

QUAD BUFFER for REFERENCE CIRCUIT IC

■GENERAL DESCRIPTION

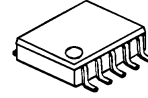
The **NJM2342** is a 4 channel buffer IC packaged in the small TVSP 10.

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

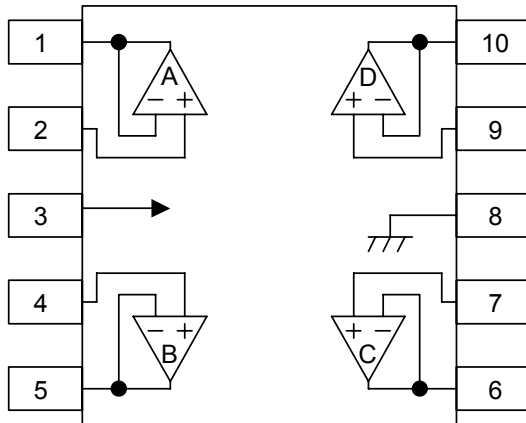


NJM2342RB2

■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 ⁺ | 15 | V |
| Common Mode Input Voltage | V _{IC} | -0.3 ~ +14 (note1) | V |
| Power Dissipation | P _D | 320 | mW |
| Operating Temperature Range | T _{OPR} | -40 ~ +85 | °C |
| Storage Temperature Range | T _{STG} | -50 ~ +125 | °C |

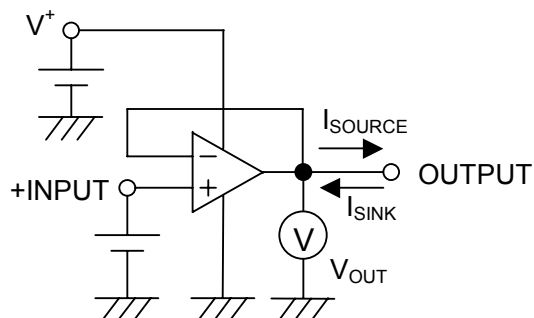
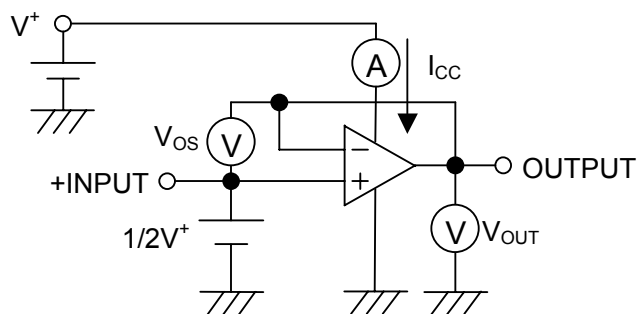
(note1) When the supply voltage is less than 14V,
the absolute maximum input voltage is equal to the supply voltage.

■ELECTRICAL CHARACTERISTICS (V⁺=5V, Ta=25°C)

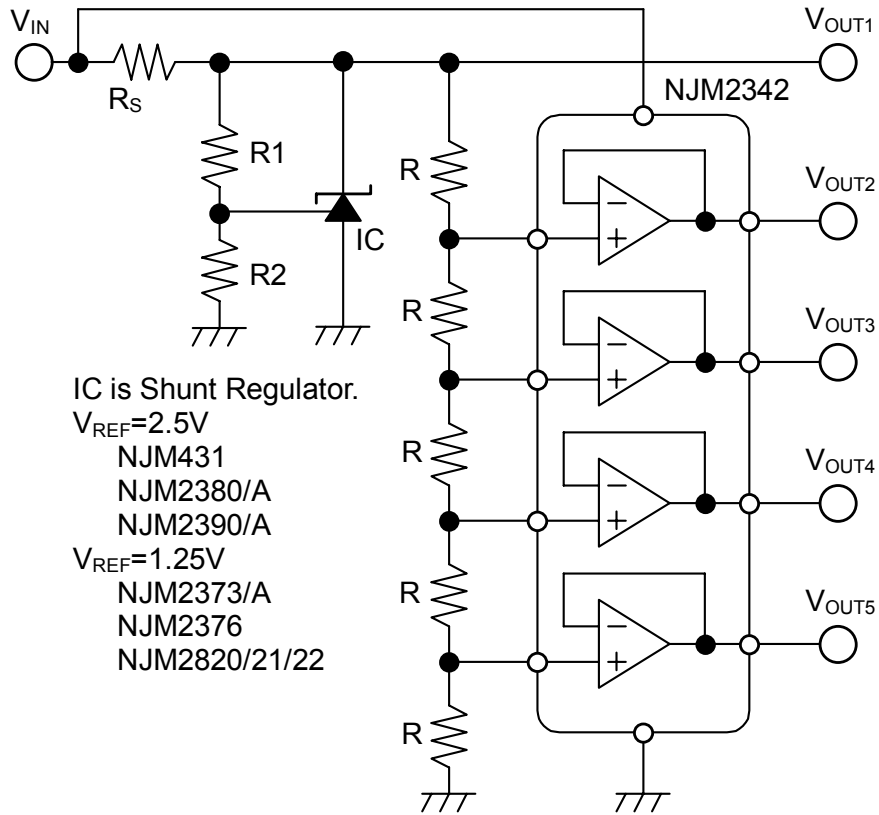
| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---------------------------------|------------------|--|---------|------|------|------|
| Operating Voltage | V ⁺ | (note2) | 3 | – | 14 | V |
| Output Offset Voltage | V _{OS} | | – | 1 | 5 | mV |
| Input Bias Current | I _B | | –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

