

## QUAD BUFFER for REFERENCE CIRCUIT IC

### ■GENERAL DESCRIPTION

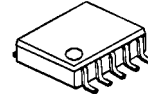
The **NJM2342** is a 4 channel buffer IC packaged in the small TVSP 10.

The **NJM2342** provides buffered voltage from the external input voltage.

The sink-source output configuration effectively absorbs transient response of load changes.

Therefore, it is suitable for reference voltage generation for Video DAC, LCD bias voltage and other applications where transient response becomes an issue.

### ■PACKAGE OUTLINE

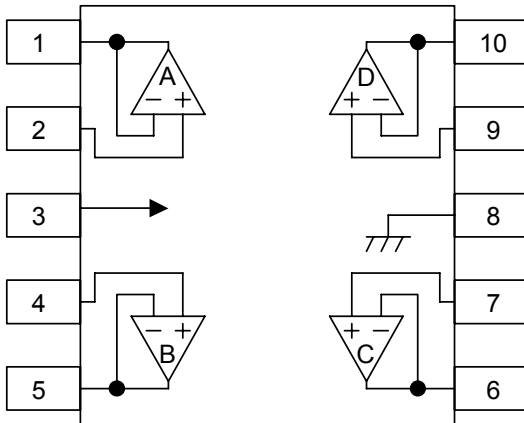


**NJM2342RB2**

### ■FEATURES

- Quad Buffer internal TVSP10
- Sink/Source Output
- Offset Voltage  $V_{io}=1\text{mV typ.}$
- Operating Voltage 3V to 14V
- Quiescent Current 1mA typ.
- Bipolar Technology
- Package Outline TVSP10

### ■PIN CONFIGURATION



#### PIN FUNCTION

- 1. A OUTPUT
- 2. A +INPUT
- 3.  $V^+$
- 4. B +INPUT
- 5. B OUTPUT
- 6. C OUTPUT
- 7. C +INPUT
- 8. GND
- 9. D +INPUT
- 10. D OUTPUT

**NJM2342RB2**

# NJM2342

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

PARAMETER	SYMBOL	MAXIMUM RATINGS	UNIT
Supply Voltage	V <sup>+</sup>	15	V
Common Mode Input Voltage	V <sub>IC</sub>	-0.3 ~ +14 (note1)	V
Power Dissipation	P <sub>D</sub>	320	mW
Operating Temperature Range	T <sub>OPR</sub>	-40 ~ +85	°C
Storage Temperature Range	T <sub>STG</sub>	-50 ~ +125	°C

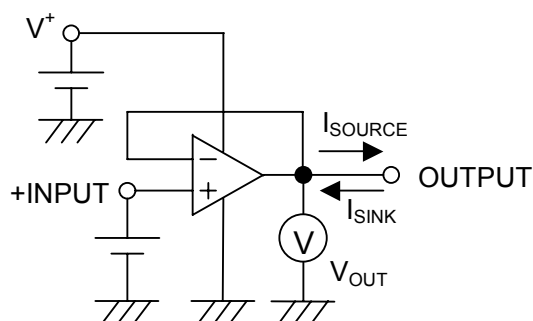
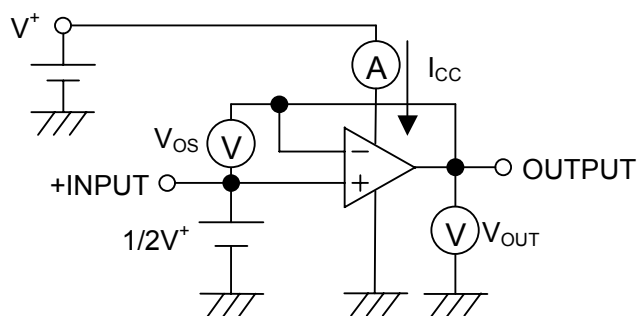
(note1) When the supply voltage is less than 14V,  
the absolute maximum input voltage is equal to the supply voltage.

