

## 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))**

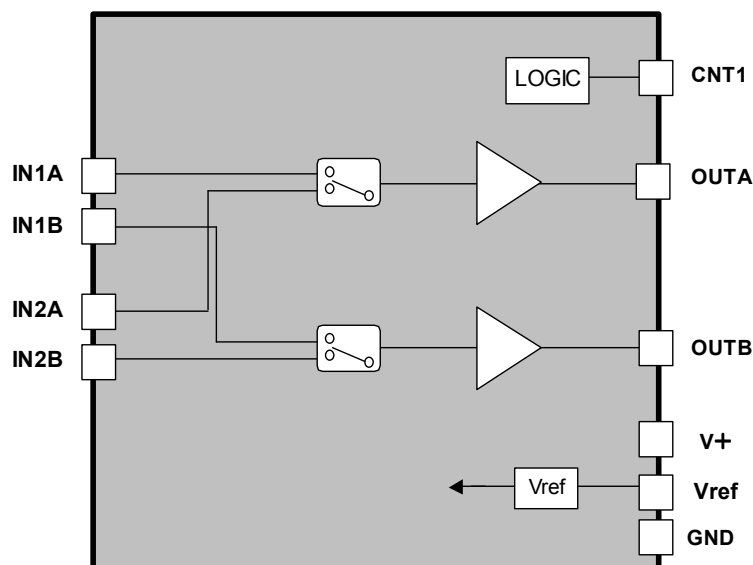


**NJM2752V**  
**(SSOP14)**

### ■ 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

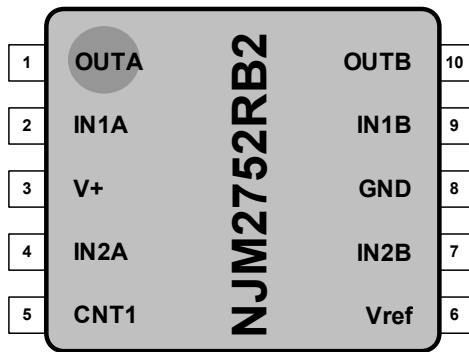


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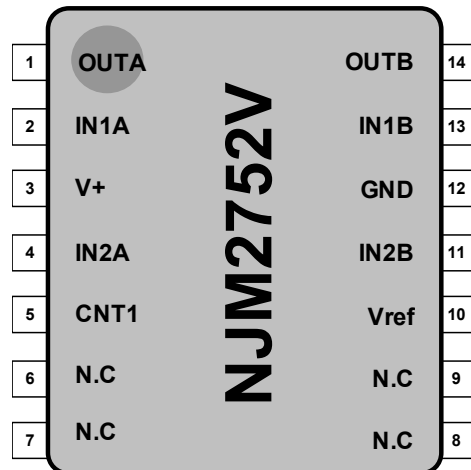
## ■ PIN CONFIGURATIONS

MSOP10 (TVSP10),SSOP14

### MSOP10 (TVSP10)



### SSOP14

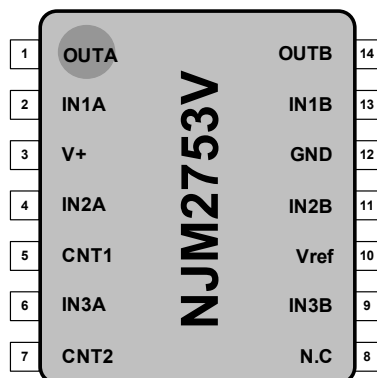


PIN.No. (MSOP10 (TVSP10))	PIN.No. (SSOP14)	SYMBOL	FUNCTION	PIN.No. (MSOP10 (TVSP10))	PIN.No. (SSOP14)	SYMBOL	FUNCTION
1	1	OUTA	Ach Output Terminal	6	10	Vref	Reference Terminal
2	2	IN1A	Ach Input Terminal1	7	11	IN2B	Bch Input Terminal2
3	3	V+	Power Supply Terminal	8	12	GND	GND Terminal
4	4	IN2A	Ach Input 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				

