Device Modeling Report

COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER:NJM2741
MANUFACTURER: NEW JAPAN RADIO CO.,LTD

Bee Technologies Inc.

Output Voltage Swing

□ V(Vout)

V_V1
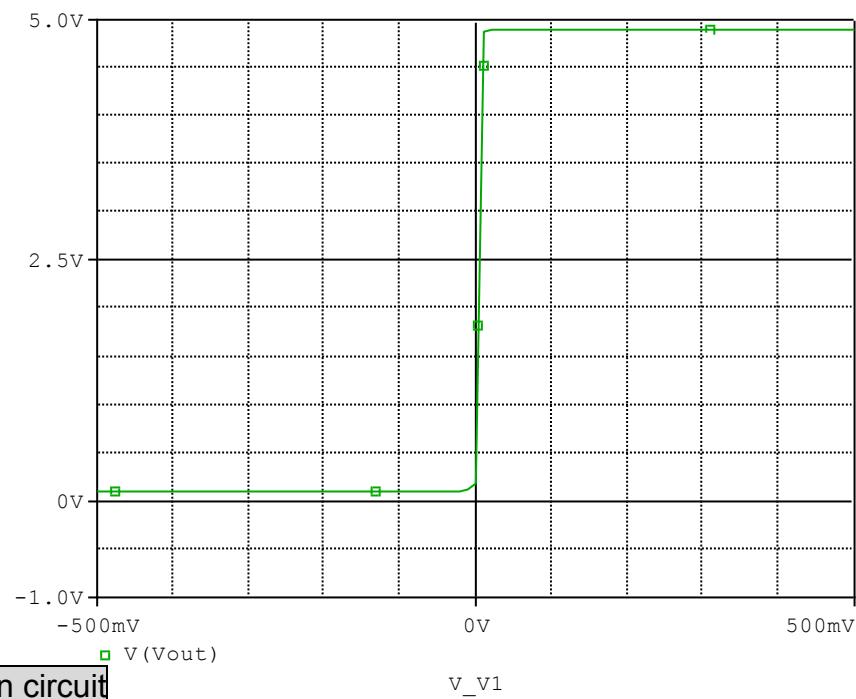
Evaluation circuit
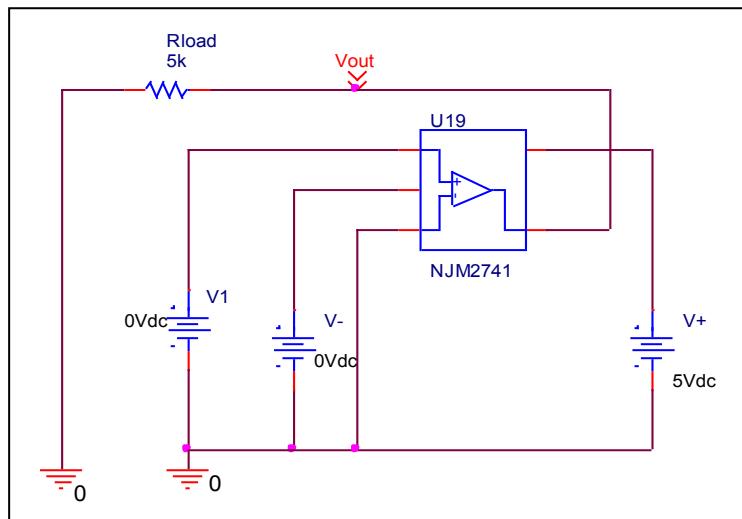
Output Voltage Swing	Data sheet	Simulation	%Error
VoH(V)	4.900	4.900	0.000
VoL(V)	0.100	0.100	0.000

Input Offset Voltage

V(Vout)

