

3-Input / 1-Output Stereo Audio Selector

■ GENERAL DESCRIPTION

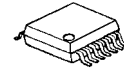
The **NJM2753** is 3-Input / 1-Output Stereo Audio Selector.

The **NJM2753** consists of switches and buffer operational amplifiers.

Based on the internal switch op-amp technology, the **NJM2753** features lower output noise, lower distortion and higher channel separation than the general Multiplexers or Analogue Switches.

The **NJM2753** contains compatibility with NJM2752(2in-1out SW), NJM2755(4in-1out SW).

■ PACKAGE OUTLINE



NJM2753V

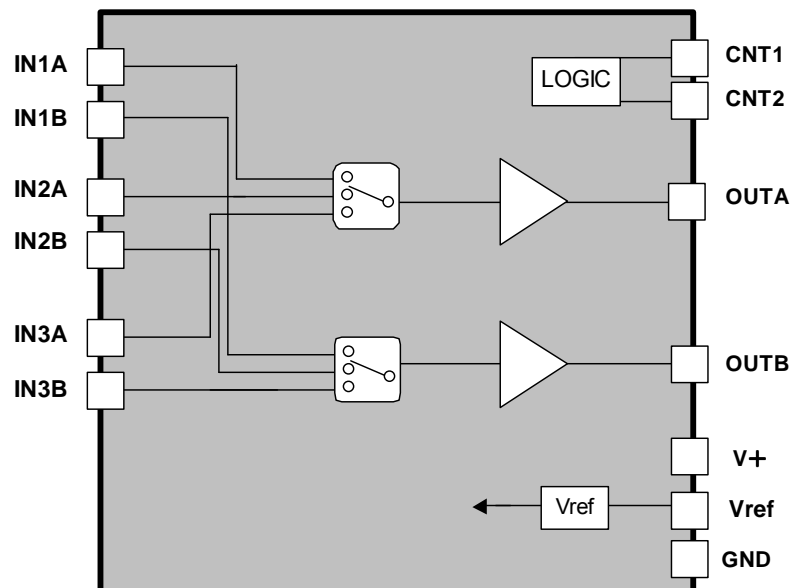
■ APPLICATIONS

- LCD-TV/PDP-TV
- Car Stereo
- Any Audio System

■ FEATURES

- Operating Voltage 4.7 to 10V
- 3-Input / 1-Output Stereo Audio Selector
- Low Output Noise -114dBV typ.
- Low Distortion 0.0009% typ.
- Bipolar Technology
- Package Outline SSOP14

■ BLOCK DIAGRAM

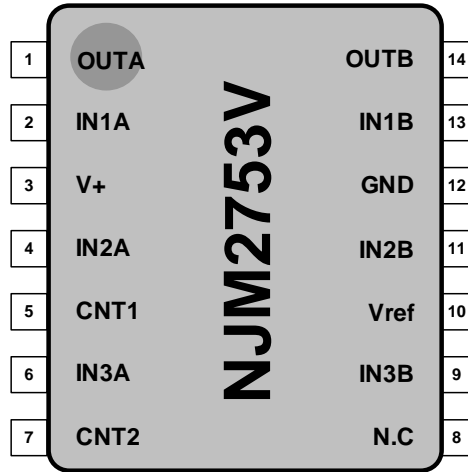


NJM2753

■ PIN CONFIGURATIONS

NJM2753 SSOP14

SSOP14

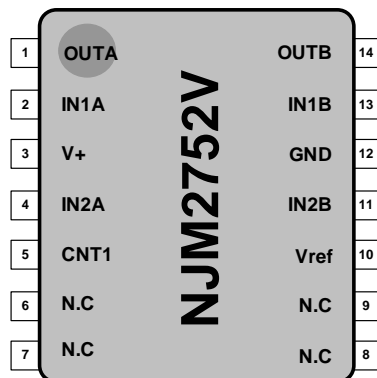


PIN.No.	SYMBOL	FUNCTION	PIN.No.	SYMBOL	FUNCTION
1	OUTA	Ach Output Terminal	8	N.C	No Connection
2	IN1A	Ach Input Terminal1	9	IN3B	Bch Input Terminal3
3	V+	Power Supply Terminal	10	Vref	Reference Terminal
4	IN2A	Ach Input Terminal2	11	IN2B	Bch Input Terminal2
5	CNT1	Control Switch Terminal1	12	GND	GND Terminal
6	IN3A	Ach Input Terminal2	13	IN1B	Bch Input Terminal1
7	CNT2	Control Switch Terminal2	14	OUTB	Bch Output Terminal

