

2-Input / 1-Output Stereo Audio Selector

■ GENERAL DESCRIPTION

The **NJM2752** is 2-Input / 1-Output Stereo Audio Selector.

The **NJM2752** consists of switches and buffer operational amplifiers.

Based on the internal switch op-amp technology, the **NJM2752** features lower output noise, lower distortion and higher channel separation than the general Multiplexers or Analogue Switches.

The **NJM2752** contains compatibility with the NJM2753 (3in-1out SW), NJM2755 (4in-1out SW). It is suitable for LCD-TV/PDP-TV, Car Stereo, and Any Audio System.

■ PACKAGE OUTLINE



NJM2752RB2
(MSOP10 (TVSP10))

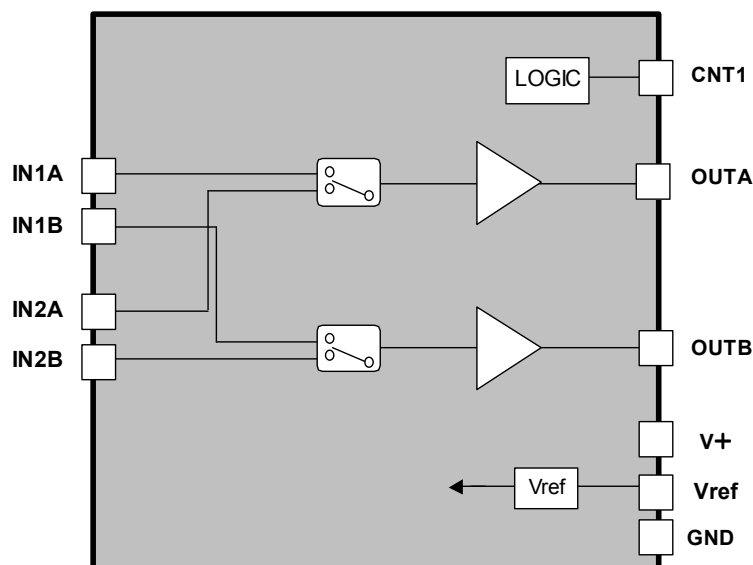


NJM2752V
(SSOP14)

■ FEATURES

- Operating Voltage 4.7 to 10V
 - 2-Input / 1-Output Stereo Audio Selectors
 - Low Output Noise -114dBV typ.
 - Low Distortion 0.0009% typ.
 - Bipolar Technology
 - Package Outline MSOP10 (TVSP10)*
SSOP14
- *MEET JEDEC MO-187-DA / THIN TYPE

■ BLOCK DIAGRAM

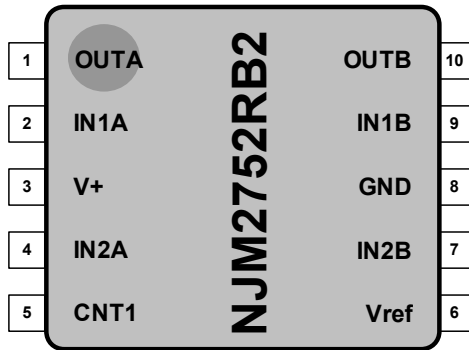


NJM2752

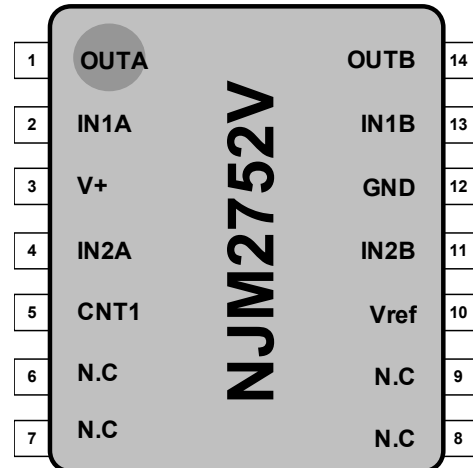
■ PIN CONFIGURATIONS

MSOP10 (TVSP10),SSOP14

MSOP10 (TVSP10)



