

# STK6980 B, H, BH, HH SERIES

## 4 PHASE STEPPING MOTOR DRIVE FOR UNIPOLAR CONSTANT-CURRENT CHOPPER DRIVER

(ユニポーラ定電流チョッパー駆動4相ステッピングモータードライバー)

△ Under development

| Type No.<br>機種 | Maximum Rating<br>最大定格 |           |           |           | Recommended<br>Condition<br>推奨条件 | Main Operational Characteristics<br>動作特性         |           |                      |                        |                                                   |          |                                                                           |                |
|----------------|------------------------|-----------|-----------|-----------|----------------------------------|--------------------------------------------------|-----------|----------------------|------------------------|---------------------------------------------------|----------|---------------------------------------------------------------------------|----------------|
|                | Vcc<br>max             | Io<br>max | Tc<br>max | Tj<br>max | Vcc                              | Output Saturation<br>出力飽和電圧                      |           |                      | Output Current<br>出力電流 | Pin No.9 or 11<br>Voltage                         |          | Thermal Resistance( $\theta_{j-c}$ )<br>接合部熱抵抗                            |                |
|                |                        |           |           |           |                                  | $V_{IN}=5V$<br>$R_E=0\Omega$<br>$R_g=1.2K\Omega$ |           |                      | Each phase<br>2.75mA   | Non Signal<br>$R_F=0\Omega$<br>* $R_o=4.7K\Omega$ |          | $\theta_{j-c}$ : From junction of<br>each Tr or diode of<br>Al-substrate. |                |
|                | V                      | A         | °C        | °C        | V                                | Vst1<br>V                                        | Vst2<br>V | I <sub>OH</sub><br>A | Io max<br>A            | *High<br>V                                        | Low<br>V | Tr1, Tr6<br>°C/W                                                          | Tr2 ~5<br>°C/W |
| STK6980B       | 30                     | 0.7       | 105       | 150       | 24                               | 1.0                                              | 1.8       | 0.43                 | 0.5                    | 0.5                                               | 0.08     | 32.0                                                                      | 16.0           |
| STK6981B       | 30                     | 1.5       | 105       | 150       | 24                               | 1.0                                              | 2.0       | 0.9                  | 1.05                   | 0.5                                               | 0.08     | 16.0                                                                      | 10.0           |
| STK6982B       | 30                     | 2.5       | 105       | 150       | 24                               | 1.2                                              | 2.15      | 1.5                  | 1.75                   | 0.5                                               | 0.08     | 14.7                                                                      | 9.0            |
| STK6980H       | 52                     | 0.7       | 105       | 150       | 36                               | 1.0                                              | 1.9       | 0.43                 | 0.5                    | 0.5                                               | 0.08     | (19.2)                                                                    | (13.0)         |
| STK6981H       | 52                     | 1.5       | 105       | 150       | 36                               | 1.0                                              | 2.15      | 0.9                  | 1.05                   | 0.5                                               | 0.08     | 13.5                                                                      | 13.5           |
| STK6982H       | 52                     | 2.5       | 105       | 150       | 36                               | 1.2                                              | 2.3       | 1.5                  | 1.75                   | 0.5                                               | 0.08     | 13.5                                                                      | 13.5           |
| STK6980BH II   | 30                     | 0.7       | 105       | 150       | 24                               | 1.0                                              | 1.8       | 0.43                 | 0.5                    | 0.5                                               | 0.08     | 19.5                                                                      | 16.0           |
| STK6981BH II   | 30                     | 1.5       | 105       | 150       | 24                               | 1.0                                              | 2.0       | 0.9                  | 1.05                   | 0.5                                               | 0.08     | 11.0                                                                      | 10.0           |
| STK6982BH II   | 30                     | 2.5       | 105       | 150       | 24                               | 1.2                                              | 2.15      | 1.5                  | 1.75                   | 0.5                                               | 0.08     | 9.0                                                                       | 9.0            |
| STK6980HH II   | 50                     | 0.7       | 105       | 150       | 36                               | 1.0                                              | 1.9       | 0.43                 | 0.5                    | 0.5                                               | 0.08     | (19.2)                                                                    | (13.0)         |
| STK6981HH II   | 50                     | 1.5       | 105       | 150       | 36                               | 1.0                                              | 2.15      | 0.9                  | 1.05                   | 0.5                                               | 0.08     | (14.7)                                                                    | (13.0)         |
| STK6982HH II   | 50                     | 2.5       | 105       | 150       | 36                               | 1.2                                              | 2.3       | 1.5                  | 1.75                   | 0.5                                               | 0.08     | 8.5                                                                       | 8.5            |