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

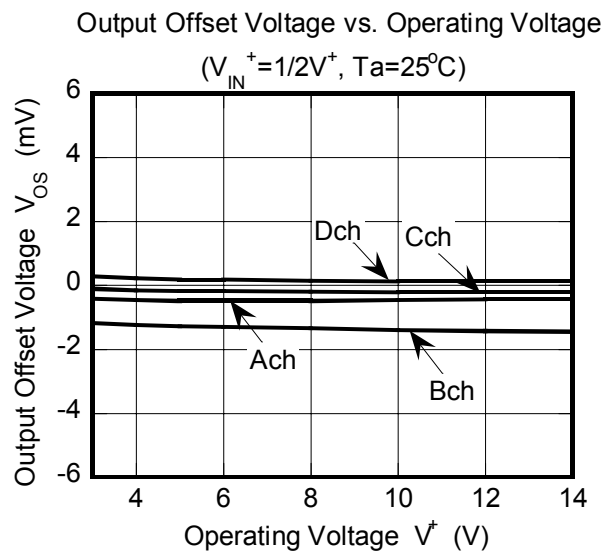
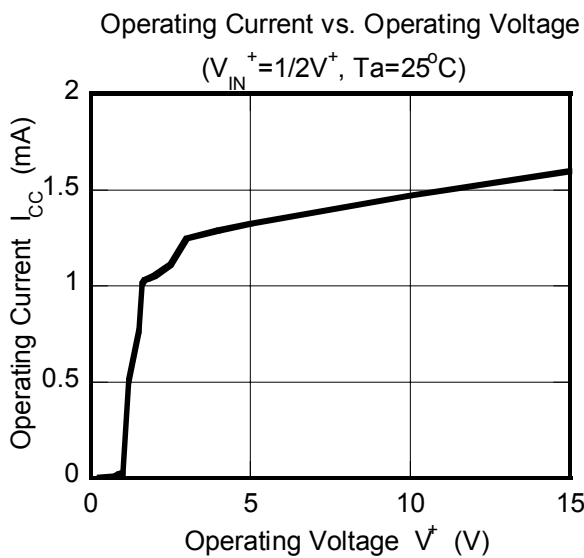
■TEST CIRCUITS