SSOP14

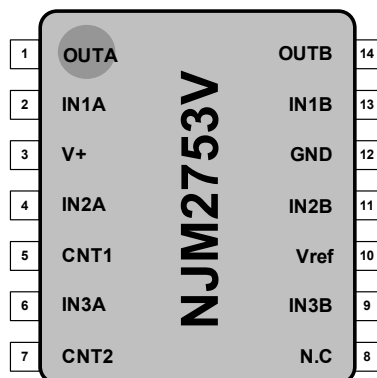


| PIN.No. (MSOP10 (TVSP10)) | PIN.No. (SSOP14) | SYMBOL | FUNCTION | PIN.No. (MSOP10 (TVSP10)) | PIN.No. (SSOP14) | SYMBOL | FUNCTION |
|---------------------------------|---------------------|--------|--------------------------|---------------------------------|---------------------|--------|---------------------|
| 1 | 1 | OUTA | Ach Output Terminal | 6 | 10 | Vref | Reference Terminal |
| 2 | 2 | IN1A | Ach Input Terminal1 | 7 | 11 | IN2B | Bch Input Terminal2 |
| 3 | 3 | V+ | Power Supply Terminal | 8 | 12 | GND | GND Terminal |
| 4 | 4 | IN2A | Ach Input Terminal2 | 9 | 13 | IN1B | Bch Input Terminal1 |
| 5 | 5 | CNT1 | Control Switch Terminal1 | 10 | 14 | OUTB | Bch Output Terminal |
| | 6,7 8,9 | N.C | No Connection | | | | |

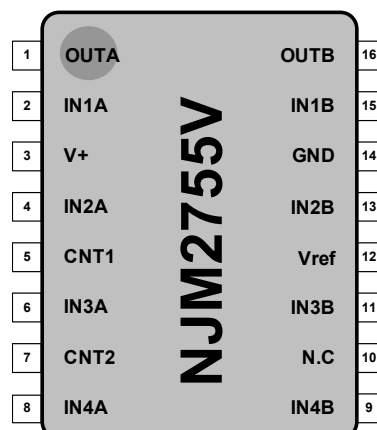
[Reference]

The NJM2752 contains compatibility with the NJM2753 (3in-1out SW), NJM2755 (4in-1out SW).

NJM2753



NJM2755



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| PARAMETER | SYMBOL | RATING | UNIT |
|-----------------------------|------------------|---|------|
| Supply Voltage | V ⁺ | 12 | V |
| Power Dissipation | P _D | MSOP10 (TVSP10): 470 ¹⁾ , 640 ²⁾ SSOP14: 450 ¹⁾ , 570 ²⁾ NOTE 1): EIA/JEDEC STANDARD Test board (76.2x114.3x1.6mm, 2layer, FR-4) mounting NOTE 2): EIA/JEDEC STANDARD Test board (76.2x114.3x1.6mm, 4layer, FR-4) mounting | mW |
| Operating Temperature Range | T _{OPR} | -40 to +85 | °C |
| Storage Temperature Range | T _{STR} | -40 to +150 | °C |

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V⁺=9V)