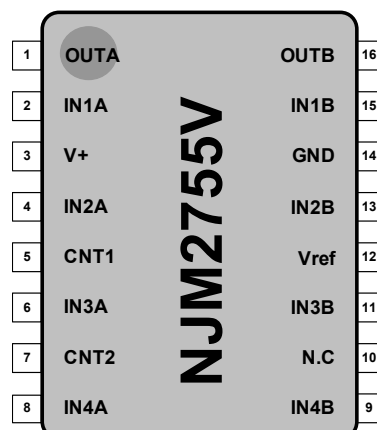
### [Reference]

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 <sup>+</sup>	12	V
Power Dissipation	P <sub>D</sub>	MSOP10 (TVSP10): 470 <sup>1)</sup> , 640 <sup>2)</sup> SSOP14: 450 <sup>1)</sup> , 570 <sup>2)</sup> 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 <sub>OPR</sub>	-40 to +85	°C
Storage Temperature Range	T <sub>STR</sub>	-40 to +150	°C

## ■ ELECTRICAL CHARACTERISTICS ( Ta=25°C, V<sup>+</sup>=9V)

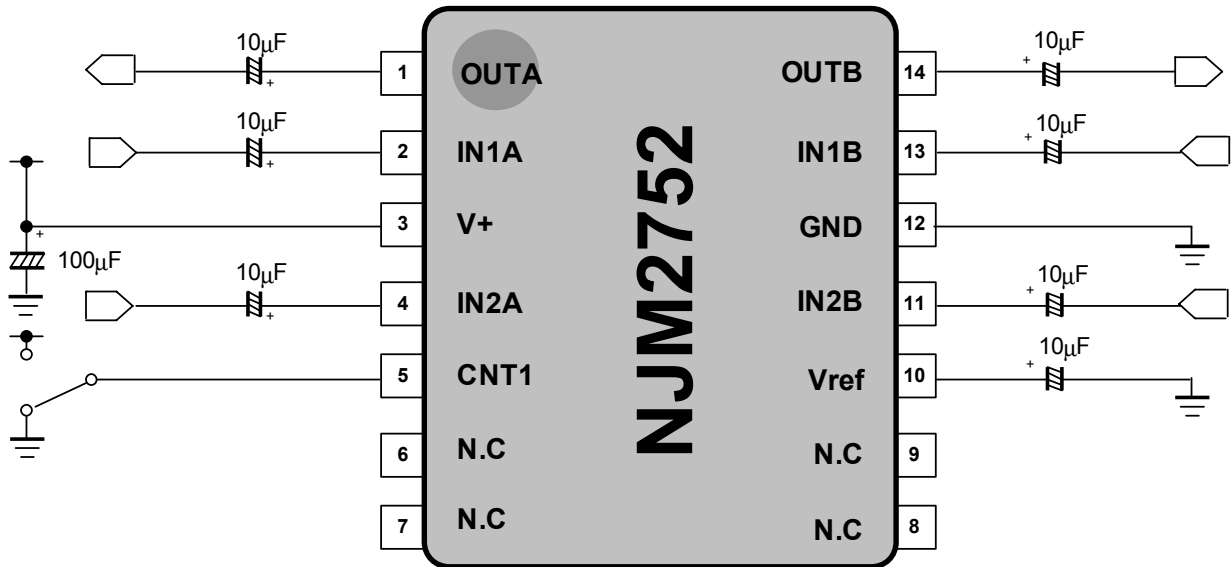
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V <sup>+</sup>		4.7	9.0	10	V
Supply Current	I <sub>CC</sub>	No Signal	-	10	15	mA
Reference Voltage	V <sub>REF</sub>		-	4.5	-	V
Voltage Gain	G <sub>V</sub>	V <sub>in</sub> =1V <sub>rms</sub> , f=1kHz	-1	0	1	dB
Total Harmonic Distortion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