■ TYPICAL APPLICATIONS

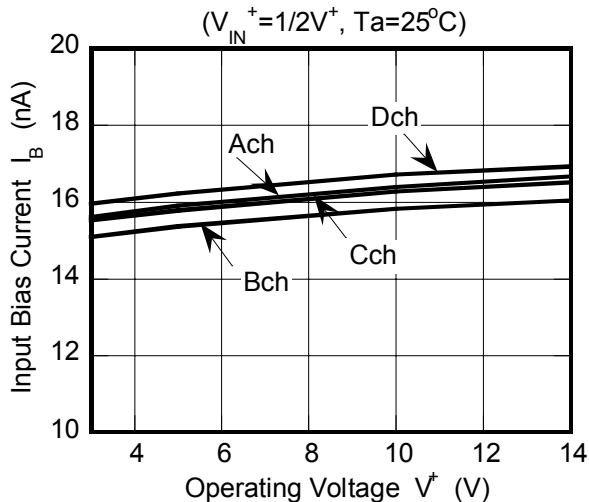


■ TYPICAL CHARACTERISTICS

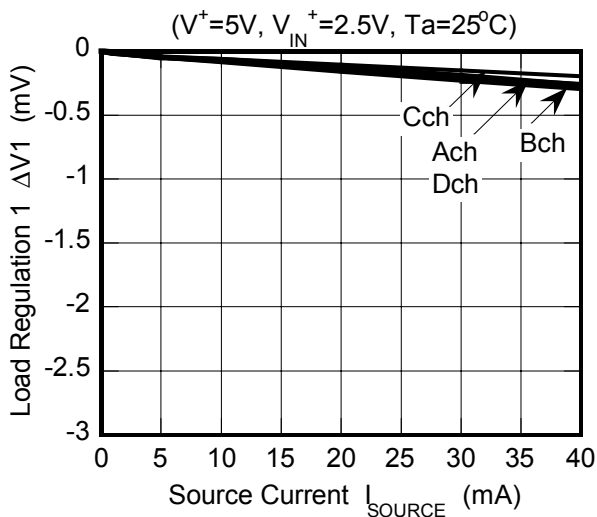


■ TYPICAL CHARACTERISTICS

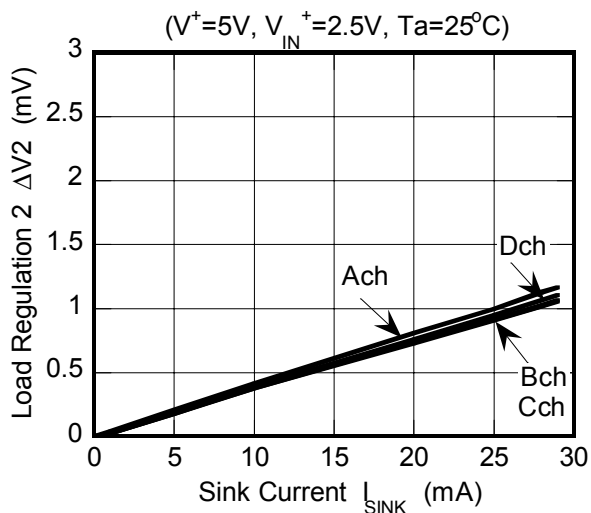
Input Bias Current vs. Operating Voltage