## ■ELECTRICAL CHARACTERISTICS (V<sup>+</sup>=5V, Ta=25°C)

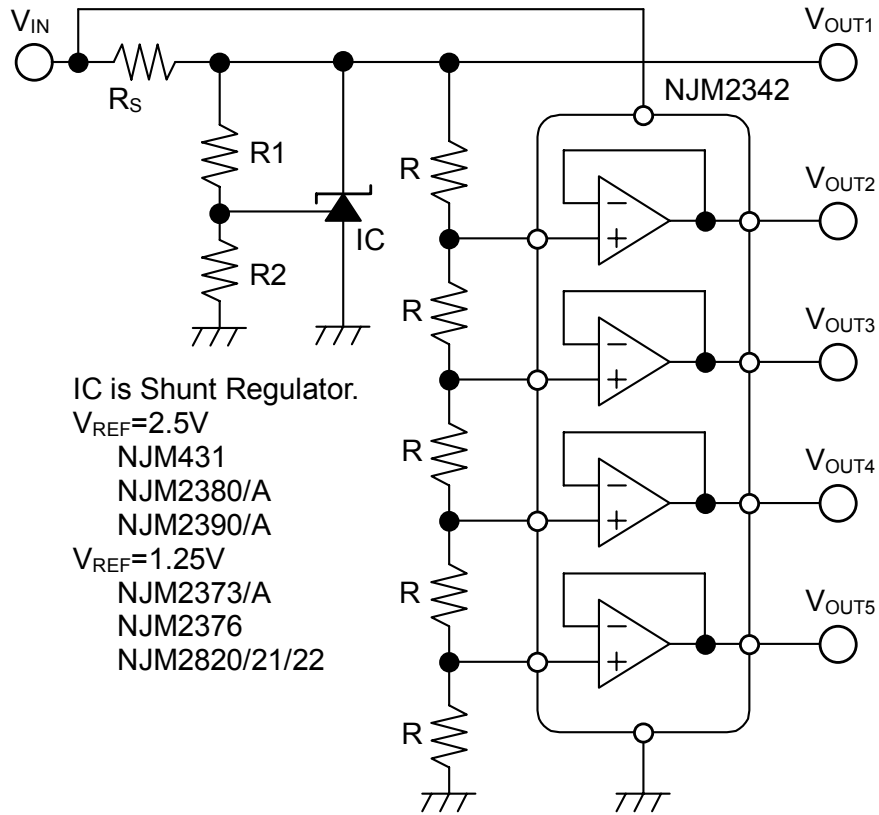
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V <sup>+</sup>	(note2)	3	–	14	V
Output Offset Voltage	V <sub>OS</sub>		–	1	5	mV
Input Bias Current	I <sub>B</sub>		–	20	150	nA
Load Regulation 1	ΔV1	V <sub>IN</sub> <sup>+</sup> =2.5V, I <sub>SOURCE</sub> =0 to 30mA	–	0.2	15	mV
Load Regulation 2	ΔV2	V <sub>IN</sub> <sup>+</sup> =2.5V, I <sub>SINK</sub> =0 to 15mA	–	0.5	15	mV
Input Common Mode Voltage Range	V <sub>ICM</sub>	I <sub>SOURCE</sub> =, I <sub>SINK</sub> =12mA	1 ~ 3.2	–	–	V
Common Mode Rejection Ratio	CMR	V <sub>IN</sub> <sup>+</sup> =1 to 3.2V	–	85	–	dB
Supply Voltage Rejection Ratio	SVR	V <sup>+</sup> =3V to 14V	–	100	–	dB
Operating Current	I <sub>CC</sub>	R <sub>L</sub> =∞	–	1.0	2.0	mA
Slew Rate	SR	R <sub>L</sub> =2kΩ, f=1kHz	–	0.7	–	V/us

(note2) Input common mode voltage range case to when operating low voltage.

