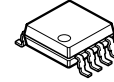


## LOW VOLTAGE GAIN ADJUST SINGLE ISOLATION AMPLIFIER WITH LPF

### ■ 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 video interface of car AV system.

### ■ PACKAGE OUTLINE



**NJM41035RB1**  
( MSOP8 (TVSP8) )

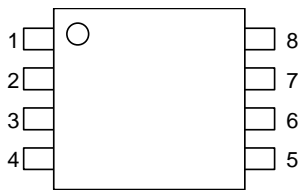
### ■ FEATURES

- 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                      MSOP8 (TVSP8)\*

\*MEET JEDEC MO-187-DA / THIN TYPE

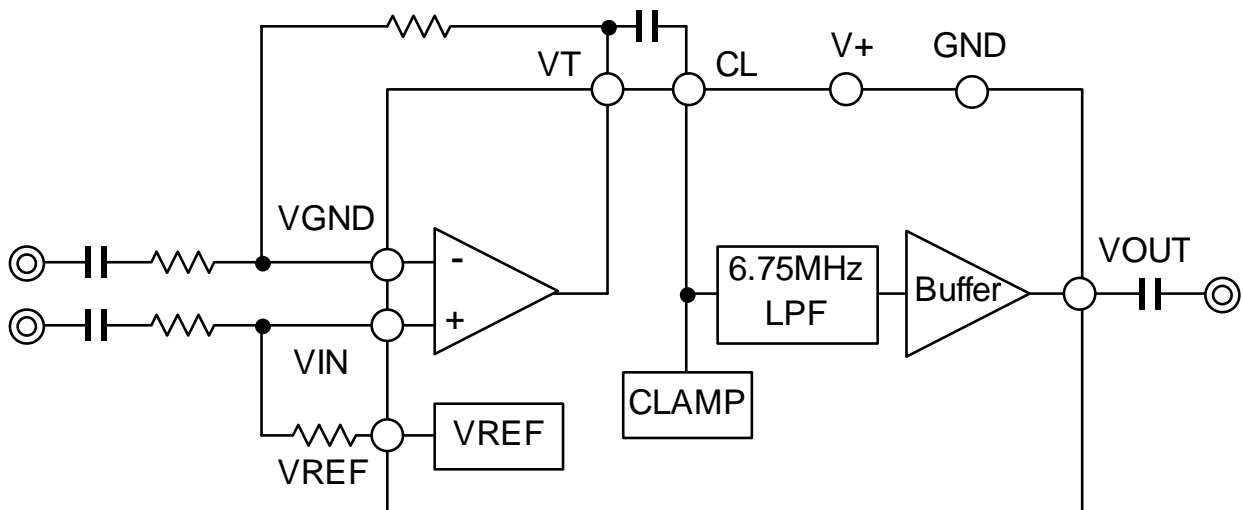
\*\* NJM41035RB1T: Wide operating temperature range type (-40 to +105°C)

### ■ PIN CONFIGURATION



- 1: VGND
- 2: V+
- 3: VREF
- 4: VIN
- 5: GND
- 6: VOUT
- 7: CL
- 8: VT

### ■ 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)

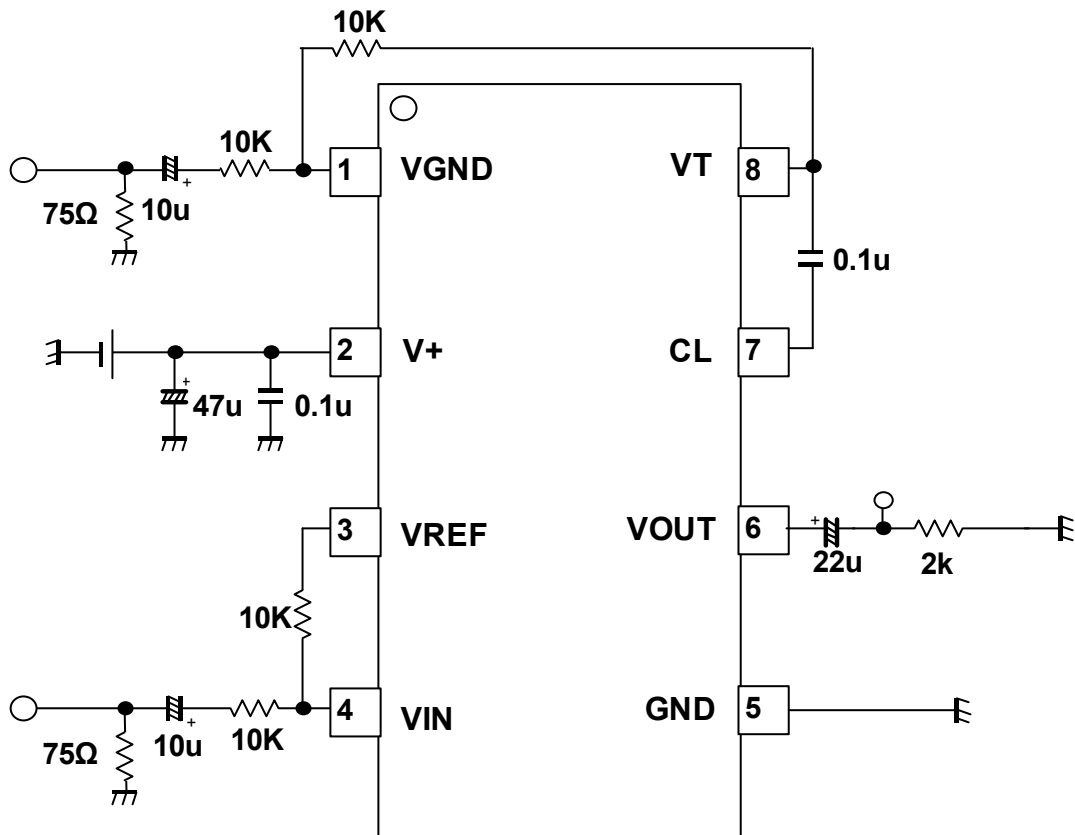
PARAMETR	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I <sub>CC</sub>	No Signal	-	15	20	mA
Maximum Output Voltage Level	Vom	Vin=100kHz, Sin-Signal, THD=1%,	2.0	2.2	-	Vp-p
Voltage Gain 1	Gv1	Vin=1MHz, 1.0Vp-p, Sin-Signal	-0.5	0	0.5	dB
Low Pass Filter Characteristic 1	Gf6.75M	Vin=6.75MHz/1MHz, 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)**