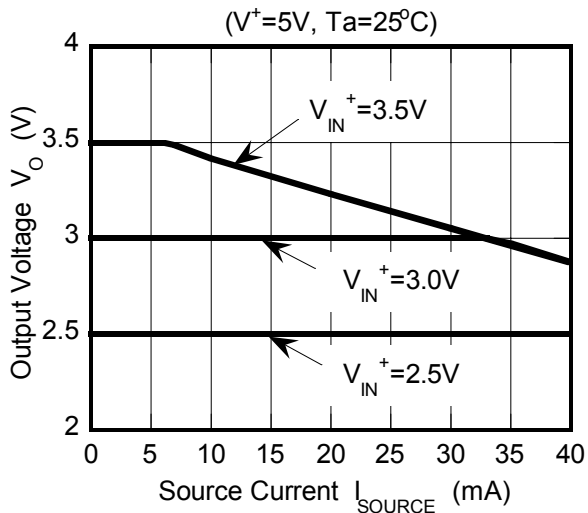
Load Regulation 1 vs. Source Current



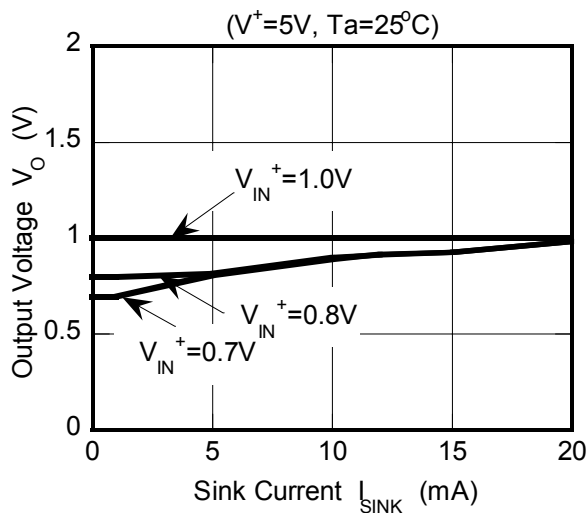
Load Regulation 2 vs. Sink Current



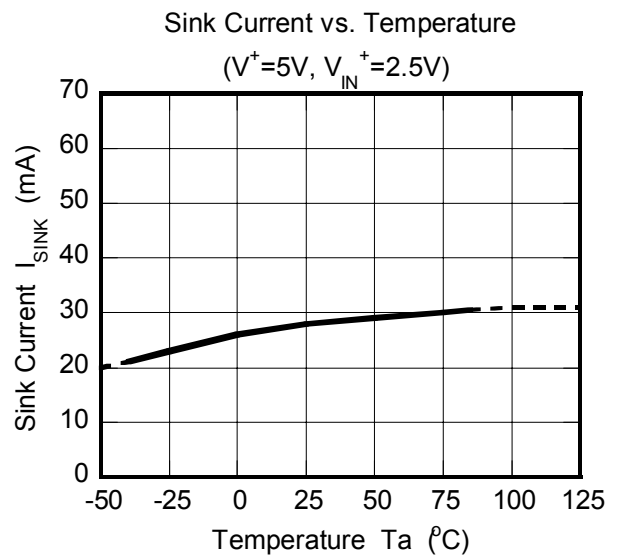
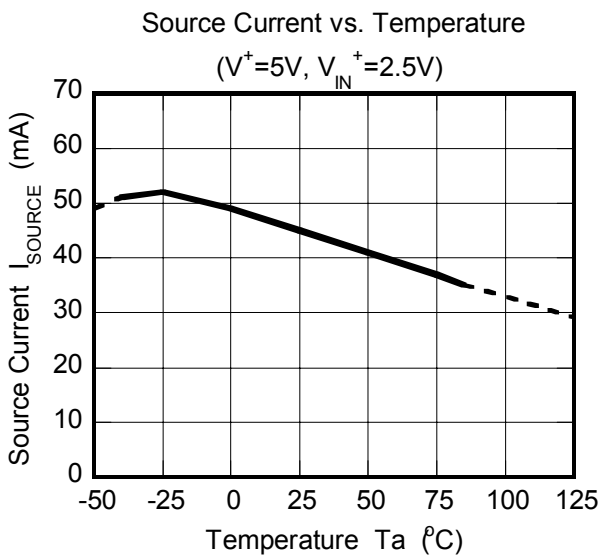
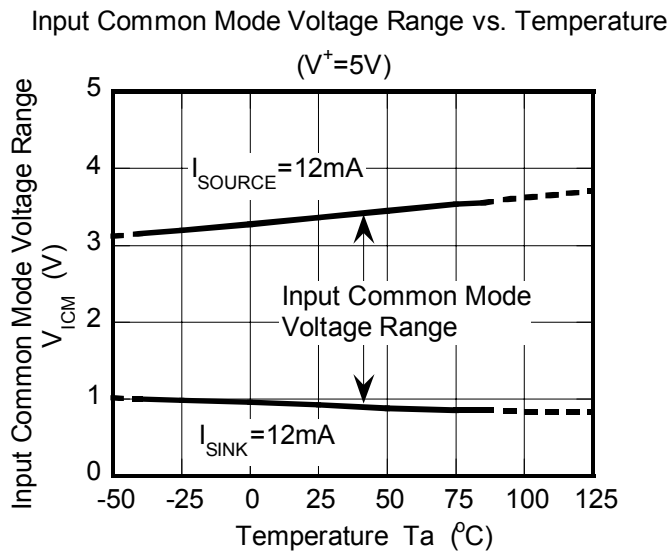
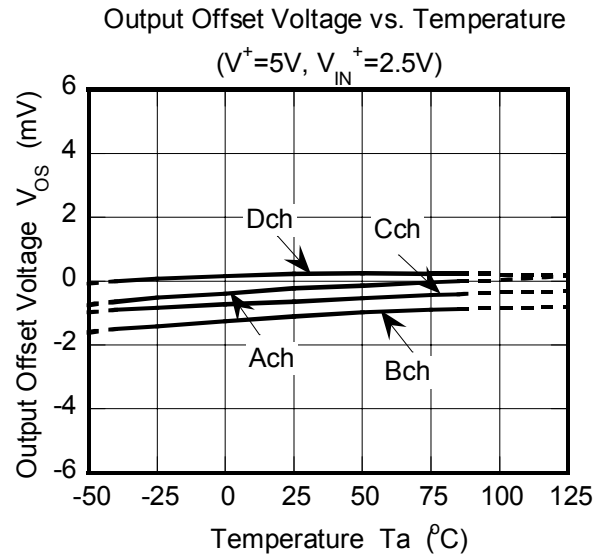
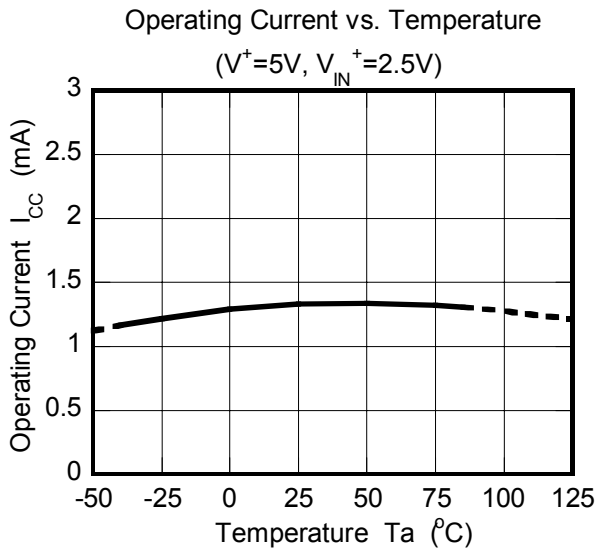
Output Voltage vs. Source Current



Output Voltage vs. Sink Current



■ TYPICAL CHARACTERISTICS



MEMO

[CAUTION]

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