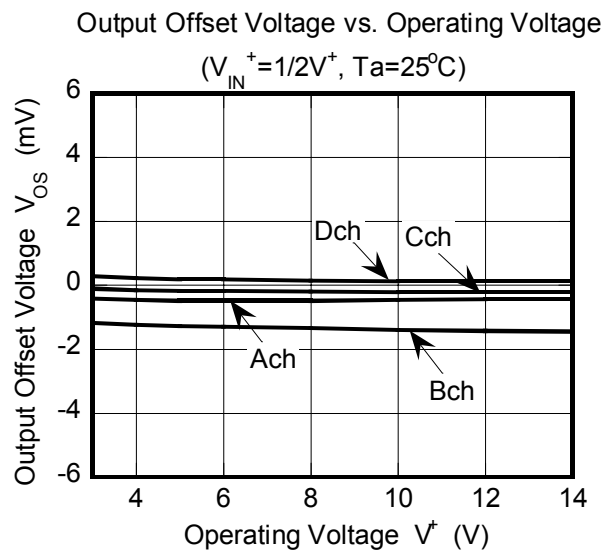
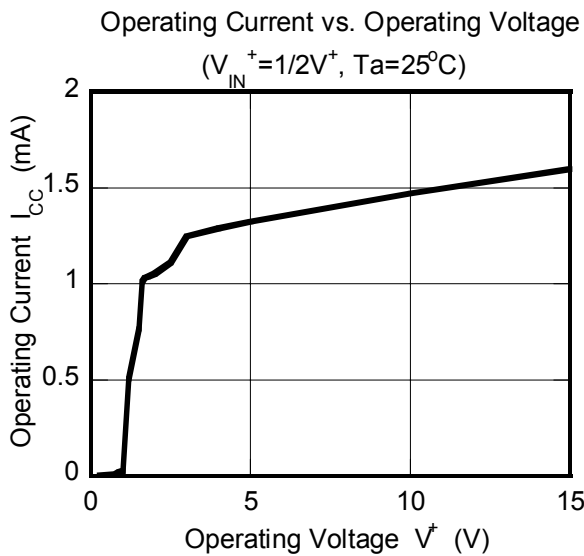
## ■TEST CIRCUITS



## ■ TYPICAL APPLICATIONS

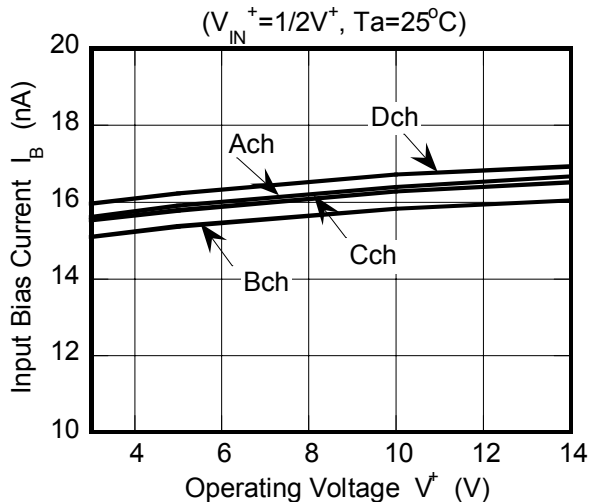


## ■ TYPICAL CHARACTERISTICS

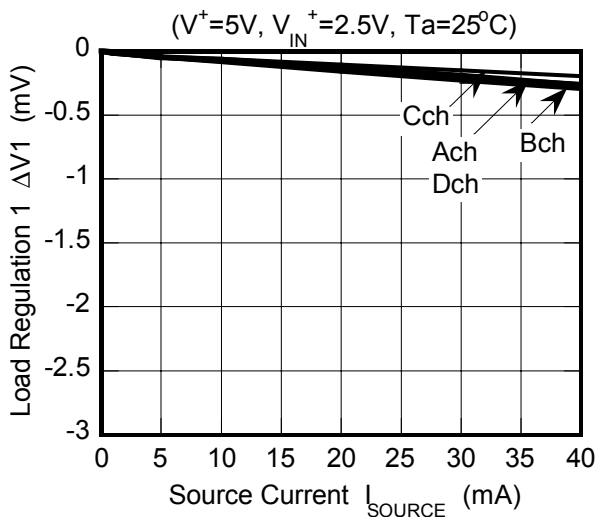


## ■ TYPICAL CHARACTERISTICS

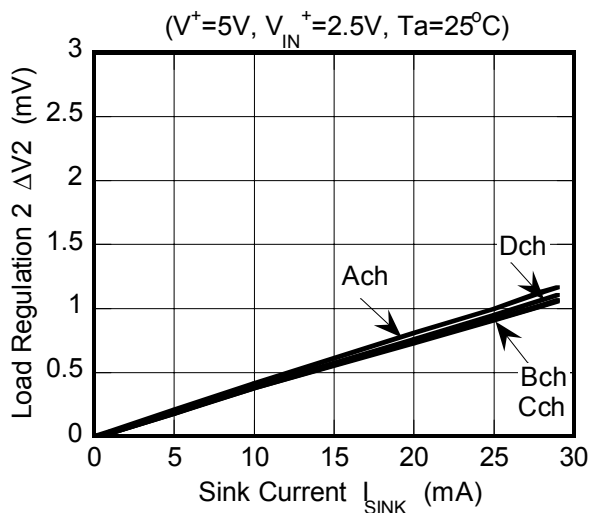
Input Bias Current vs. Operating Voltage