## ■ SWITCH CONTROL LOGIC

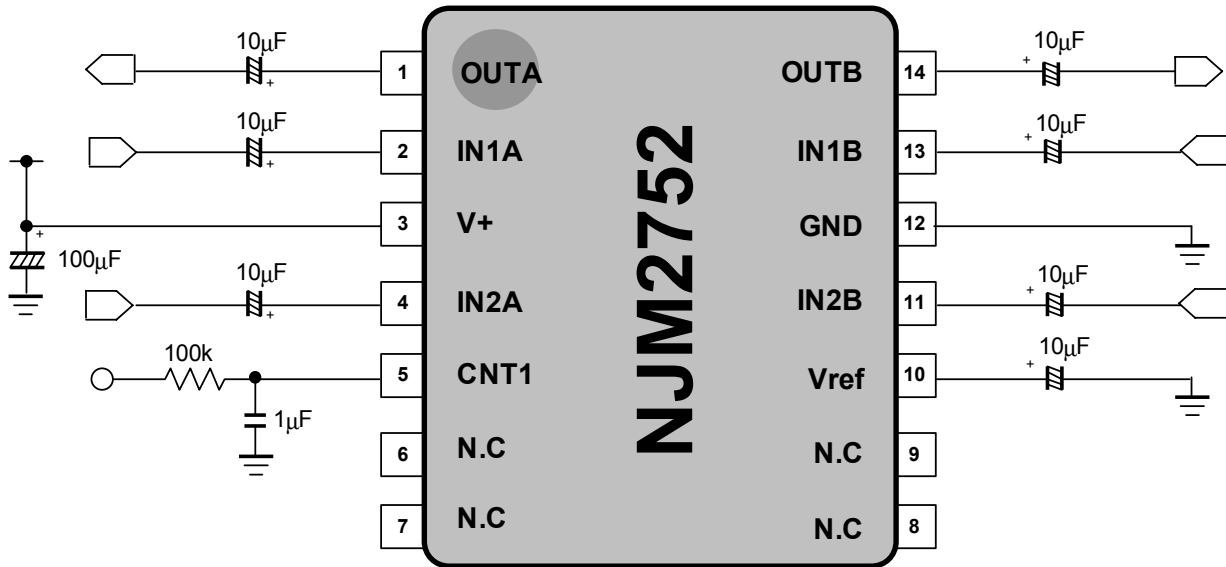
CNT1	INPUT SELECTOR Ach / Bch
L	1
H	2

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## ■ MEASUREMENT CIRCUIT (SSOP14)



