

SINGLE-SUPPLY DUAL COMPARATOR

■ GENERAL DESCRIPTION

The NJM2407 is a single-supply dual comparator packaged in VSP8. Its input stage of darlington PNP detects GND level.

The common-emitter output circuit performs low output saturation voltage less than 400mV at output sink current 3mA.

■ PACKAGE OUTLINE

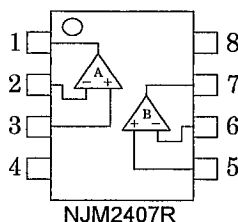


NJM2407R

■ FEATURES

- Operating Voltage (V⁺=+2V~+20V)
- Output Sink Current (6mA min.)
- Response Time (0.8 μs typ.)
- Bipolar Technology
- Package Outline VSP8

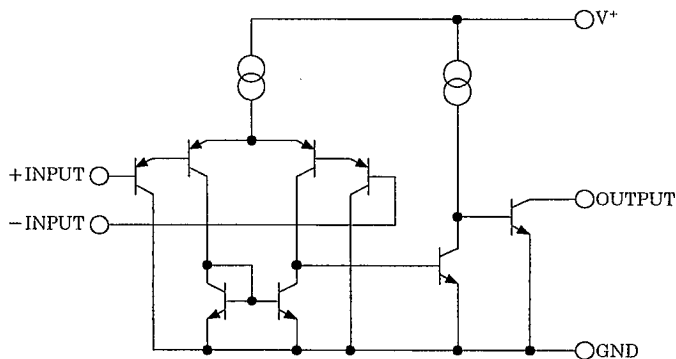
■ PIN CONFIGURATION



PIN FUNCTION

- 1. A OUTPUT
- 2. A -INPUT
- 3. A +INPUT
- 4. GND
- 5. B +INPUT
- 6. B -INPUT
- 7. B OUTPUT
- 8. V⁺

■ EQUIVALENT CIRCUIT (1/2 Shown)



NJM2407

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V^+(V^+/V^-)$	20(±10)	V
Differential Input Voltage	V_{ID}	±20	V
Input Voltage	V_{IN}	-0.3~+20(note)	V
Power Dissipation	P_D	320	mW
Operating Temperature Range	T_{opr}	-40~+85	°C
Storage Temperature Range	T_{stg}	-50~+125	°C