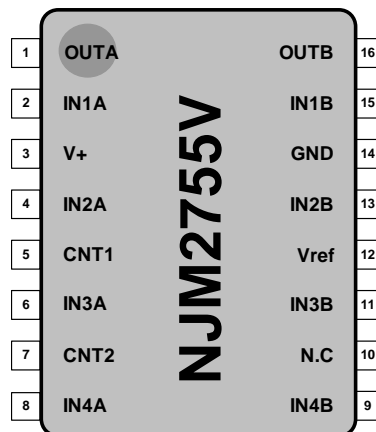
[Reference]

The NJM2753 contains compatibility with NJM2752 (2in-1out SW), NJM2755 (4in-1out SW).

NJM2752



NJM2755



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	V ⁺	12	V
Power Dissipation	P _D	SSOP14 450 ¹⁾ 570 ²⁾ <small>NOTE 1): EIA/JEDEC STANDARD Test board (76.2x114.3x1.6mm, 2layer, FR-4) mounting 2): EIA/JEDEC STANDARD Test board (76.2x114.3x1.6mm, 4layer, FR-4) mounting</small>	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	V _{in} =1V _{rms} , f=1kHz	-1	0	1	dB
Total Harmonic Distortion	THD+N	V _{in} =1V _{rms} , f=1kHz	-	0.0009	0.03	%
Output Noise Voltage	V _{NO}	A-Weighted	-	-114 (2)	-100 (10)	dBV (μV _{rms})
Maximum Output Voltage	V _{OM}	f=1kHz, THD=1%	6 (2.0)	8 (2.5)	-	dBV (V _{rms})
Cross Talk	CT	V _{in} =1V _{rms} , f=1kHz, A-Weighted	85	100	-	dB
Channel Separation	CS	V _{in} =1V _{rms} , f=1kHz, A-Weighted	90	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

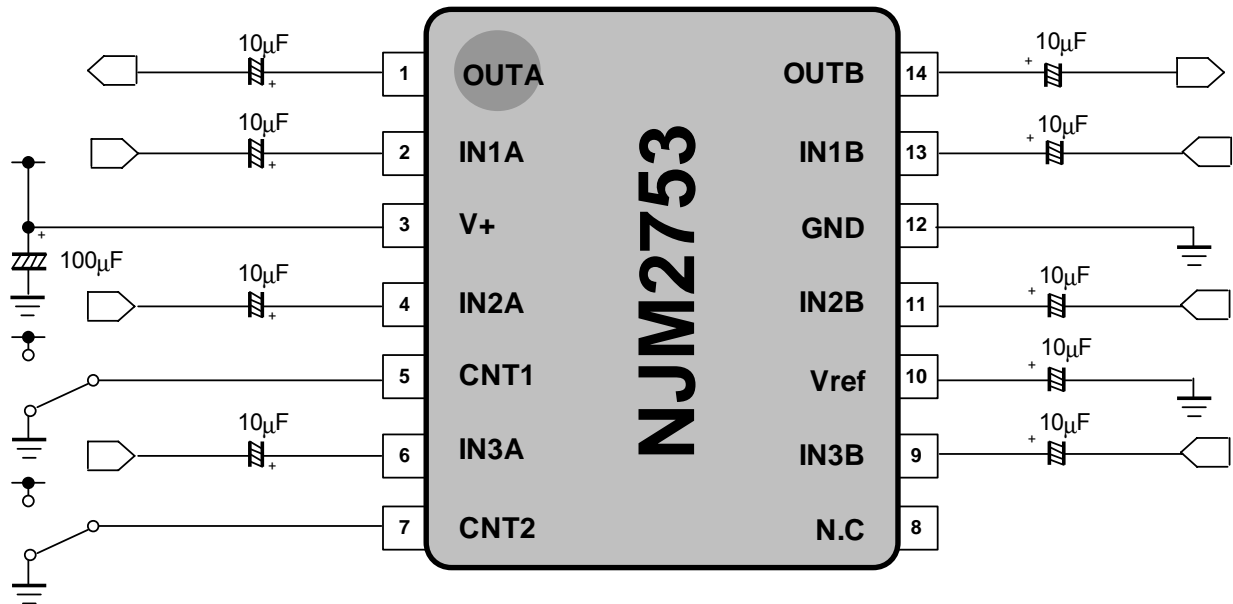
CNT2	CNT1	INPUT SELECTOR Ach / Bch
L	L	1
L	H	2
H	L / H	3

