

TENTATIVE

**General Description**

The STK6865H is a bidirectional DC motor driver IC with brake function that is fabricated using our unique IMST (Insulated Metal Substrate Technology) structure. The motor speed can be controlled by the PWM input signal as well as the "L"/"H"-level DC input signal.

**Features**

- . Bidirectional motor driver and brake function, and protector against simultaneous application of input for forward/reverse drive.
- . Braking available with input open.
- . Braking available at forward drive mode
- . PWM input signal-used speed control available (25kHz max.)

**Applications**

- . Especially suited for driving DC brush-provided motors used in PPC's, printers, sewing machines.

**Maximum Ratings at Ta=25°C**

Maximum Supply Voltage	V <sub>CC</sub> max	Quiescent mode 7,8 - 9,10 *1	50	V
Maximum Output Current	I <sub>omax</sub>	DC 1 pulse 0.5sec.	8	A
Operating Case Temperature	T <sub>cmax</sub>		105	°C
Junction Temperature	T <sub>jmax</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-40 to 125	°C

\*1 Refer to Remarks in Sample Application Circuit.

**Maximum Allowable Operating Conditions**

Supply Voltage	V <sub>CC</sub> max	Operating mode 7,8 - 9,10 *2	20 to 42	V
Output Current	I <sub>omax</sub>		4	A

\*2 Refer to Remarks in Sample Application Circuit.

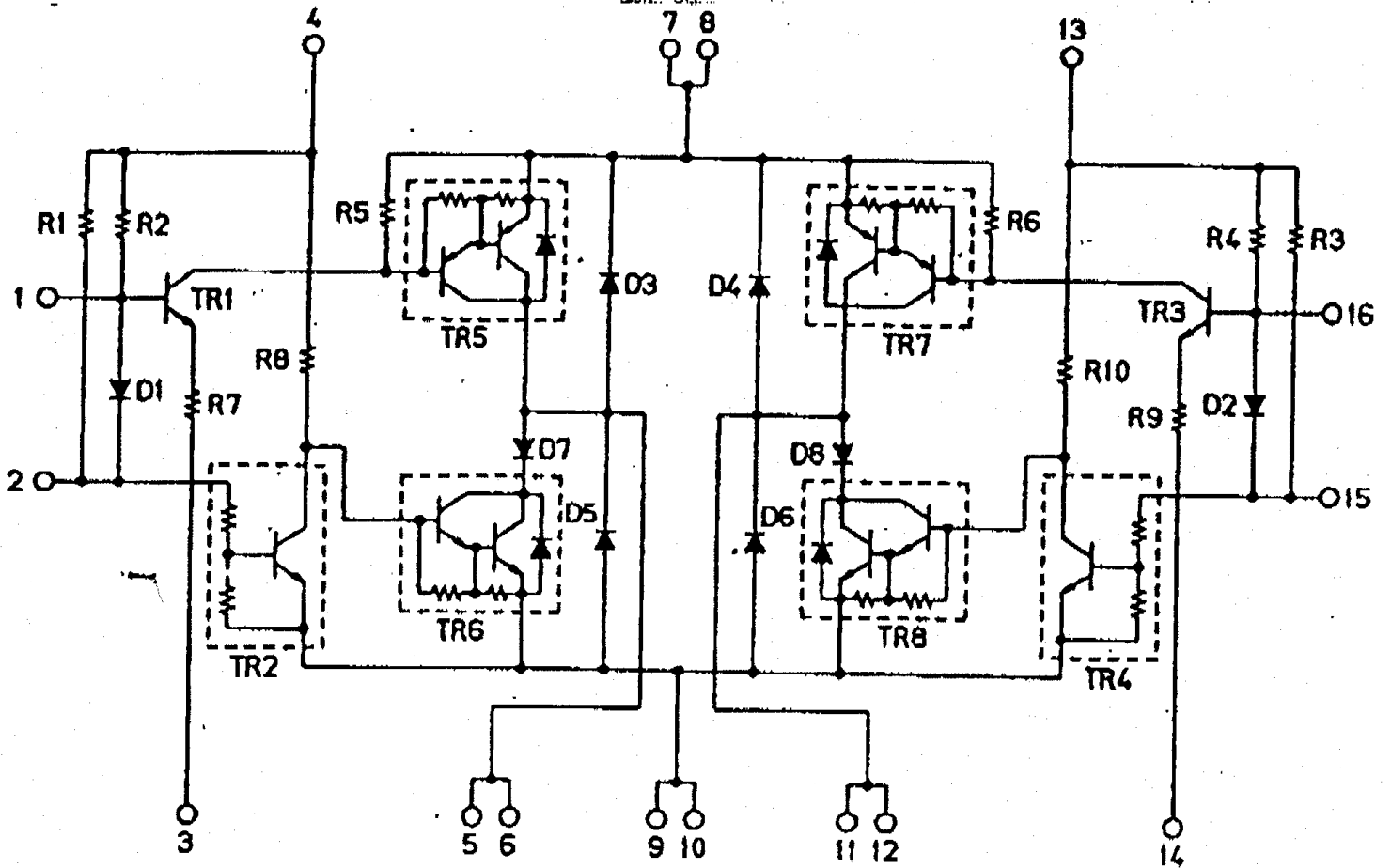
**Electrical Characteristics at Ta=25°C, V<sub>CC</sub>=24V±0.5V**

