**FEATURES**

- Anti-stall during high-speed rotation
- Improvement of waveform quality

**ADVANTAGES**

- Increasing rotational speed: 30% UP compared to conventional method
- Enlarging high-speed rotation region: 1000Hz ⇒ 1300Hz

**BENEFITS**

- Higher rotation speed
- Less noise and vibration

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**ADVANTAGE: Improvement of high-speed rotation**

Conventional Mixed decay is a constant current control technology for stepping motors that automatically switches between slow decay mode and fast decay mode in accordance with specified timing. With Mixed decay, though the benefits of both decay modes can be gained, current following capability gets worse and step out occurs as motor rotation accelerates since Mixed decay technology is controlled according to the timing.

Our original ADMD optimizes switching control between fast decay mode and slow decay mode automatically by monitoring the state of current decay in the IC. With ADMD, current following capability is improved and higher-speed, efficient motor drive with low noise is realized.

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**ADVANTAGE: Improvement of waveform quality during high-speed rotation**

In comparing each waveform in high-speed rotation, though the conventional Mixed decay has a step-out, ADMD controls the stepping motor normally. With ADMD, current following capability is improved and high-speed, efficient motor drive with low noise is realized.
ACDS technology (Advanced Current Detection System)

In operating motors with driver ICs, large-size external resistors for constant current detection are used. Thus, necessary resistor for each output channel limits room for mounting space and wiring. Meanwhile, space restrictions for mounting boards are becoming strict to realize affordable solutions in terms of space and cost.

Our original ACDS technology (Advanced Current Detection System) can solve this problem. ACDS detects current from the voltage drop of the internal transistor, allowing reduction of external resistors for constant current detection, which have been conventionally required for every channel.

ADVANTAGE: Reduction of constant current detection resistor

Conventionally, the current is detected from the voltage drop of the external resistor. ACDS detects current from the voltage drop of the internal transistor, allowing reduction of external resistors for constant current detection. With ACDS, the flexibility of wiring layout is improved, BOM cost can be reduced, and stable constant current control can be realized.

PRODUCT LINEUP

<table>
<thead>
<tr>
<th>Part number</th>
<th>ADMC</th>
<th>ACDS</th>
<th>Supply voltage (V)</th>
<th>Output current (A)</th>
<th>Driving method</th>
<th>Features</th>
<th>Package</th>
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<tr>
<td>TB67S101A</td>
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<td>Thermal shutdown (TSD) Over current detection (ISD) Power ON reset (POR)</td>
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</table>

FEATURES

- Reduction of number of parts
- Improvement of wiring layout flexibility
- Operation is improved by reducing variations (trimming in IC)

ADVANTAGES

- Number of constant current detection resistors: 2pcs → 0pcs
- Cost reduction
- Board downsizing
- Stabilization for operation

BENEFITS

- Cost reduction
- Board downsizing
- Stabilization for operation

APPLICATIONS

- MPVs/mini printers/3D printers/banking terminals/
- Industrial sewing machines/amusement machines/
- POS terminals/surveillance cameras

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