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■ TERMINAL DESCRIPTION

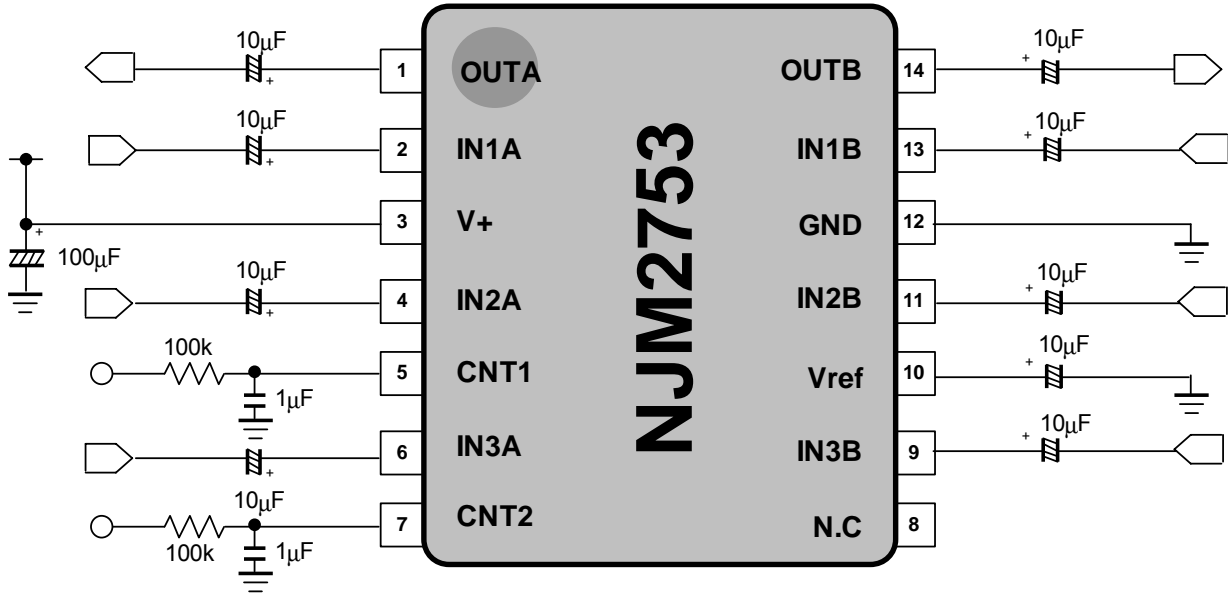
PIN No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	TERMINAL VOLTAGE
2 4 6 9 11 13	IN1A IN2A IN3A IN3B IN2B IN1B	Ach Input Terminal1 Ach Input Terminal2 Ach Input Terminal3 Bch Input Terminal3 Bch Input Terminal2 Bch Input Terminal1		V+/2
5 7	CNT1 CNT2	Control Switch Terminal1 Control Switch Terminal2		0V (GND)
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

