

## LOW VOLTAGE GAIN ADJUST SINGLE ISOLATION AMPLIFIER WITH LPF

### ■ GENERAL DESCRIPTION

The NJM41035 is a gain adjustable low voltage isolation amplifier with LPF. It can remove the common mode noise. It is suitable for the video interface of car AV system.

### ■ PACKAGE OUTLINE

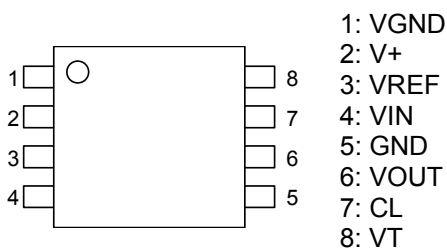


NJM41035RB1

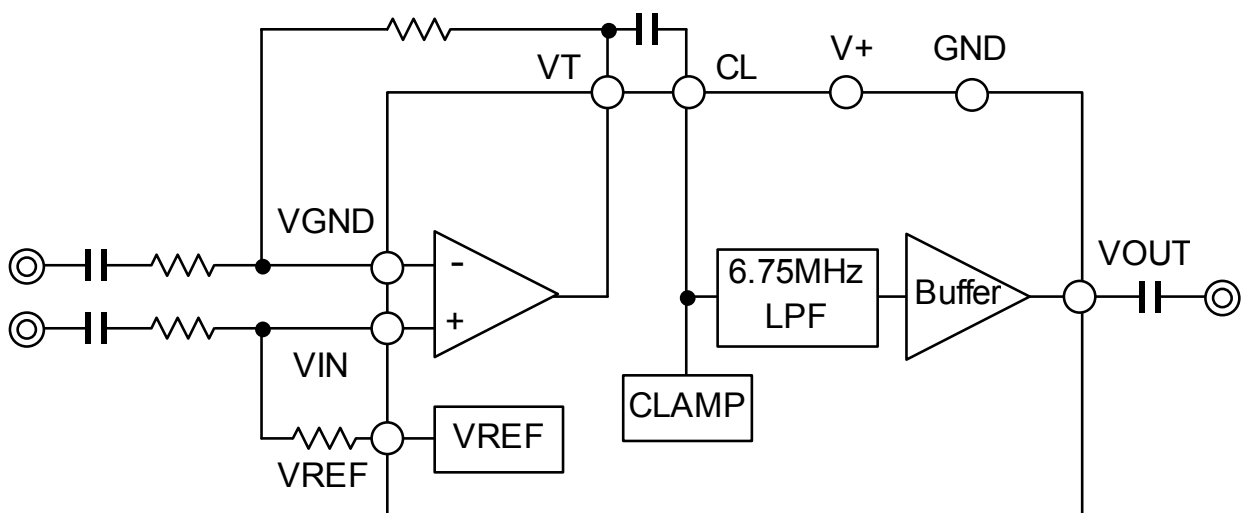
### ■ FEATURES

- Operating Voltage 2.7 to 9.5V
  - Common Mode Noise Rejection Ratio -55dBtyp.
  - Voltage Gain Adjustable
  - Internal LPF 0dB typ. at 6.75MHz  
-40dB typ. at 27MHz
  - Bipolar Technology
  - Package TVSP8
- \* NJM41035RB1T: Wide operating temperature range type (-40 to +105°C)

### ■ PIN CONFIGURATION



### ■ BLOCK DIAGRAM



# NJM41035

## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETERS	SYMBOL	RATINGS	UNIT
Supply Voltage	V+	13.0	V
Power Dissipation	P <sub>D</sub>	580 (Note1)	mW
Operating Temperature Range	Topr	-40 to +85 (Note2)	°C
Storage Temperature Range	Tstg	-40 to +150	°C

(Note 1) At on a board of EIA/JEDEC specification. (114.3 x 76.2 x 1.6mm 2 layers, FR-4)

(Note 2) It has wide operating temperature range product. (-40 to +105°C)