## ■ APPLICATION CIRCUIT (SSOP14)



### Application note:

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

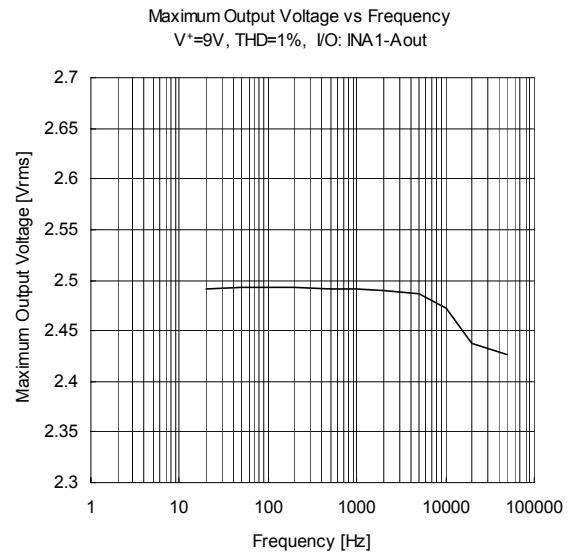
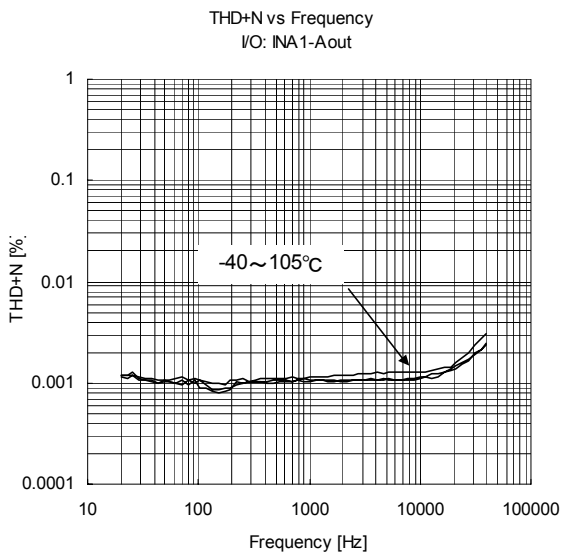
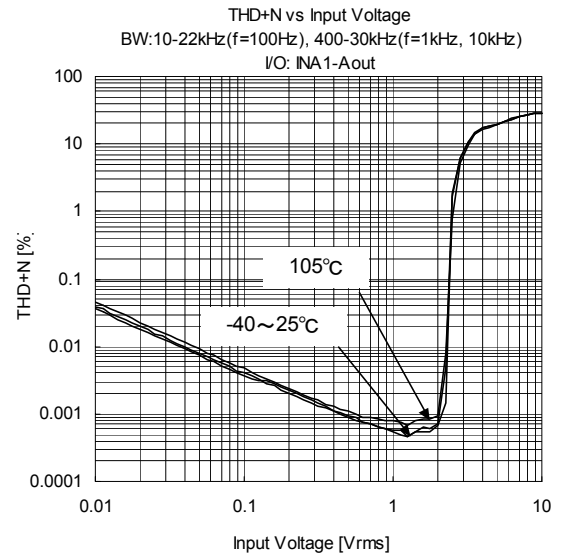
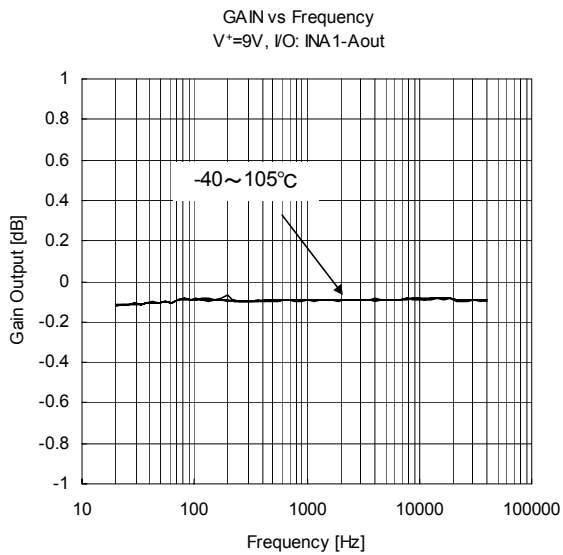
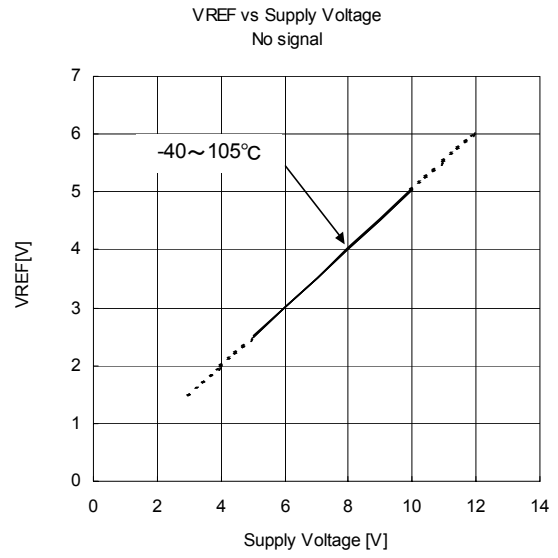
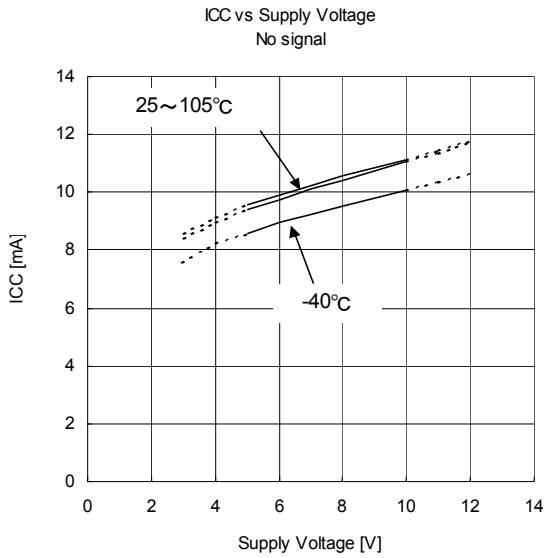
The value of input capacitor connected to IN1A and IN2A depends on cut-off frequency(calculated by  $f_c=1/2\pi RC$ ) you need. R(input impedance)=100kΩ.