MEASUREMENT CIRCUIT



NJM2753

APPLICATION CIRCUIT

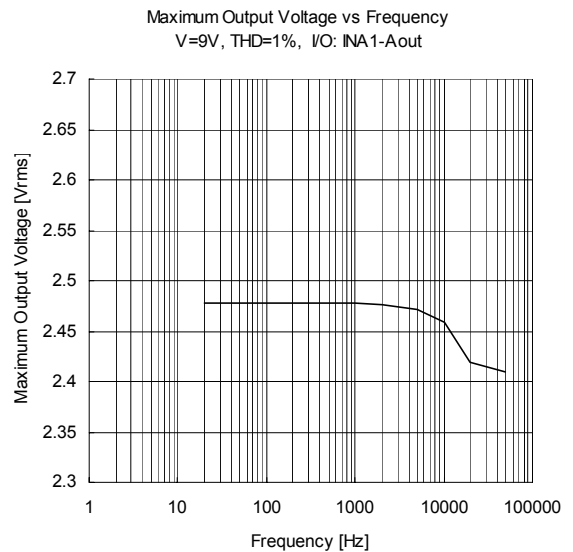
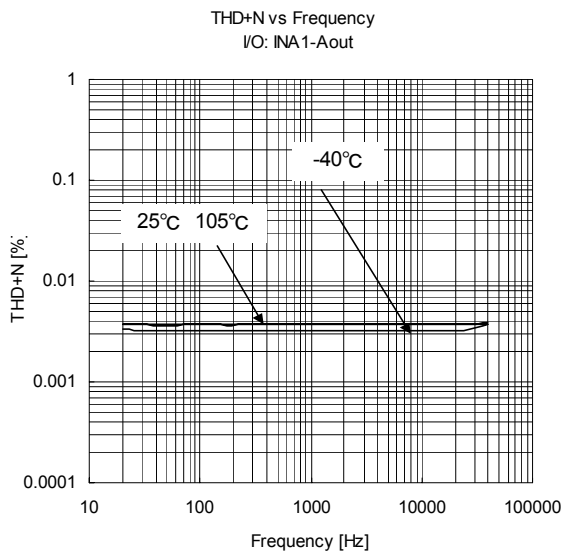
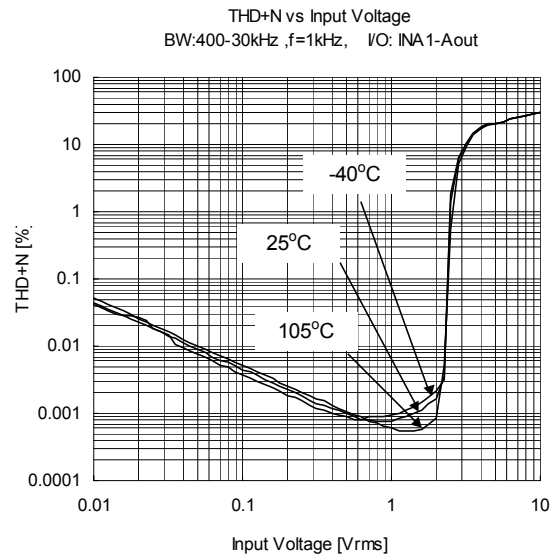
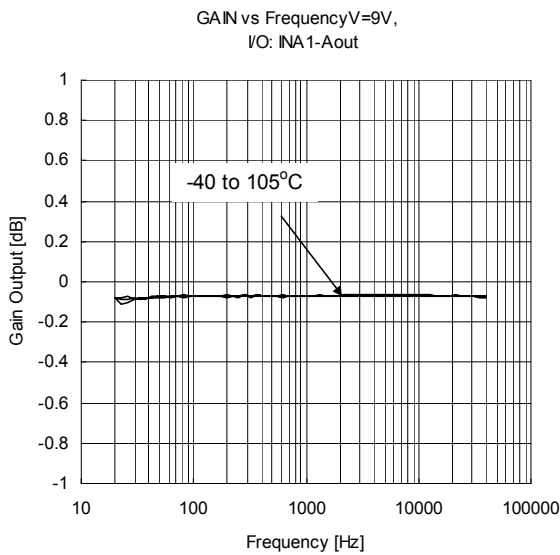
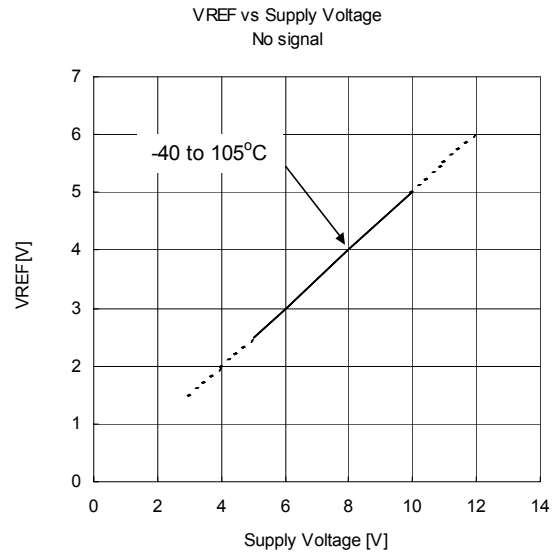
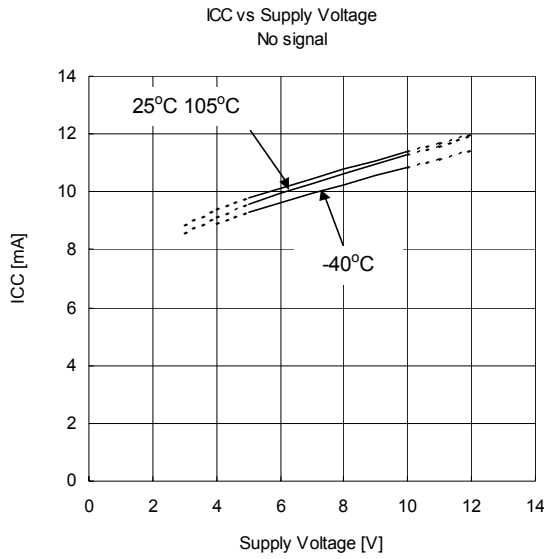


