

3-INPUT 1-OUTPUT VIDEO SWITCH

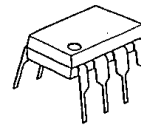
■ GENERAL DESCRIPTION

The NJM2535 is a video switch for VCR, TV and others.
It contains three cramp-type inputs and one buffer-type output.

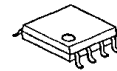
■ PACKAGE OUTLINE

■ FEATURES

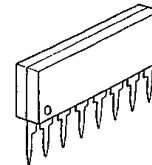
- Operating Voltage (+4.5V ~ +13V)
- Low Operating Current (4.6mA MAX)
- Crosstalk (-70dB)
- 3-Input, 1-Output
- Bipolar Technology
- Package Outline DIP8, DMP8, SIP8, SSOP8



NJM2535D



NJM2535M

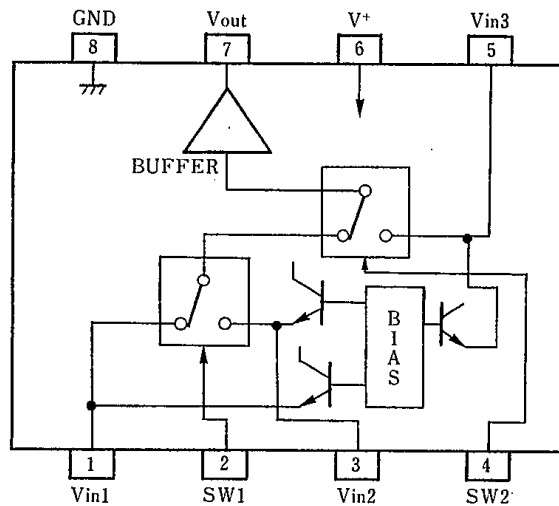


NJM2535L



NJM2535V

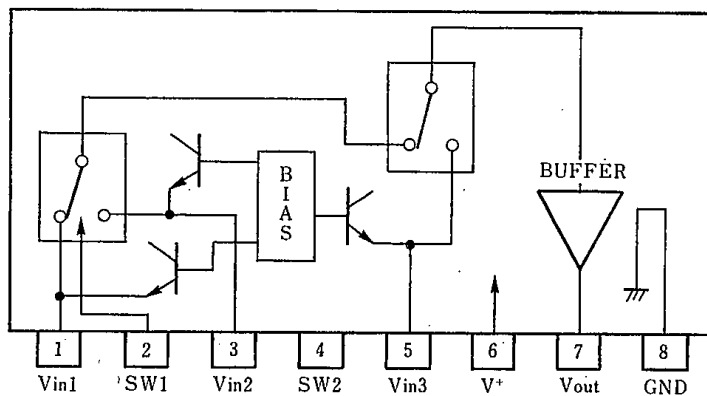
■ PIN CONFIGURATION



PIN FUNCTION

- 1 : Vin1
- 2 : SW1
- 3 : Vin2
- 4 : SW2
- 5 : Vin3
- 6 : V+
- 7 : V_{OUT}
- 8 : GND

NJM2535D
NJM2535M
NJM2535V



PIN FUNCTION

- 1 : Vin1
- 2 : SW1
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- 5 : Vin3
- 6 : V+
- 7 : V_{OUT}
- 8 : GND

NJM2535L

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	+15	V
Power Dissipation	P _D	(DIP-8) 500 (DMP-8) 300 (SIP-8) 800 (SSOP-8) 250	mW
Operating Temperature Range	T _{opr}	-20~+75	°C
Storage Temperature Range	T _{stg}	-40~+125	°C