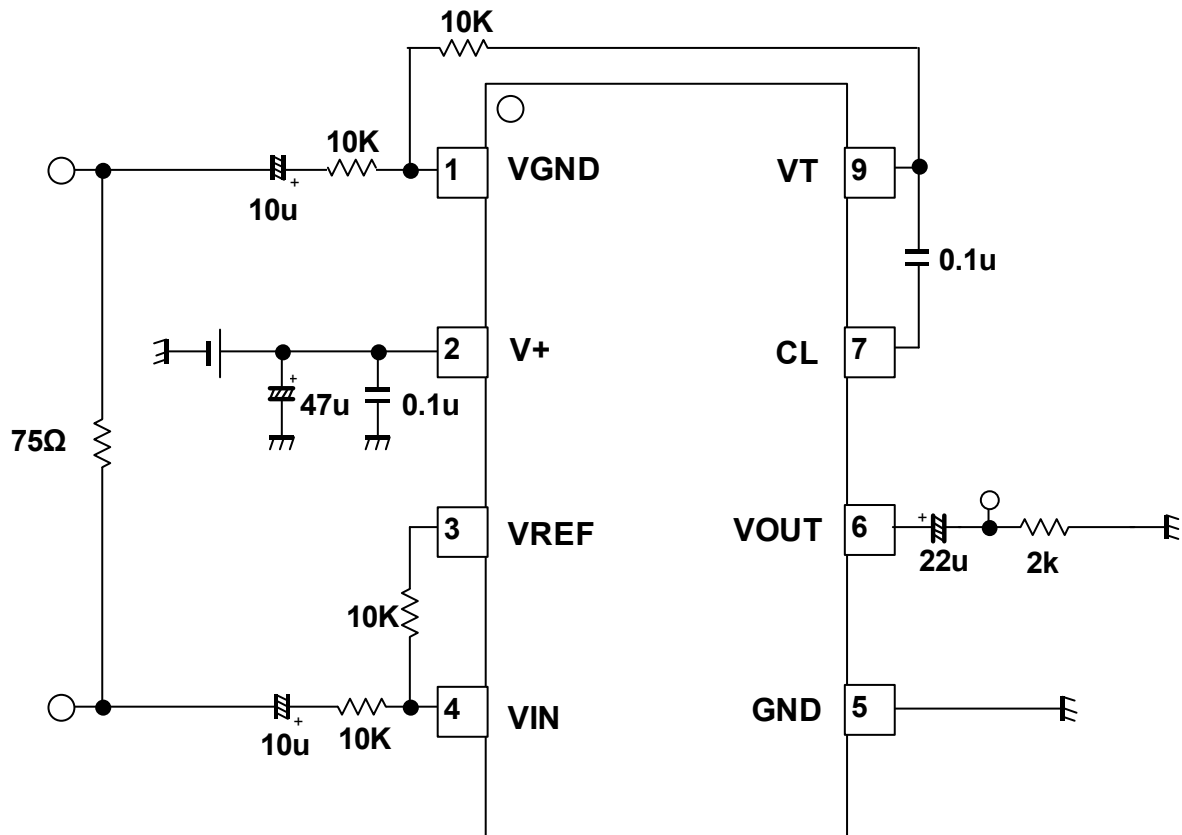
PIN No.	PIN NAME	FUNCTION	EQUIVALENT CIRCUIT	DC VOLTAGE
1 4	VGND VIN	GND input Video input		2.5V
2	V+	Power supply		-
3	VREF	Reference voltage		2.5V
5	GND	GND		-
6	OUT	Video out		1.4V
7	CL	Isolation input		2.2V
8	VT	Isolation output		2.5V

# NJM41035

## ■ TEST CIRCUIT



## APPLICATION CIRCUIT



**[CAUTION]**  
 The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.