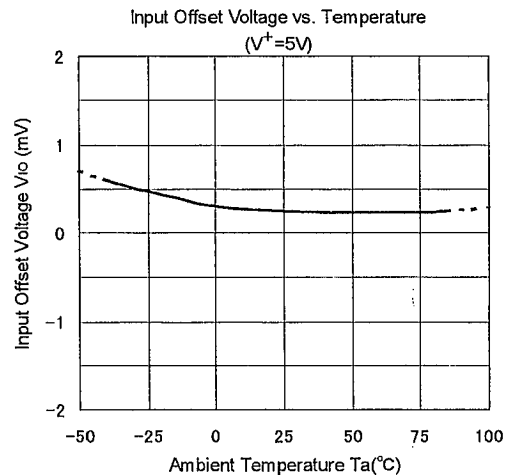
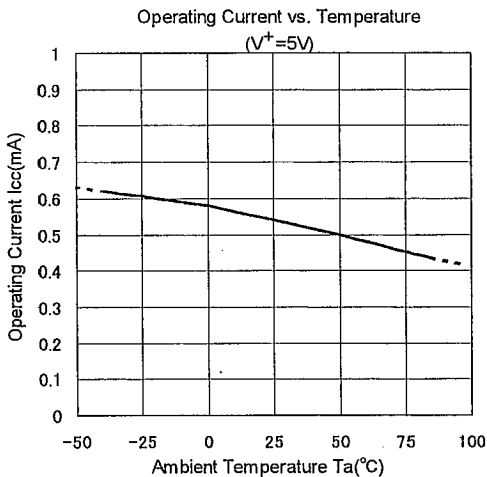
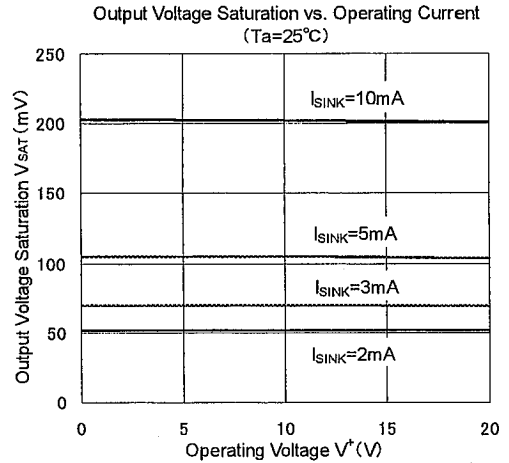
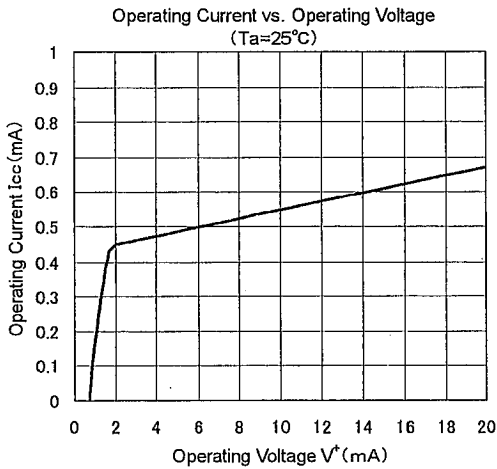
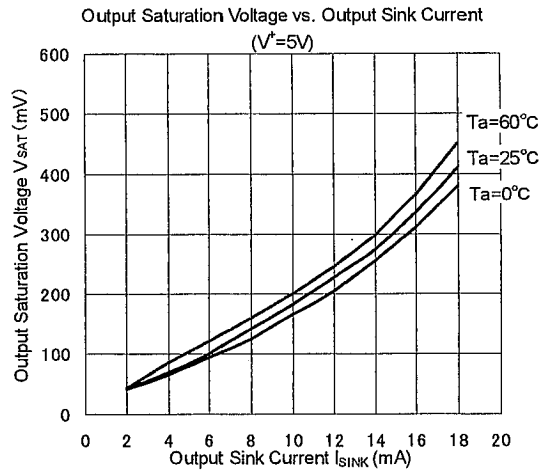
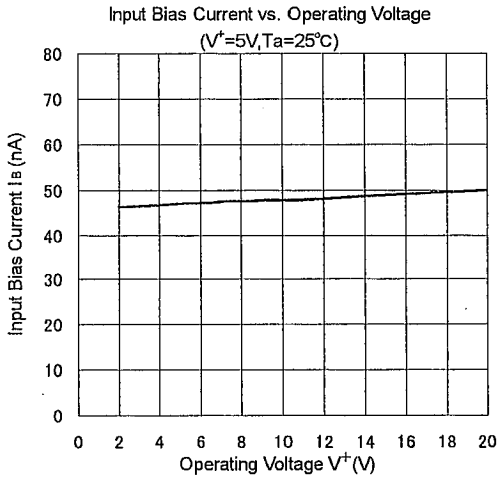
(note):When the supply voltage is less than +20V,the absolute maximum input is equal to the supply voltage.

■ ELECTRICAL CHARACTERISTICS

(V⁺=5V,Ta=25°C)

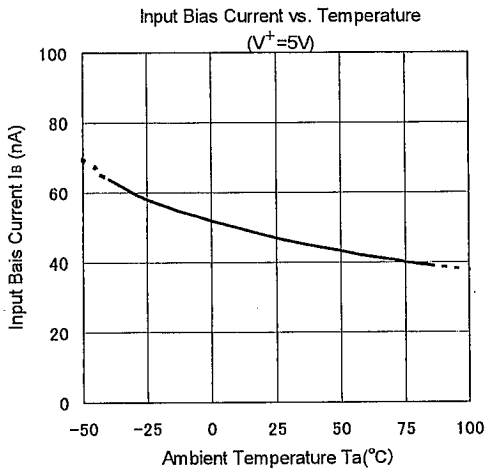
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	$R_s=0\Omega, V_o \cong 1.4V$	—	2	7	mV
Input Offset Current	I_{IO}		—	5	50	nA
Input Bias Current	I_B		—	25	250	nA
Large Signal Voltage Gain	A_V	$R_L=15k\Omega$	—	106	—	dB
Input Common Mode Voltage Range	V_{ICM}		0~3.5		—	V
Response Time	t_R	$R_L=5.1k\Omega$	—	0.8	—	μs
Output Sink Current	I_{SINK}	$V_{IN}^+=0V, V_{IN}^-=1V, V_o=1.5V$	6	16	—	mA
Output Saturation Voltage	V_{SAT}	$V_{IN}^+=0V, V_{IN}^-=1V, I_{SINK}=3mA$	—	200	400	mV
Output Leakage Current	I_{LEAK}	$V_{IN}^+=1V, V_{IN}^-=0V, V_o=5V$	—		1.0	μA
Operating Current	I_{CC}	$R_L=\infty$	—	0.4	1	mA

■ ELECTRICAL CHARACTERISTICS



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■ ELECTRICAL CHARACTERISTICS



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[CAUTION]

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