■ ELECTRICAL CHARACTERISTICS

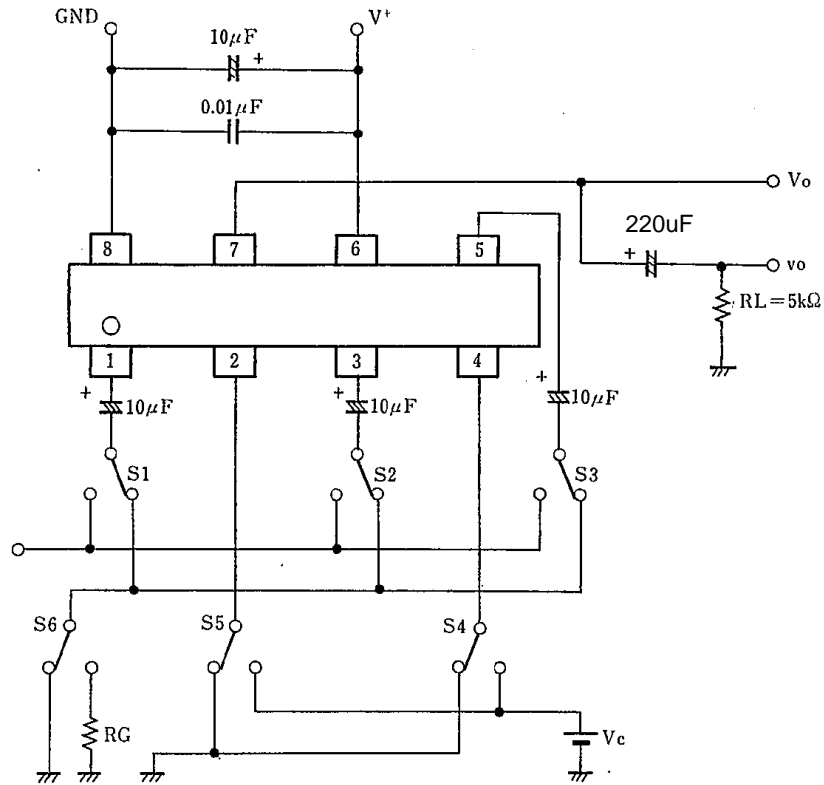
(V⁺=5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V ⁺		+4.5	—	+13.0	V
Supply Current	I _{CC}		—	3.6	4.6	mA
Frequency Characteristics	G _f	V _{IN} =2V _{pp} , V _O =10MHz/100kHz	-1.0	0	+1.0	dB
Voltage Gain	G _v	V _{IN} =2V _{pp} , 100kHz	-0.5	0	+0.5	dB
Differential Gain	DG	V _{IN} =2V _{pp} , Standard staircase signal, APL=50%	—	0	3.0	%
Differential Phase	DP	V _{IN} =2V _{pp} , Standard staircase signal, APL=50%	—	0	3.0	deg
Output Offset Voltage	V _{off}		-30	0	+30	mV
Crosstalk	CT	V _{IN} =2V _{pp} , 4.3MHz	—	-70	-60	dB
Switching Voltage	V _{CH}		2.4	—	—	V
	V _{CL}		—	—	0.8	V
Input Impedance	R _I		—	30	—	kΩ
Output Impedance	R _O		—	25	—	Ω
Input Bias Voltage	V _{IN}		—	2.5	—	V

■ INPUT CONTROL SIGNAL-OUTPUT SIGNAL

SW1	SW2	OUTPUT SIGNAL
L	L	V _{IN1}
H	L	V _{IN2}
L/H	H	V _{IN3}

■ TEST CIRCUIT



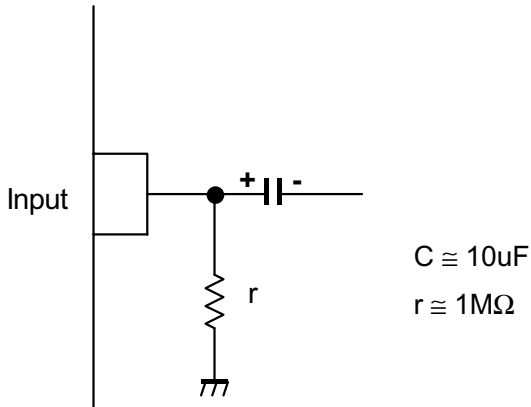
This IC requires $1M\Omega$ resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.



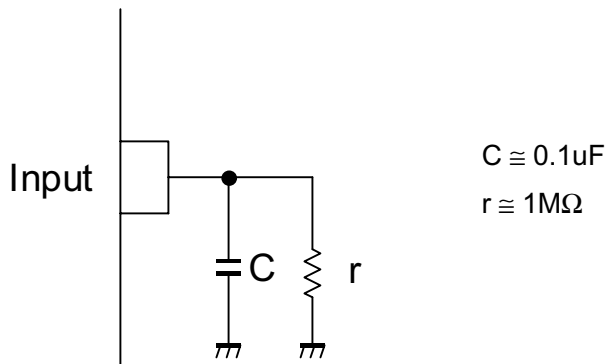
NJM2535

■APPLICATION

This IC requires $1\text{M}\Omega$ resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.