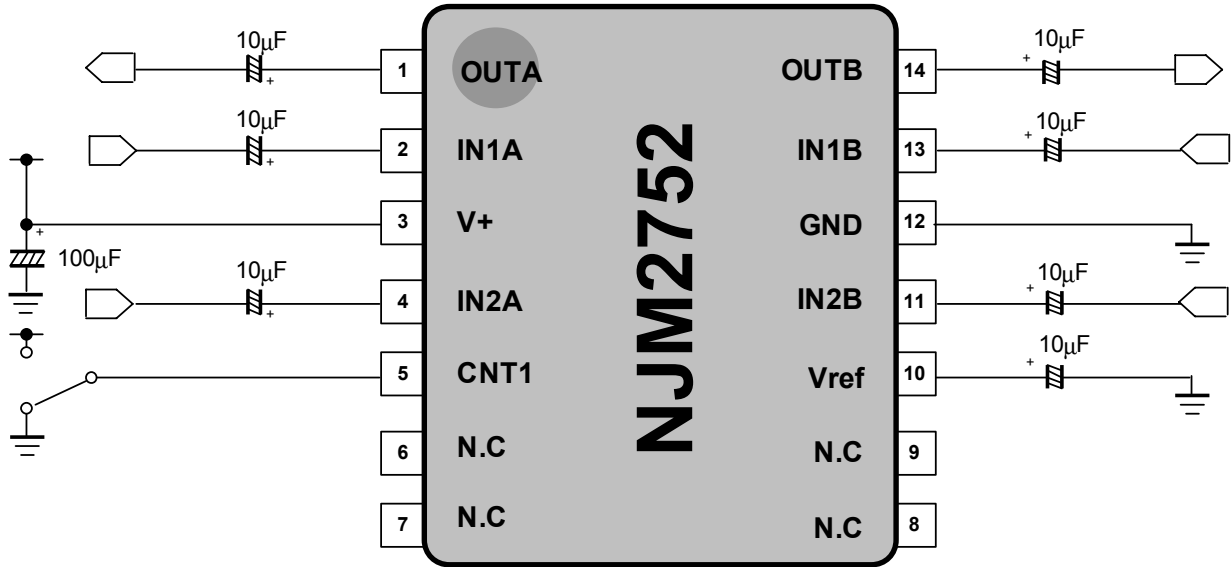
| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---------------------------|------------------|----------------------------------|------------|-------------|--------------|----------------|
| Operating Voltage | V ⁺ | | 4.7 | 9.0 | 10 | V |
| Supply Current | I _{CC} | No Signal | - | 10 | 15 | mA |
| Reference Voltage | V _{REF} | | - | 4.5 | - | V |
| Voltage Gain | G _V | Vin=1Vrms, f=1kHz | -1 | 0 | 1 | dB |
| Total Harmonic Distortion | THD+N | Vin=1Vrms, f=1kHz | - | 0.0009 | 0.03 | % |
| Output Noise Voltage | V _{NO} | A-Weighted | - | -114 (2) | -100 (10) | dBV (μVrms) |
| Maximum Output Voltage | V _{OM} | f=1kHz, THD=1% | 6 (2.0) | 8 (2.5) | - | dBV (Vrms) |
| Cross Talk | CT | Vin=1Vrms, f=1kHz, A-Weighted | 70 | 100 | - | dB |
| Channel Separation | CS | Vin=1Vrms, f=1kHz, A-Weighted | 80 | 110 | - | dB |
| Switch-ON Voltage Level | V _{CH} | | 2.4 | - | - | V |
| Switch-OFF Voltage Level | V _{CL} | | - | - | 0.5 | V |
| Input Impedance | R _{IN} | | - | 100 | - | kΩ |
| Output Impedance | R _{OUT} | | - | 45 | - | Ω |

■ SWITCH CONTROL LOGIC

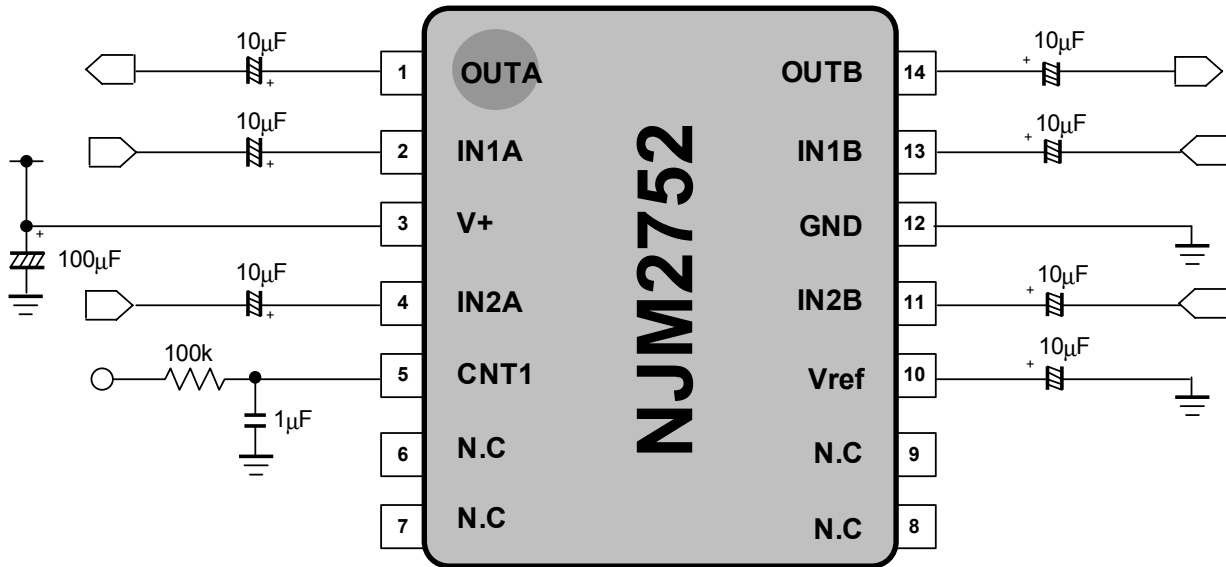
| CNT1 | INPUT SELECTOR Ach / Bch |
|------|--------------------------|
| L | 1 |
| H | 2 |