V_Vin
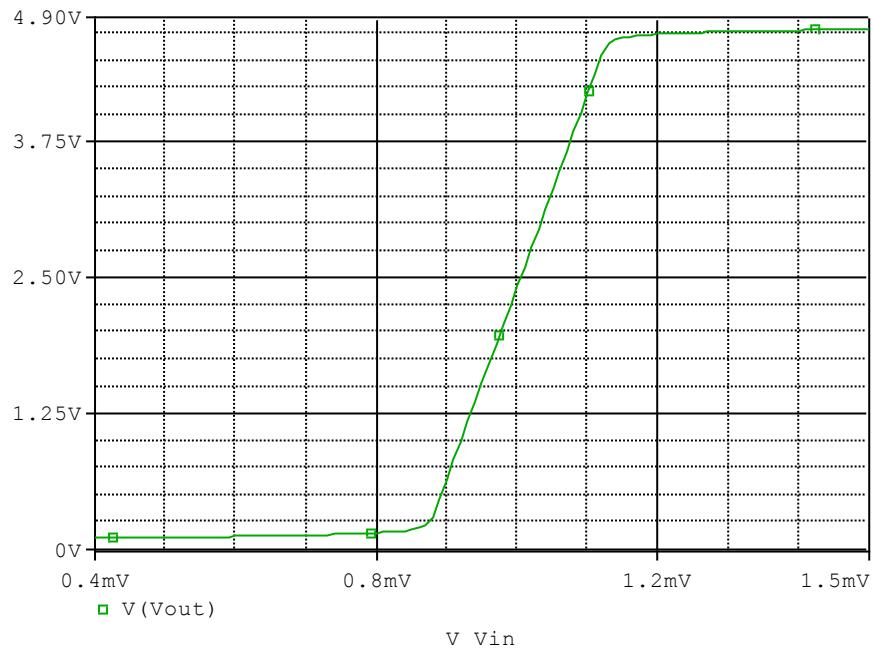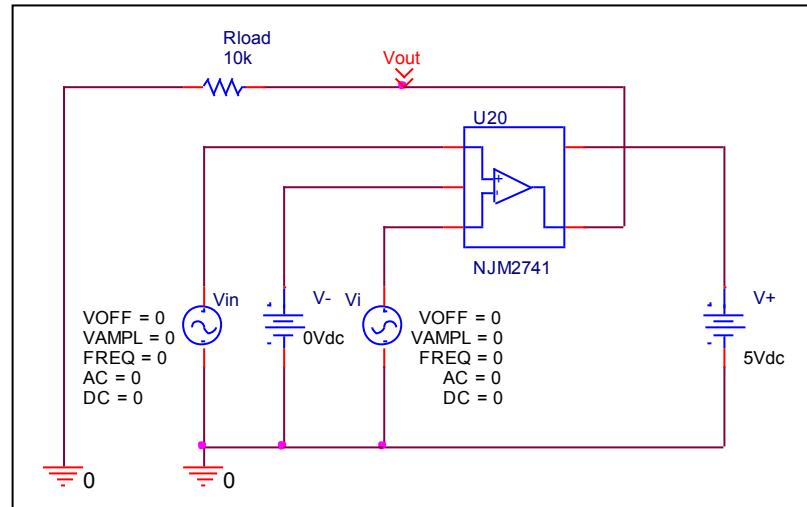
Evaluation circuit

	Measurement		Simulation		Error	
Vos	1.000	mV	1.000	mV	0.000	%

Slew Rate

$\diamond$ V(Vout)