### ■ FEATURES

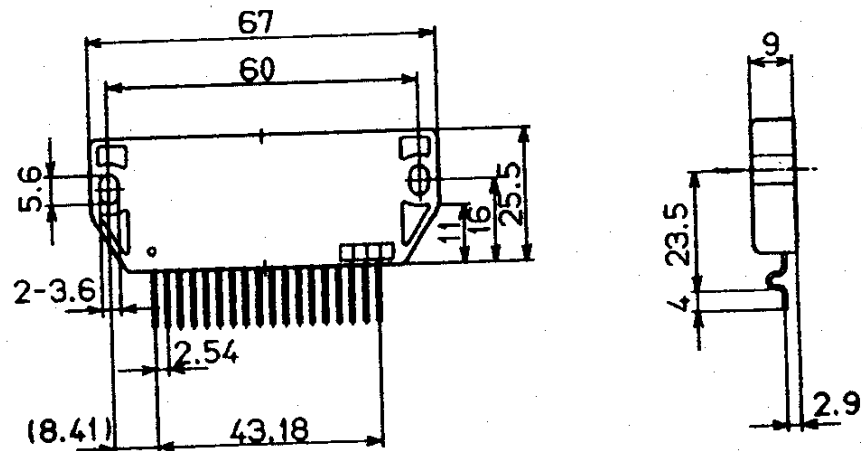
- Chopper operation capable of providing good rising characteristic of motor current and low heat generation due to constant current and also, STK6980BH II, STK6980H II series are very low heat generation.
- Chopper frequency, caused by self excitation, is determined by R, L of motor. (Externally excitation also available)
- Unipolar drive makes it possible to drive any stepping motor of hybrid type, PM type, VR type.
- Pause pin can be used to control pause action.
- Protection elements for fly-back voltage are all included.

### ■ 特 長

- モータ電流の立ち上がり特性を良くすること及び定電流にして発熱を小さくするためにチョッパー動作を行います。STK6980BH II, STK6980H II シリーズは、特に低消費型となっています。
- チョッピング周波数は、モータの R, L で決まり自動方式です。(他励方式も可)
- ユニポーラ駆動のためハイブリッド型, PM型, VR型のいずれのステッピングモータも駆動可能です。
- STOP端子があり一時停止のコントロールが可能です。
- モータコイルからのフライバック電圧保護用の素子を全て内蔵しています。

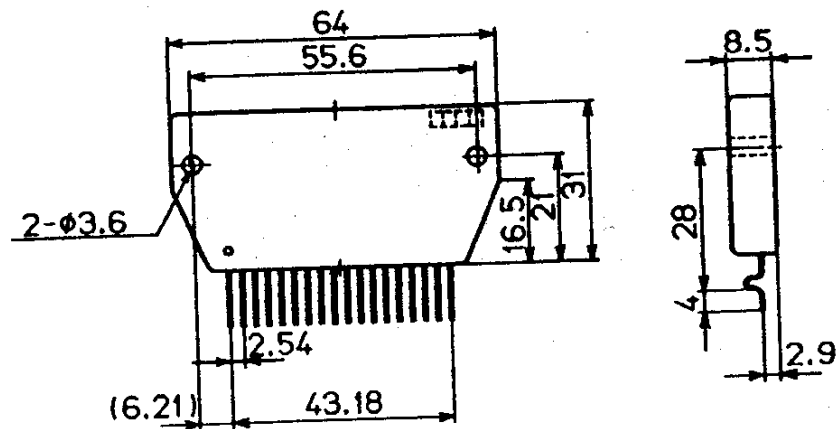
# ■ PACKAGE DIMENSION

(1)



(STK6980B,STK6980H,STK6980B II series)

(2)



(STK6980H II series)