NJM2752

■ MEASUREMENT CIRCUIT (SSOP14)



■ APPLICATION CIRCUIT (SSOP14)



Application note:

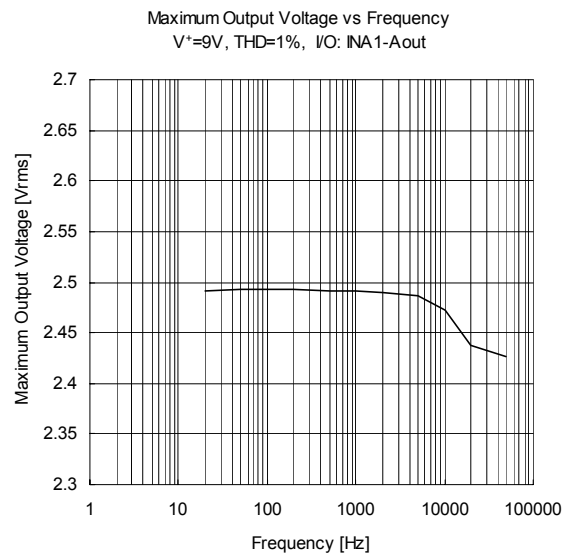
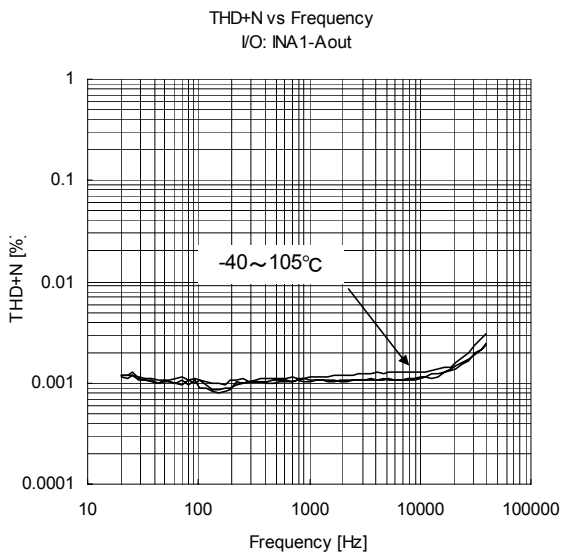
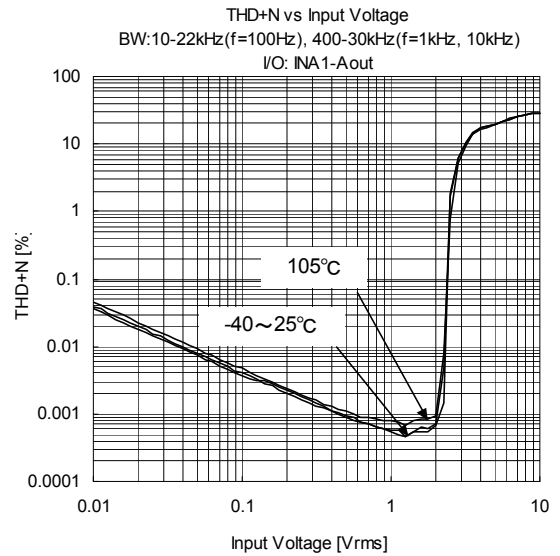
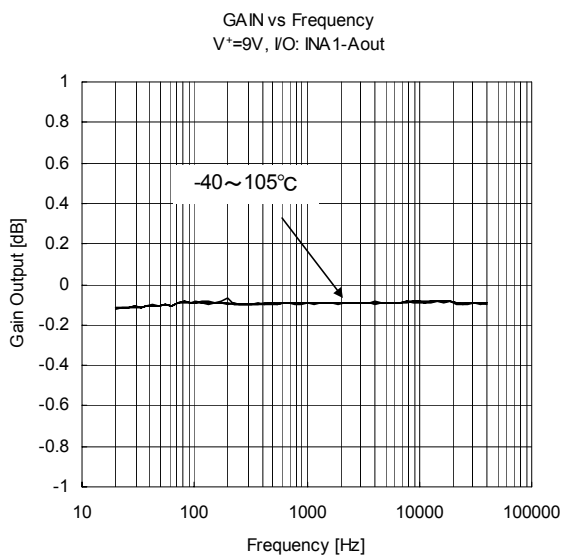
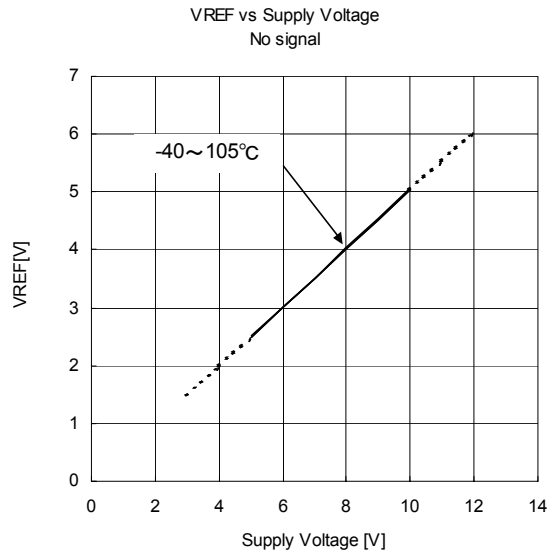
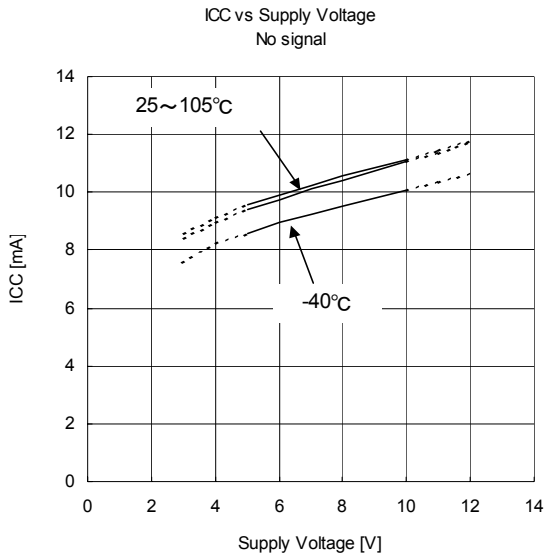
Resistor(100k) and capacitor(1µF) connected to CNT1 are added to reduce pop-noise.

The value of input capacitor connected to IN1A and IN2A depends on cut-off frequency(calculated by $f_c=1/2\pi RC$) you need. R(input impedance)=100kΩ.

