



### ADJUSTABLE DIVIDED VOLTAGE GENERATOR

#### GENERAL DESCRIPTION

The NJM2366 is an adjustable divided voltage generator for medium and large size LCD panels which are required five bias voltage.

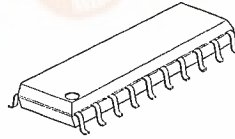
5 divided voltage are generated by internal bleeder resistor and are output through the buffer amplifier.

The minimum voltage ratio is selected from 1/13 to 1/19 of supply voltage.

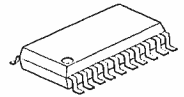
#### FEATURES

- Operating Voltage (-10V ~ -36V)
- Low Operating Current (1.5mA max.)
- Output Current ( $\pm 10\text{mA}$  min.)
- 5 Divided Voltage From Supply Voltage
- Internal an OP-AMP
- Bipolar Technology
- Package Outline SOP20, SSOP20

#### PACKAGE OUTLINE

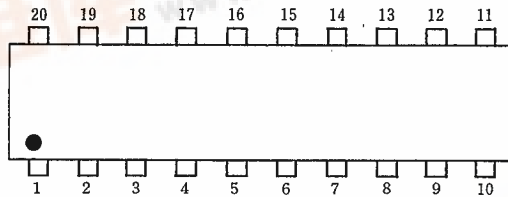


NJM2366G



NJM2366V

#### PIN CONFIGURATION

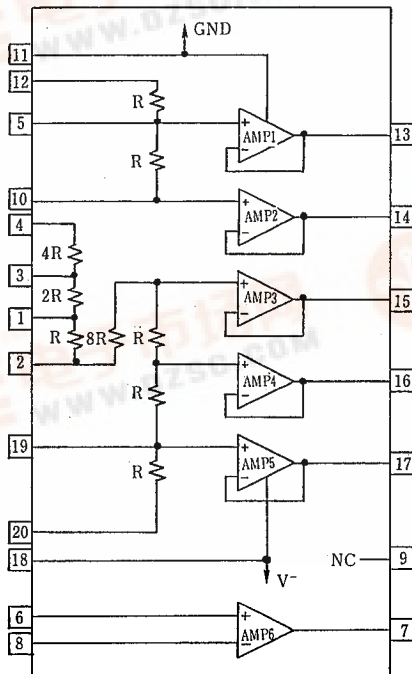


NJM2366G  
NJM2366V

#### PIN FUNCTION

- |          |          |
|----------|----------|
| 1. RX3   | 11. GND  |
| 2. RX4   | 12. Vin  |
| 3. RX2   | 13. V1   |
| 4. RX1   | 14. V2   |
| 5. Vin1  | 15. V3   |
| 6. Vin+  | 16. V4   |
| 7. Vout  | 17. V5   |
| 8. Vin   | 18. V-   |
| 9. NC    | 19. Vin3 |
| 10. Vin2 | 20. Vref |

#### BLOCK DIAGRAM



# NJM2366

## ■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sup>-</sup>	-40	V
Vin Voltage	V <sub>in</sub>	-40	V
Output Current	I <sub>out</sub>	±15	mA
Power Dissipation(G/V type)	P <sub>D</sub>	300	mW
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature Range(G/V type)	T <sub>stg</sub>	-50 ~ +125	°C

## ■ ELECTRICAL CHARACTERISTICS

(V<sup>-</sup>=-16V, Ta=25°C)

### Total Device

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Operating Current	I <sub>cc</sub>	V <sup>-</sup> =V <sub>ref</sub> =-30V, 1/13Bias	-	-	1.5	mA
Resistance	R	IR=20 μA	15	20	25	K Ω
Internal Resistance Divided Ratio	Ra1	R/R	0.98	1.00	1.02	
	Ra2	2R/R	1.96	2.00	2.04	
	Ra3	4R/R	3.92	4.00	4.08	
	Ra4	8R/R	7.84	8.00	8.16	

### Buffers Block

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output Voltage Rating	RA1	V <sup>-</sup> =V <sub>ref</sub>   GND-V1   /   V1-V2   -10V > V <sup>-</sup> > -30V	0.98	1.00	1.02	
	RA2	V3-V4   /   V4-V5   -10V > V <sup>-</sup> > -30V	0.98	1.00	1.02	
Output Voltage Difference	DV	(A)+(B); V <sup>-</sup> =V <sub>ref</sub> (A)=   GND-V1   -   V1-V2   (B)=   V4-V5   -   V3-V4	-100	0	100	mV
Load Regulation	ΔV1	V <sup>-</sup> =V <sub>ref</sub> =-30V -10mA ≤ I <sub>out</sub> ≤ 10mA	-20	0	20	mV
	ΔV2		-20	0	20	
	ΔV3		-20	0	20	
	ΔV4		-20	0	20	
	ΔV5		-20	0	20	
	ΔVout		-20	0	20	

## ■ ELECTRICAL CHARACTERISTICS

( $V^- = -16V$ ,  $T_a = 25^\circ C$ )

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output Current 1	$I_{SOURCE1}$	$V^- = V_{ref} = -30V$ 1/13Bias	+10	—	—	mA
	$I_{SOURCE2}$		+10	—	—	
	$I_{SOURCE3}$		+10	—	—	
	$I_{SOURCE4}$		+10	—	—	
	$I_{SOURCE5}$		+10	—	—	
	$I_{SOURCE6}$		+10	—	—	
Output Current 2	$I_{SINK1}$	$V^- = V_{ref} = -30V$ 1/13Bias	-10	—	—	mA
	$I_{SINK2}$		-10	—	—	
	$I_{SINK3}$		-10	—	—	
	$I_{SINK4}$		-10	—	—	
	$I_{SINK5}$		-10	—	—	
	$I_{SINK6}$		-10	—	—	

# NJM2366

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## MEMO

**[CAUTION]**

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