

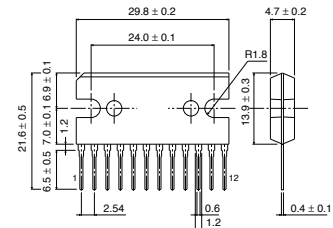
## System Regulator for Car Stereo

# BA4908

### ● Description

BA4908 is a system regulator IC for car stereo.  
This IC incorporates 1 channel of 5.6V output,  
2 channels of 8.7V output and 2 channels of  
high side switch.

### ● Dimension (Unit : mm)



**SIP-M12**

### ● Features

- 1) PNP output and low drop out type (Except AMP and ANT)
- 2) Built-in output current limit circuit to protect IC from destruction by short
- 3) Built-in over-voltage protection circuit to deliver strong design for surge input to BACK UP and Vcc
- 4) 12 pin power package perfect for space saving design
- 5) Built-in thermal protection circuit to protect IC from thermal destruction

### ● Applications

Car stereo

### ● Absolute Maximum Ratings (Ta=25°C)

| Parameter                   | Symbol | Limits     | Unit |
|-----------------------------|--------|------------|------|
| Power supply voltage        | Vcc    | 24         | V    |
| Power dissipation           | Pd     | 3000 *     | mW   |
| Operating temperature range | Topr   | -30 ~ +85  | °C   |
| Storage temperature range   | Tstg   | -55 ~ +150 | °C   |

\*Derating : 27.2mW/°C for operation above Ta=25°C

### ● Recommended Operating Conditions (Ta=25°C)

| Parameter                  | Symbol | Min. | Typ. | Max. | Unit |
|----------------------------|--------|------|------|------|------|
| Recommended supply voltage | Vcc    | 10   | 13.2 | 16   | V    |
| Operating voltage range    | Vcc    | 6.3  | 13.2 | 24   | V    |

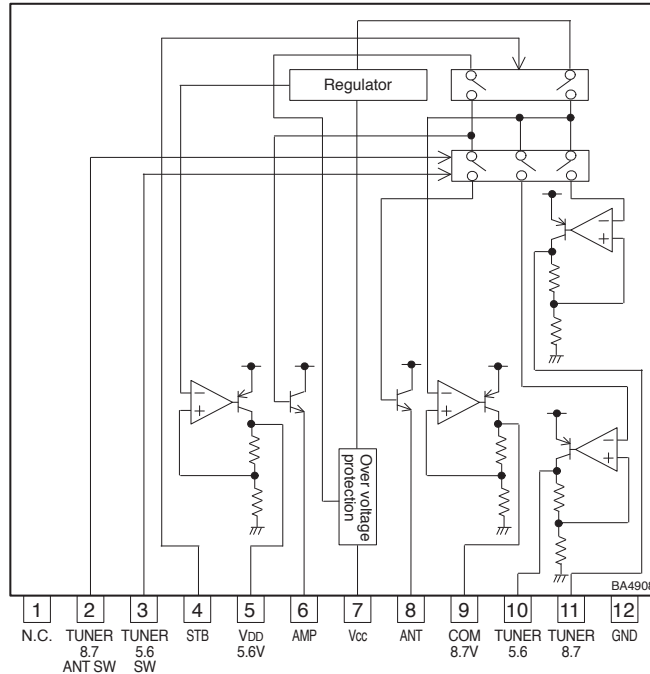
\*Electric characteristic is not guaranteed. (Especially at low input voltage)

● Electrical characteristics (Unless otherwise noted: Ta=25°C, Vcc=13.2V)

| Parameter                      | Symbol            | Min. | Typ. | Max. | Unit | Conditions             |
|--------------------------------|-------------------|------|------|------|------|------------------------|
| Circuit current at standby     | I <sub>ST</sub>   | —    | 0.55 | 0.80 | mA   | STAN BY pin = 0V       |
| Output voltage(VDD)1           | V <sub>O1</sub>   | 5.30 | 5.60 | 5.90 | V    | I <sub>o1</sub> =80mA  |
| Minimum I/O voltage difference | ΔV <sub>O13</sub> | —    | 0.3  | 0.7  | V    | I <sub>o1</sub> =80mA  |
| Output current capacity        | I <sub>o1</sub>   | 100  | 200  | —    | mA   | V <sub>O1</sub> ≥5.3V  |
| Output voltage(COM)2           | V <sub>O2</sub>   | 8.25 | 8.70 | 9.15 | V    | I <sub>o2</sub> =120mA |
| Minimum I/O voltage difference | ΔV <sub>O23</sub> | —    | 0.4  | 0.7  | V    | I <sub>o2</sub> =120mA |
| Output current capacity        | I <sub>o2</sub>   | 150  | 300  | —    | mA   | V <sub>O2</sub> ≥8.25V |
| I/O voltage difference(AMP)3   | ΔV <sub>O31</sub> | —    | 1.0  | 1.5  | V    | I <sub>o3</sub> =400mA |
| Output current capacity        | I <sub>o3</sub>   | 500  | 900  | —    | mA   | V <sub>O3</sub> ≥11.7V |
| I/O voltage difference(ANT)4   | ΔV <sub>O41</sub> | —    | 1.0  | 1.5  | V    | I <sub>o4</sub> =400mA |
| Output current capacity        | I <sub>o4</sub>   | 500  | 900  | —    | mA   | V <sub>O4</sub> ≥11.7V |
| Output voltage(TUNER5.6)5      | V <sub>O5</sub>   | 5.3  | 5.6  | 5.9  | V    | I <sub>o5</sub> =50mA  |
| Minimum I/O voltage difference | ΔV <sub>O53</sub> | —    | 0.4  | 0.7  | V    | I <sub>o5</sub> =120mA |
| Output current capacity        | I <sub>o5</sub>   | 150  | 300  | —    | mA   | V <sub>O5</sub> ≥5.3V  |
| Output voltage(TUNER8.7)6      | V <sub>O6</sub>   | 8.25 | 8.70 | 9.15 | V    | I <sub>o6</sub> =140mA |
| Minimum I/O voltage difference | ΔV <sub>O63</sub> | —    | 0.4  | 0.7  | V    | I <sub>o6</sub> =200mA |
| Output current capacity        | I <sub>o6</sub>   | 250  | 500  | —    | mA   | V <sub>O6</sub> ≥8.25V |

\* This product is not designed for protection against radioactive rays.  
 \* Output current capacity must be set below MINIMUM of the specification.

● Block Diagram



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