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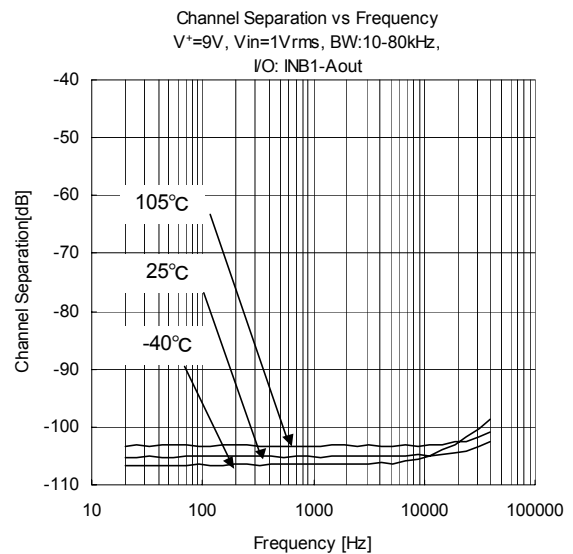
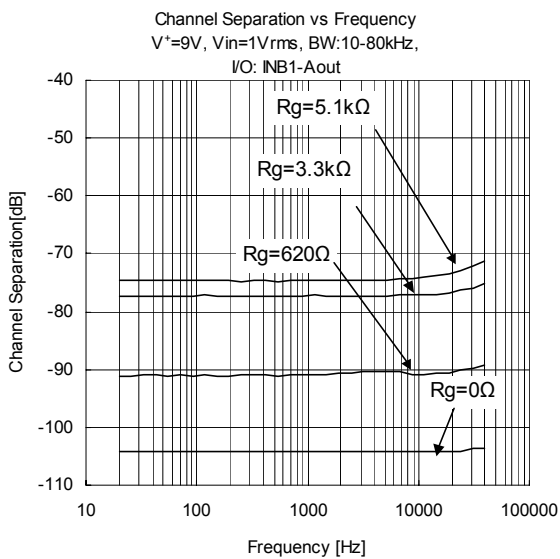
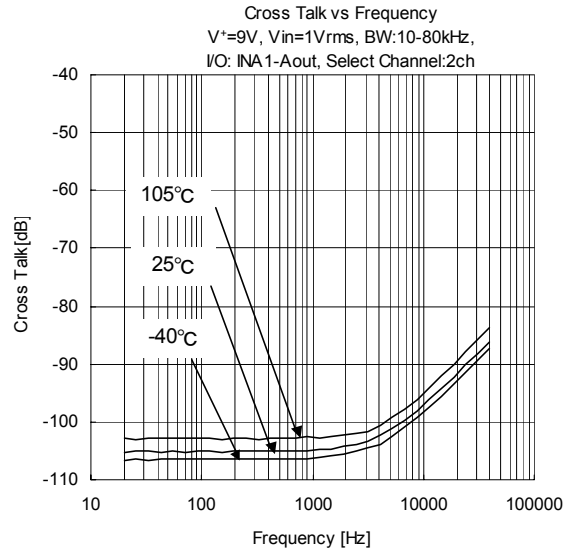
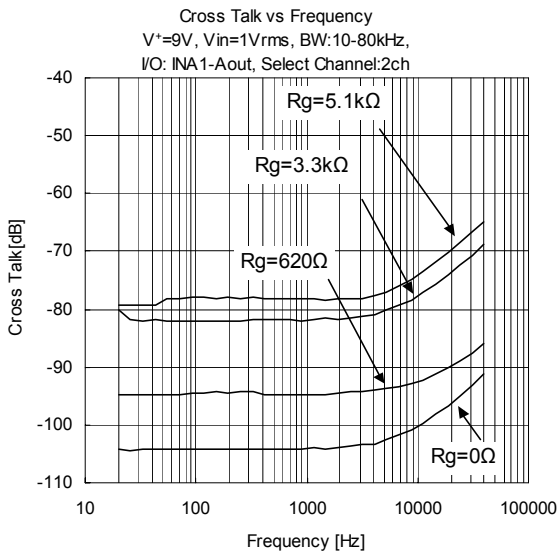
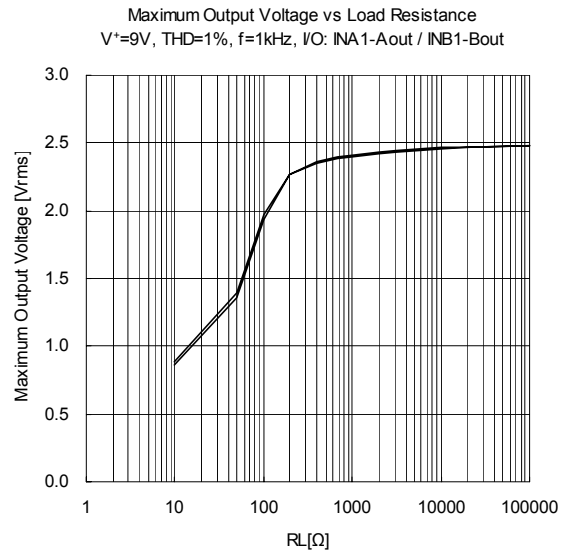
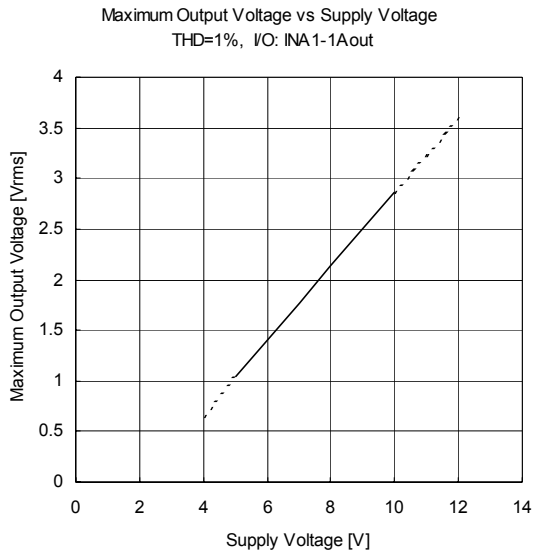
## ■ TERMINAL DESCRIPTION