Application note:

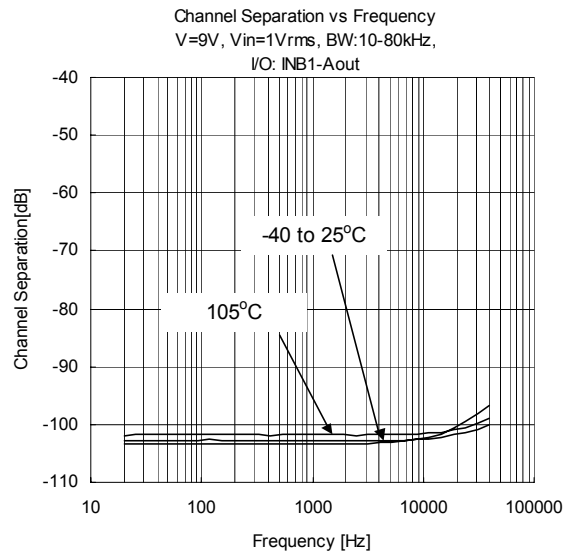
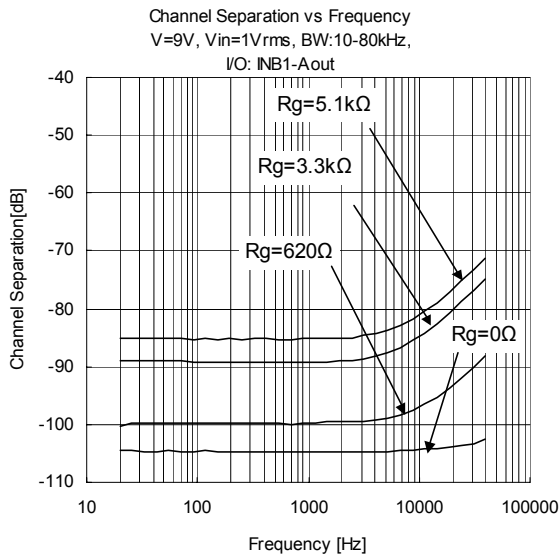
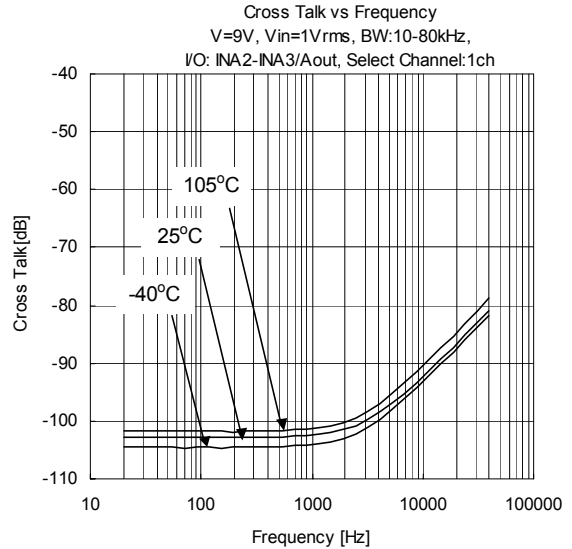
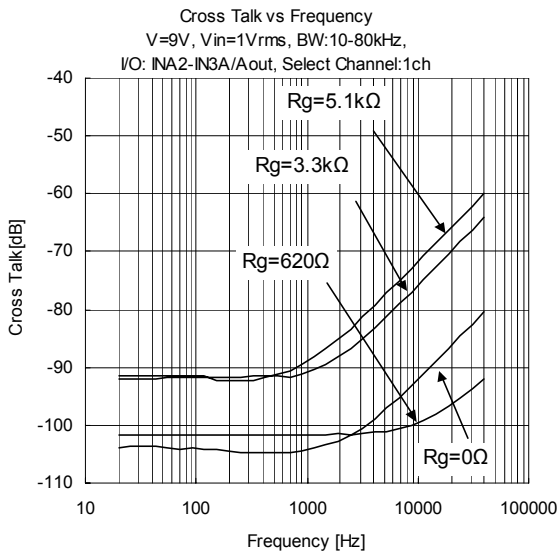
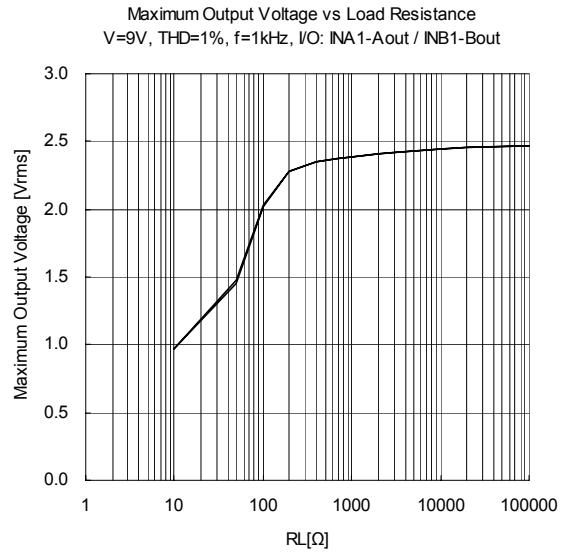
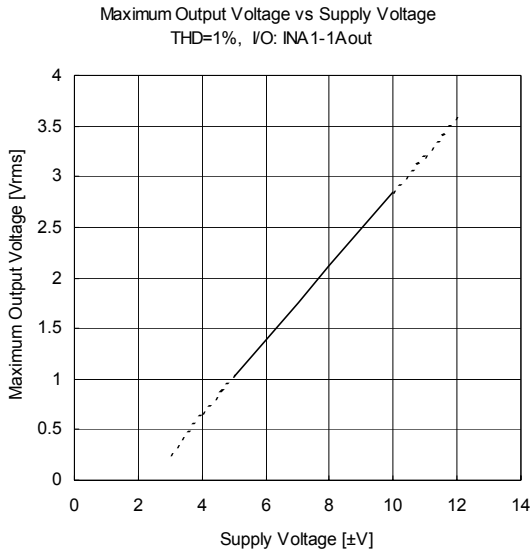
Resistor(100k) and capacitor(1µF) connected to CNT1 are added to reduce pop-noise.