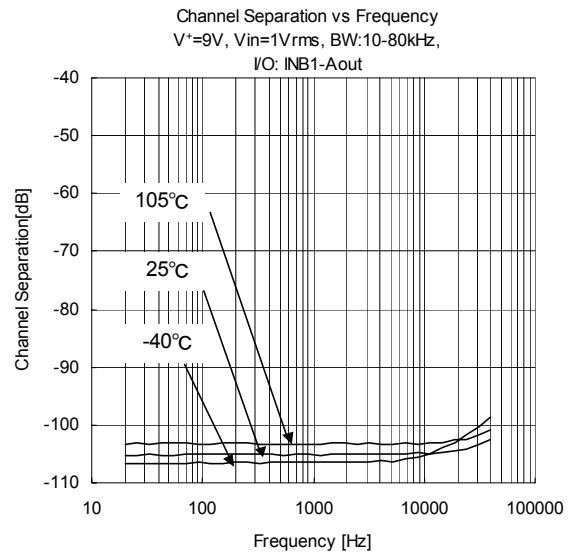
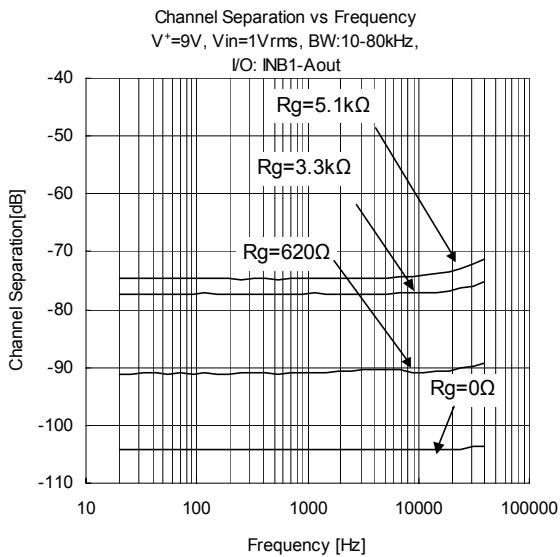
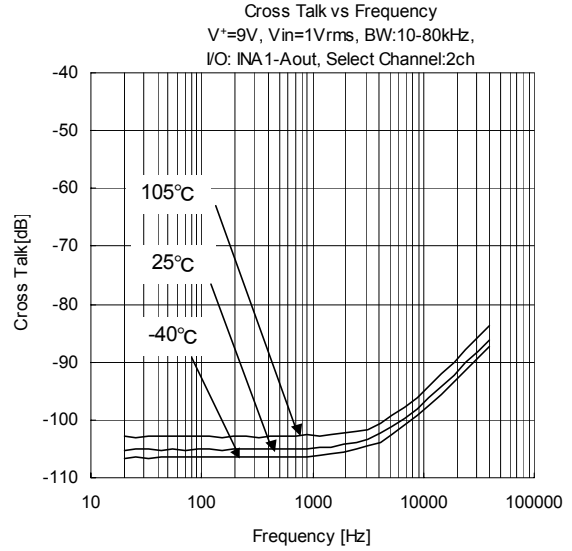
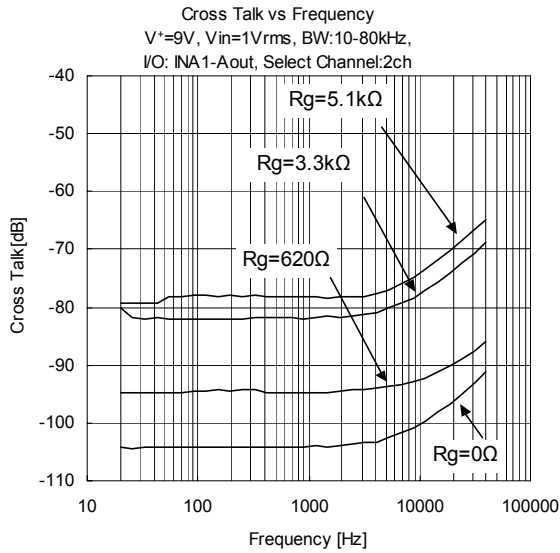
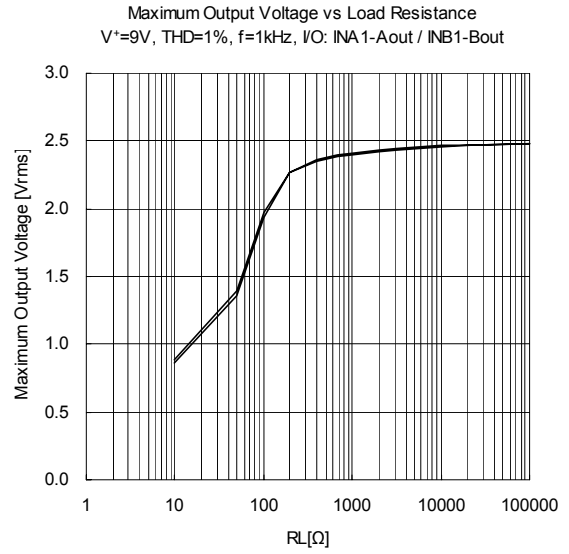
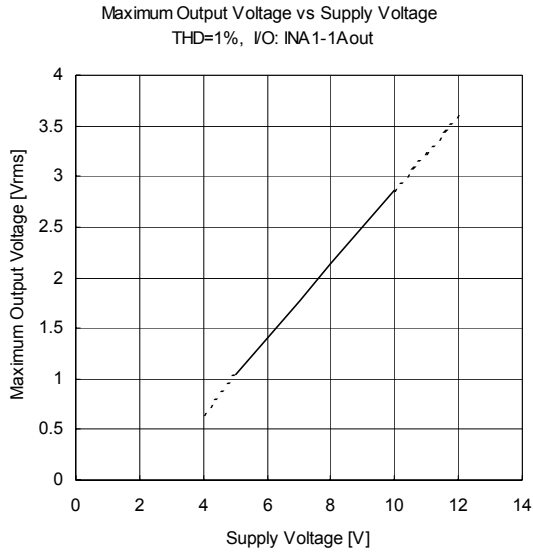
■ TERMINAL DESCRIPTION