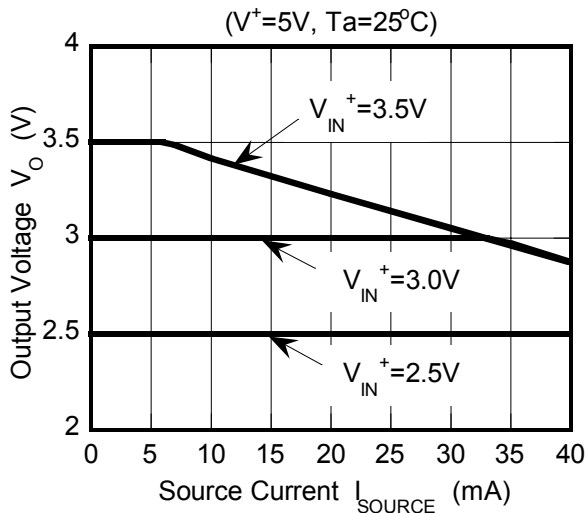
Load Regulation 1 vs. Source Current



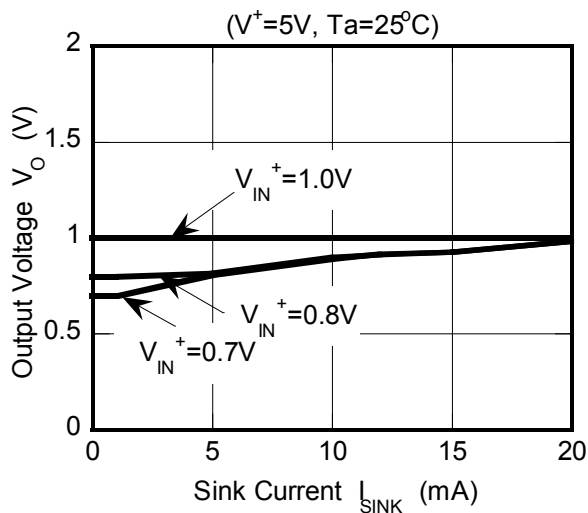
Load Regulation 2 vs. Sink Current



Output Voltage vs. Source Current



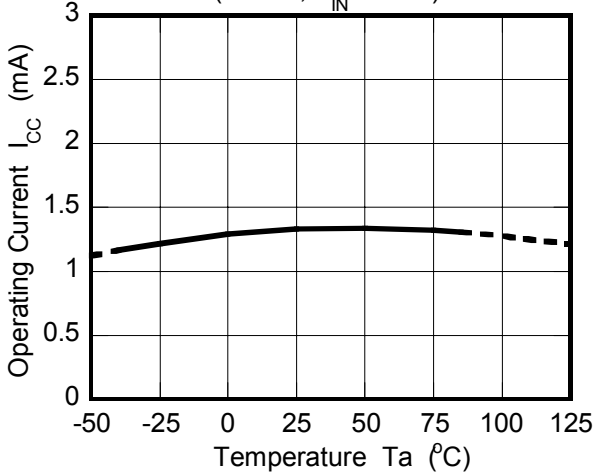
Output Voltage vs. Sink Current



## ■ TYPICAL CHARACTERISTICS

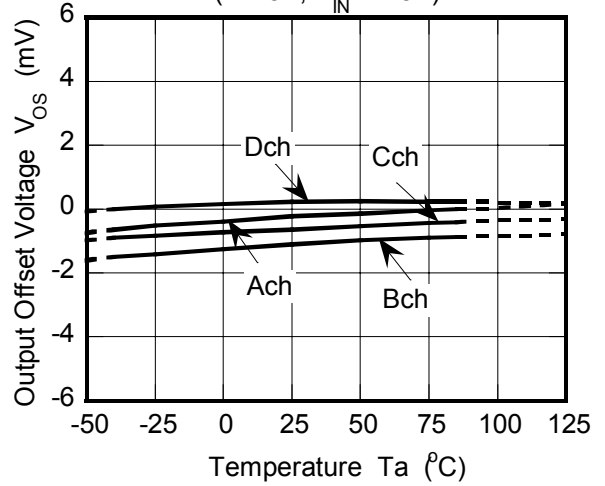
Operating Current vs. Temperature

( $V^+ = 5V, V_{IN}^+ = 2.5V$ )



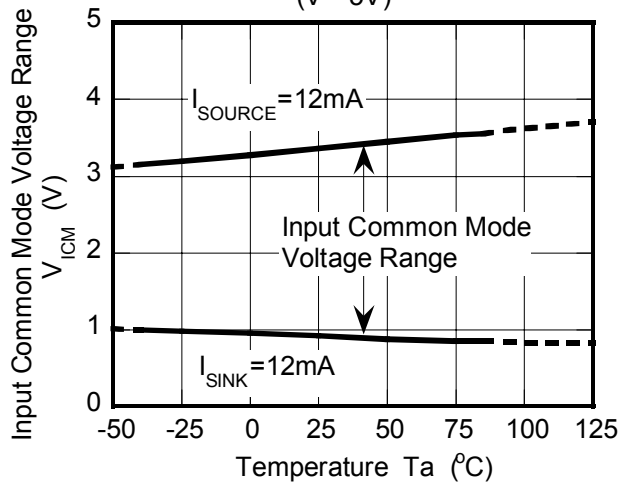