PIN No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	TERMINAL VOLTAGE
2 4 11 13	IN1A IN2A IN1B IN2B	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

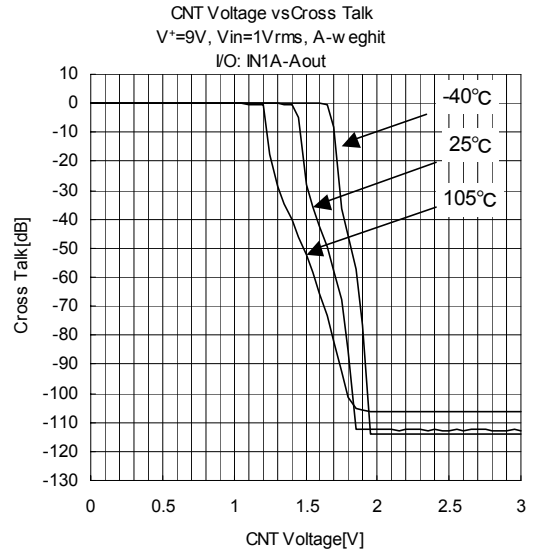
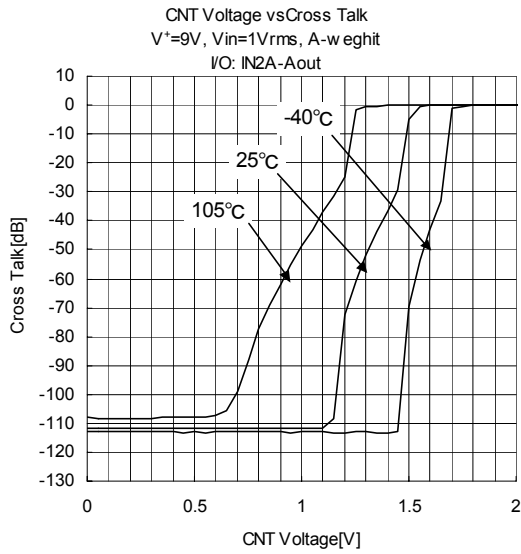


## ■ TYPICAL CHARACTERISTICS





## ■ TYPICAL CHARACTERISTICS



**[CAUTION]**

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