| PIN No. | SYMBOL | FUNCTION | EQUIVALENT CIRCUIT | TERMINAL VOLTAGE |
|--------------------|------------------------------|--|--------------------|------------------|
| 2 4 11 13 | IN1A IN2A IN2B IN1B | Ach Input Terminal1 Ach Input Terminal2 Bch Input Terminal2 Bch Input Terminal1 | | V+/2 |
| 5 | CNT1 | Control Switch Terminal1 | | 0V (GND) |
| 1 14 | OUTA OUTB | Ach Output Terminal Bch Output Terminal | | V+/2 |
| 10 | Vref | Reference Terminal | | V+/2 |
| 3 12 | V+ GND | Power Supply Terminal GND Terminal | | V+ 0V |

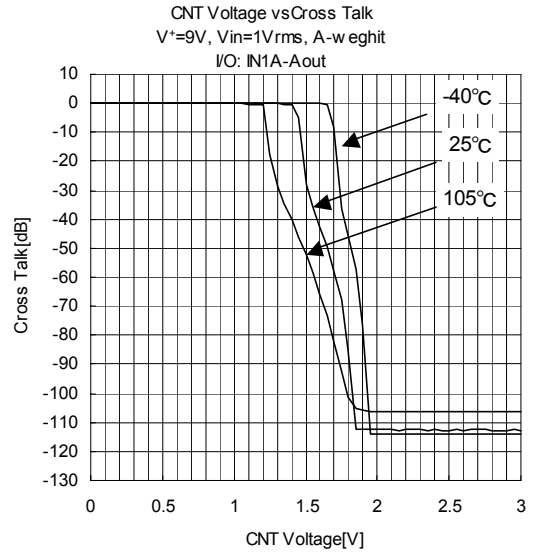
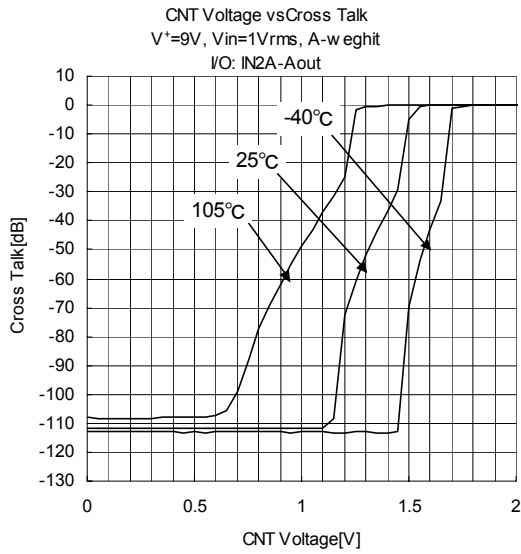
■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS



[CAUTION]

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