Output Offset Voltage vs. Temperature

( $V^+ = 5V, V_{IN}^+ = 2.5V$ )



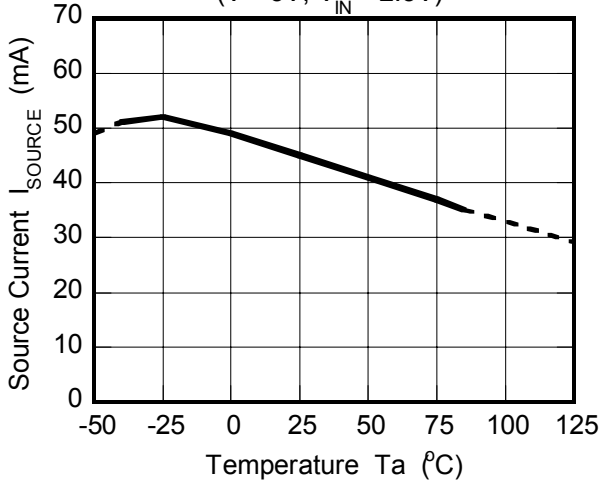
Input Common Mode Voltage Range vs. Temperature

( $V^+ = 5V$ )



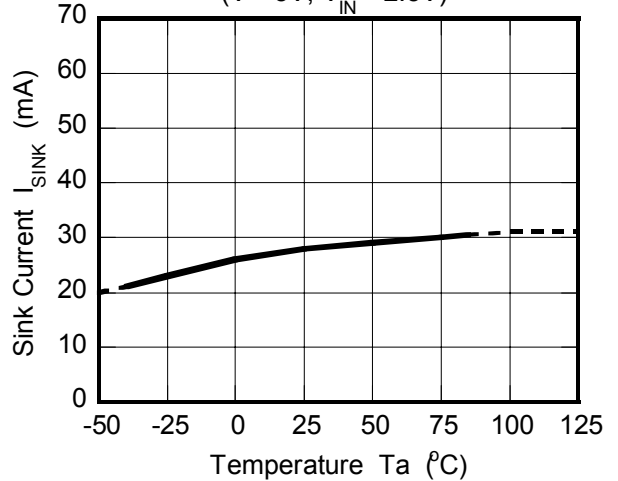
Source Current vs. Temperature

( $V^+ = 5V, V_{IN}^+ = 2.5V$ )



Sink Current vs. Temperature

( $V^+ = 5V, V_{IN}^+ = 2.5V$ )



## MEMO

**[CAUTION]**

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