			min	typ	max	unit
Quiescent Current	I <sub>cco</sub>	Input pin open		35		mA
Output Saturation Voltage-1	V <sub>st-1</sub>	I <sub>o</sub> =4A(TR <sub>5</sub> ,TR <sub>7</sub> )	1.5			V
Output Saturation Voltage-2	V <sub>st-2</sub>	I <sub>o</sub> =4A(TR <sub>6</sub> +D <sub>7</sub> ,TR <sub>8</sub> +D <sub>8</sub> )	3.5			V
Input "L"-Level Current-1	I <sub>IL-1</sub>	Pin 1, pin 16 (pin 2, pin 15 open)	3.5			mA
Input "L"-Level Current-2	I <sub>IL-2</sub>	Pin 2, pin 15 (pin 1, pin 16 open)	4.2			mA
Input "L"-Level Voltage-1	V <sub>IL-1</sub>	Pin 1, pin 16	1.0			V
Input "L"-Level Voltage-2	V <sub>IL-2</sub>	Pin 2, pin 15	1.0			V
Diode Forward Voltage	V <sub>df</sub>	I <sub>df</sub> =1A	1.5			V

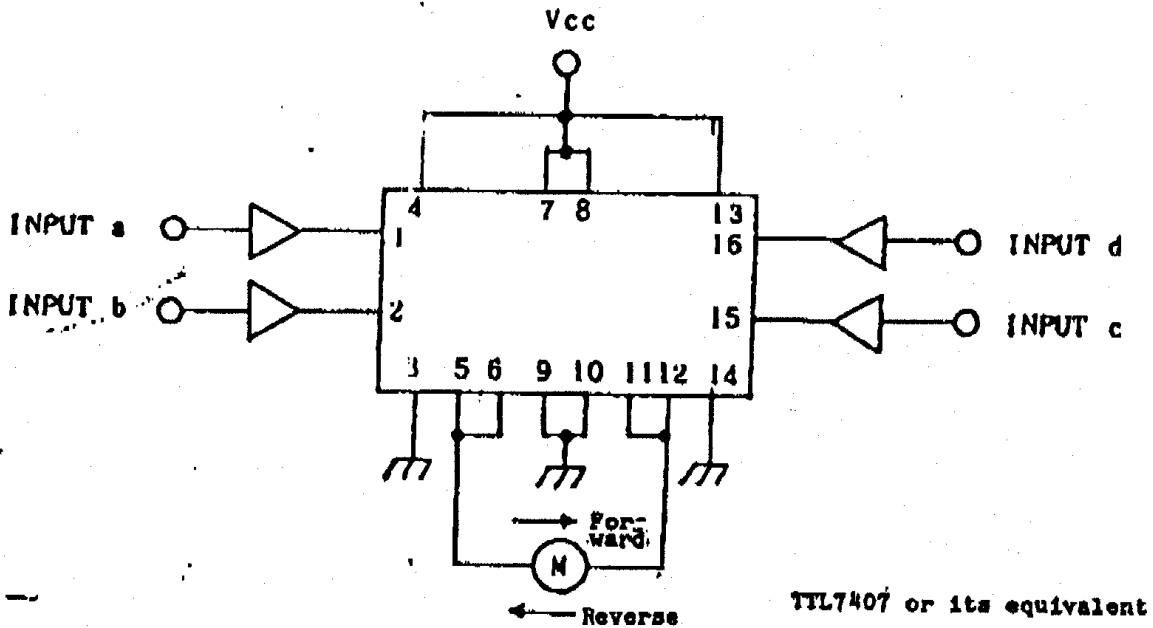


STK6865H

Equivalent Circuit



Sample Application Circuit

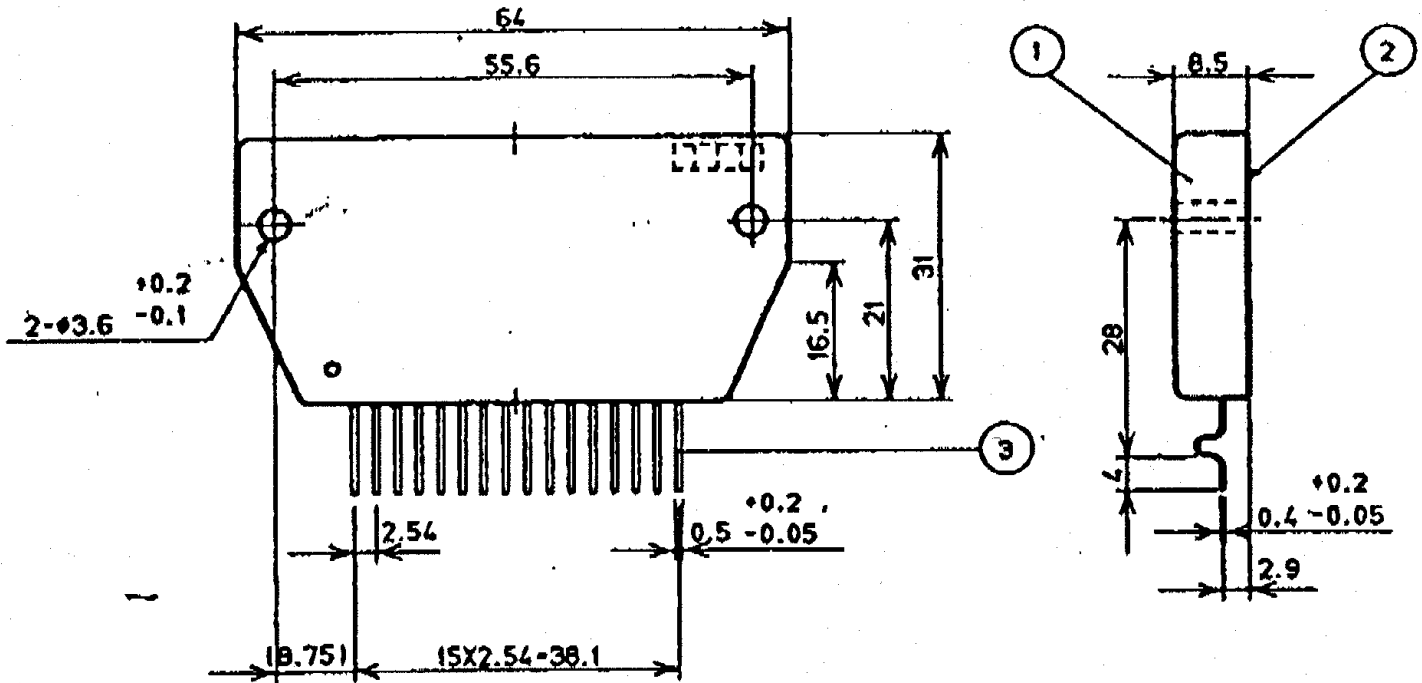


TTL7407 or its equivalent



# STK6865H

## Case Outline (unit: mm)



The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass-produced. The information herein is believed to be accurate and reliable. However, no responsibility is assumed by SANYO for its use, nor for any infringements of patents or other rights of third parties which may result from its use.