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.

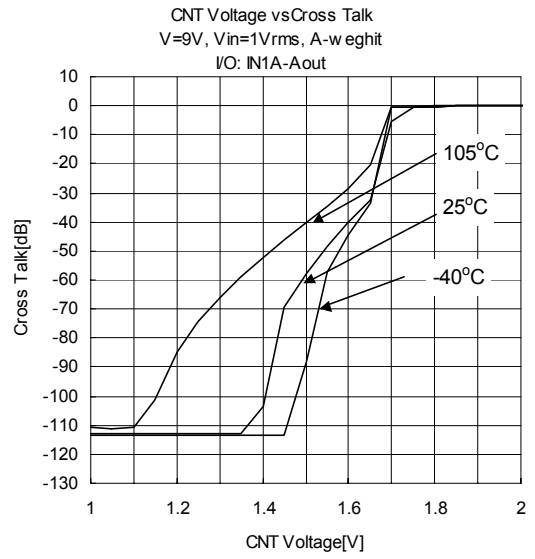
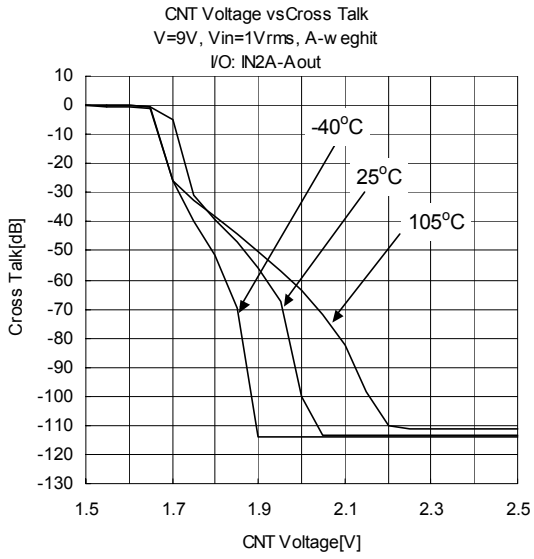
TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



[CAUTION]

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