Time
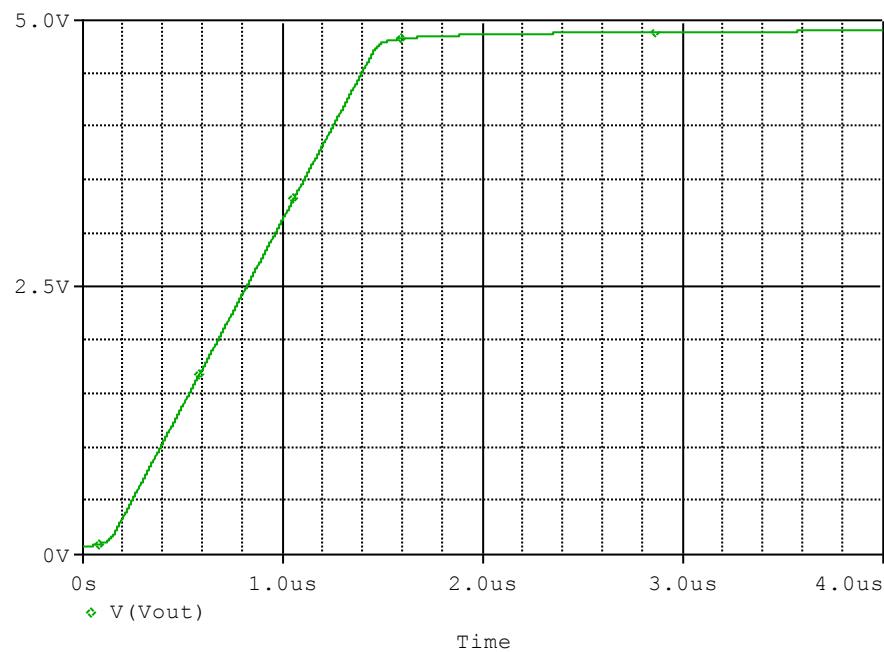
Evaluation circuit
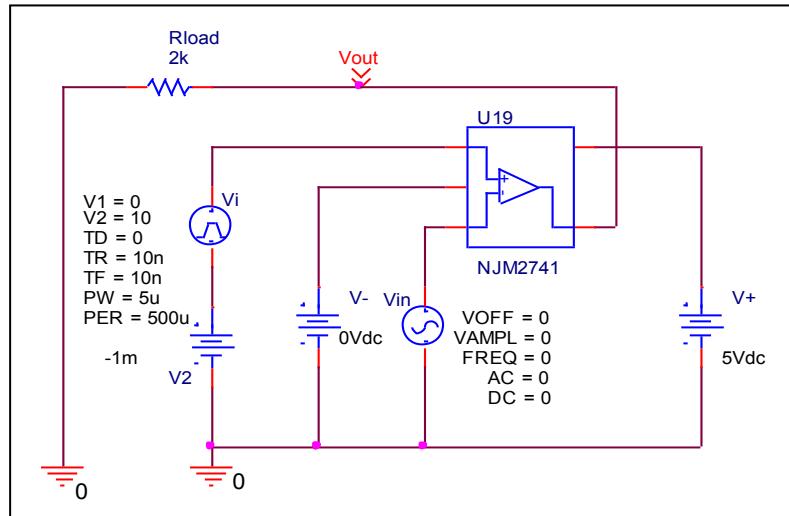
Slew Rate(v/us)	Data sheet	Simulation	%Error
	3.500	3.487	-0.371

Input current

```
104nA                                                                    .
        ┌────┬────┬────┬────┬────┬────┬────┬────┬────┐
        │    ·    ·    ·    ·    │    ·    ·    ·    ·    │
        │    ◇    ·    ◇    ·    │    ·    ◇    ·    ·    │
        ├────┼────┼────┼────┼────┼────┼────┼────┼────┤
102nA   │    ·    ·    ·    ·    │    ·    ·    ·    ·    │
        ├────┼────┼────┼────┼────┼────┼────┼────┼────┤
        │    ·    ·    ·    ·    │    ·    ·    ·    ·    │
100nA   ├────┼────┼────┼────┼────┼────┼────┼────┼────┤
        │    ·    ·    ·    ·    │    ·    ·    ·    ·    │
        │    ·    ·    ·    ·    │    ·    ·    ·    ·    │
        │    □    ·    □    ·    │    ·    □    ·    ·    │
98nA    └────┴────┴────┴────┴────┴────┴────┴────┴────┘
        0s             0.5ms              1.0ms
            □ I(Vi)   ◇ I(Vin)
                          Time
```
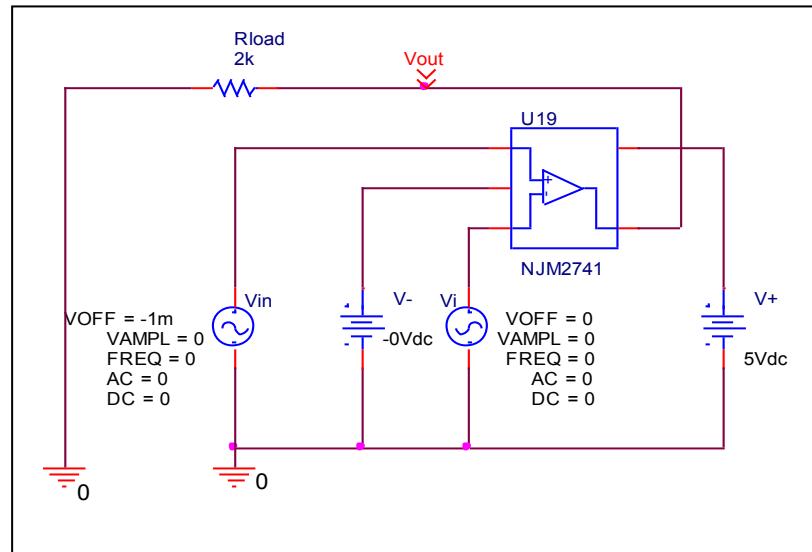
	Data sheet	Simulation	%Error
Ib(nA)	100.000	100.856	0.856
Ibos(nA)	5.000	5.001	0.020