## ■ RECOMMENDED OPERATING CONDITION (Ta= 25 °C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	Vopr		+2.7	-	+9.5	V

## ■ ELECTRICAL CHARACTERISTICS (V<sup>+</sup>=5.0V, Ta=25°C, RL=2kΩ)

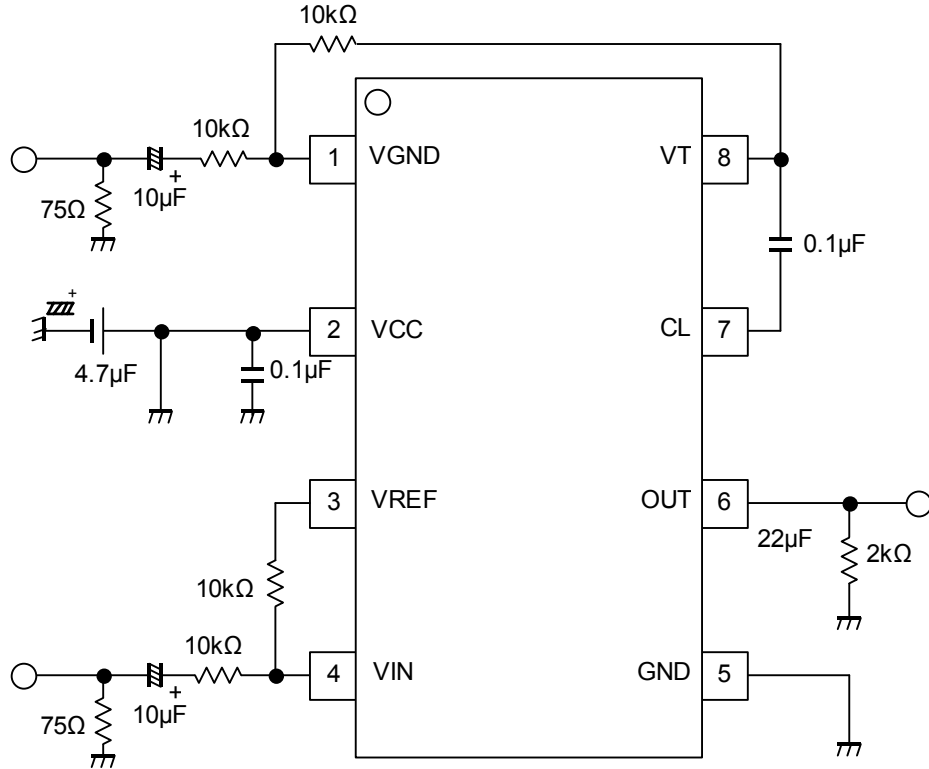
PARAMETR	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I <sub>CC</sub>	No Signal	-	15	20	mA
Maximum Output Voltage Level	Vom	Vin=100kHz, Sin-Signal, THD=1%,	2.0	2.2	-	Vp-p
Voltage Gain 1	Gv1	Vin=1MHz, 1.0Vp-p, Sin-Signal	-0.5	0	0.5	dB
Low Pass Filter Characteristic 1	Gf6.75M	Vin=6.75MHz/1MHz, 1.0Vpp sin-signal	-1.0	0	+1.0	dB
Low Pass Filter Characteristic 2	Gf27M	Vin=27MHz/1MHz, 1.0Vpp sin-signal	-	-40	-24	dB
Common Mode Noise Rejection Ratio	CMR	Vin=20KHz, Vin=1Vpp	-	-55	-	dB
Differential Gain	DG	Vin=1.0Vp-p, 10step Video Signal	-	0.5	-	%
Differential Phase	DP	Vin=1.0Vp-p, 10step Video Signal	-	0.5	-	deg

## ■ TERMINAL FUNCTION (V+ = 5.0V)

PIN No.	PIN NAME	FUNCTION	EQUIVALENT CIRCUIT	DC VOLTAGE
1 4	VGND VIN	GND input Video input		2.5V
2	V+	Power supply		-
3	VREF	Reference voltage		2.5V
5	GND	GND		-
6	OUT	Video out		1.4V
7	CL	Isolation input		2.2V
8	VT	Isolation output		2.5V

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## TEST CIRCUIT



**[CAUTION]**

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