-awareness and step count without costly feedback circuitry. Without feedback circuits, significant operating margins must be implemented so that motor torque and velocity limits are not exceeded.

Trinamic's dcStep technology allows for momentary increases in torque to compensate for sudden increases in load resistance without losing step count, significantly reducing the safety margin that would otherwise be required by a stepper motor control system.




PRODUCT	TMC5130A-LA	TMC5062-LA
Stepper motor type	2-Phase bipolar	2x 2-Phase bipolar
Phase current [RMS]	1.4A (1.7A)	0.8A (1.1A)
Motor supply voltage	4.75…46V	4.75…20V
Max. microstep resolution	256	256
Controller interface	SPI + UART	SPI + UART
sixPoint™ ramp generator	✓	✓
chopSync2™	✓	✓
stallGuard2™	✓	✓
coolStep™	✓	✓
spreadCycle™ chopper	✓	✓
stealthChop™	✓	-
S/D with microPlyer™	✓	-
Encoder support	a/b/n	a/b/n
MOSFET Type	int.	int.
Package	QFP48	QFN48 (7x7)

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