Open Loop Voltage Gain vs. Frequency

Simulation result
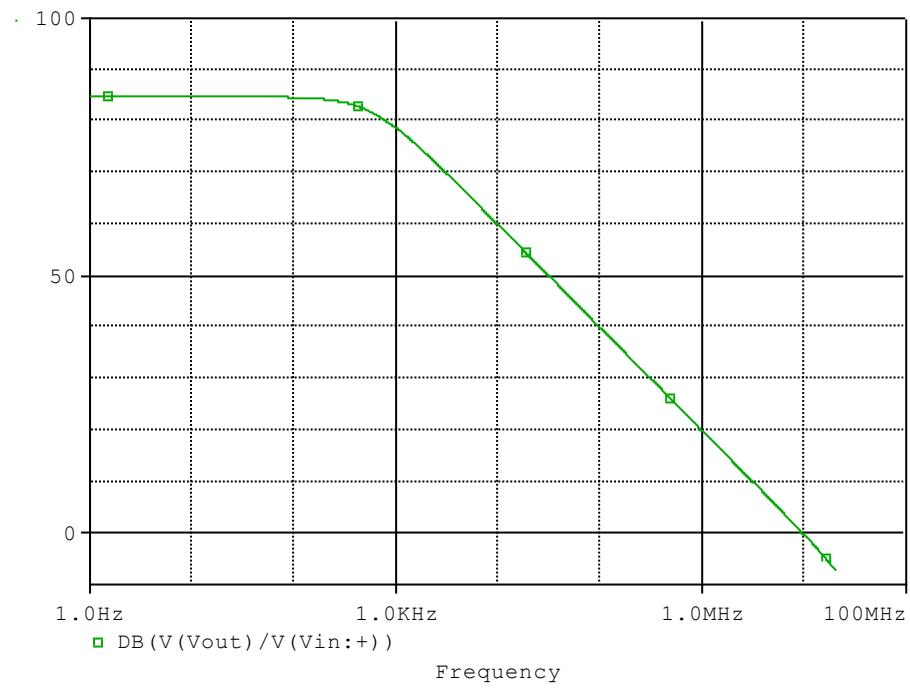
Evaluation circuit
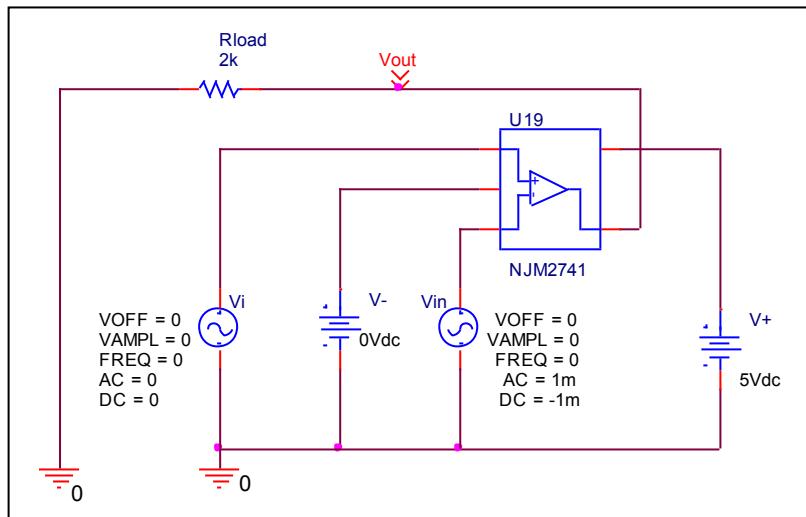
	Data sheet	Simulation	%Error
f-0dB(MHz)	10.000	9.601	-3.990
Av-dc(dB)	85.000	84.748	-0.296

Common-Mode Rejection Voltage gain

Simulation result
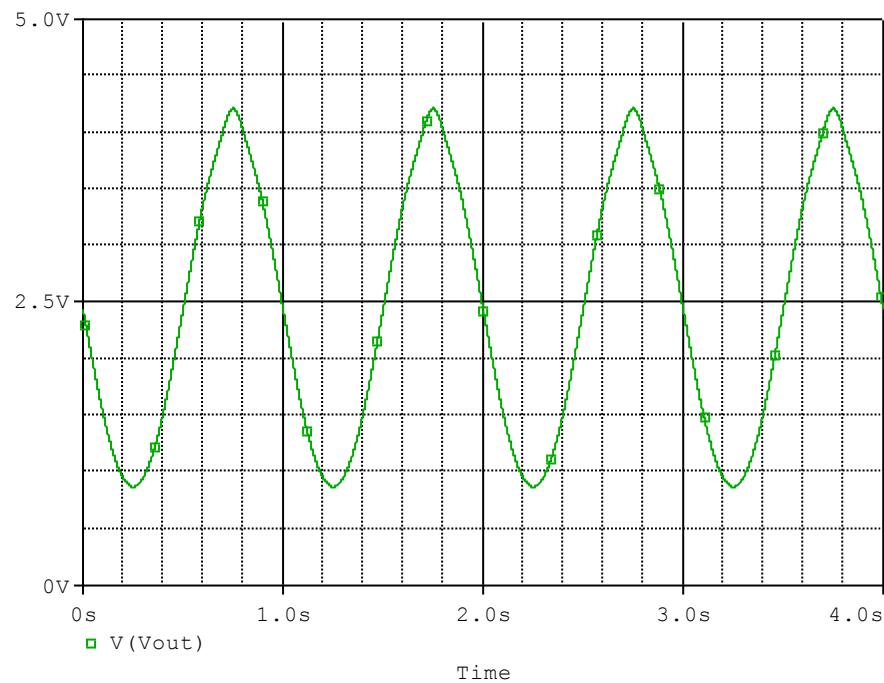
Evaluation circuit
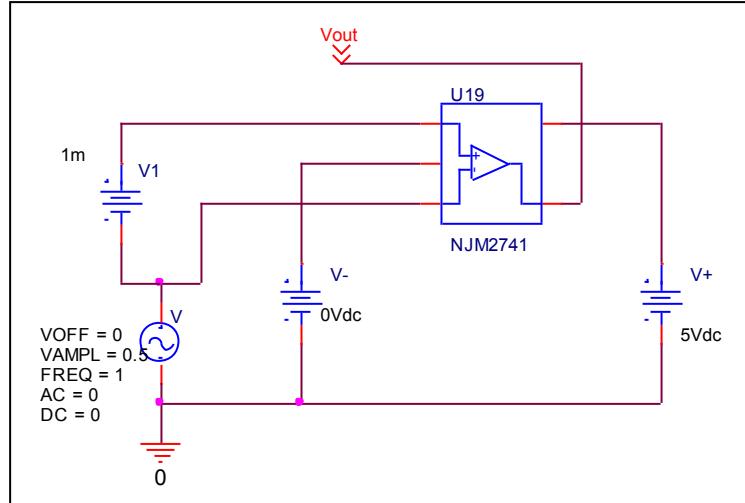
Common Mode Reject Ratio=17274.281/3.342=5168.845

CMRR	Data sheet	Simulation	%Error
	75.000	74.267	-0.977