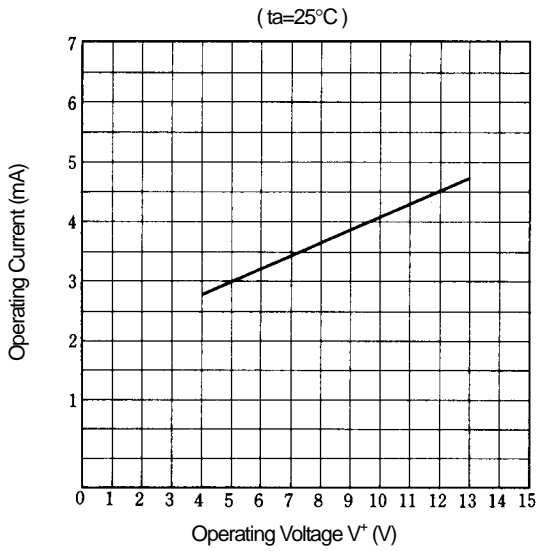


This IC requires $0.1\mu\text{F}$ capacitor between INPUT and GND, $1\text{M}\Omega$ resistance between INPUT and GND for clamp type input at mute mode.

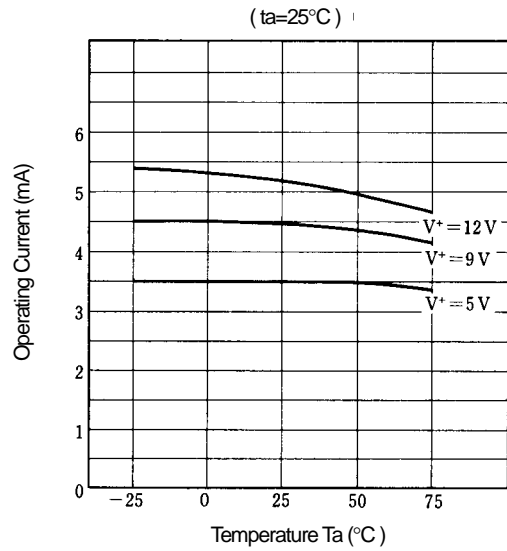


■ TYPICAL CHARACTERISTICS

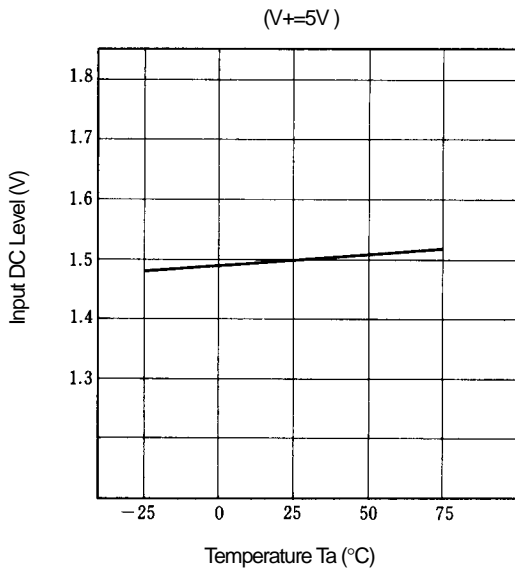
Supply Current vs. Operating Voltage



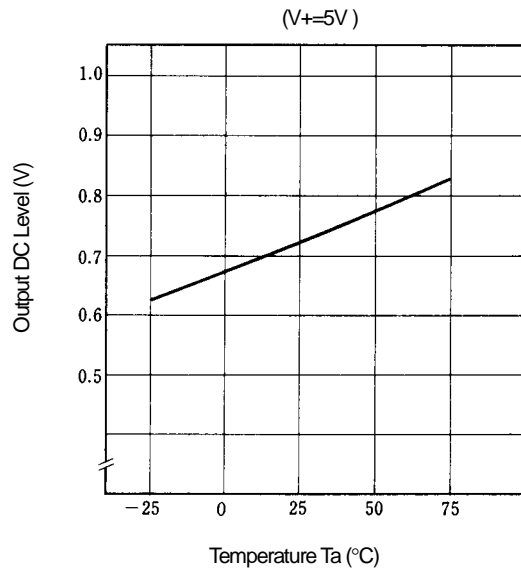
Supply Current vs. Temperature



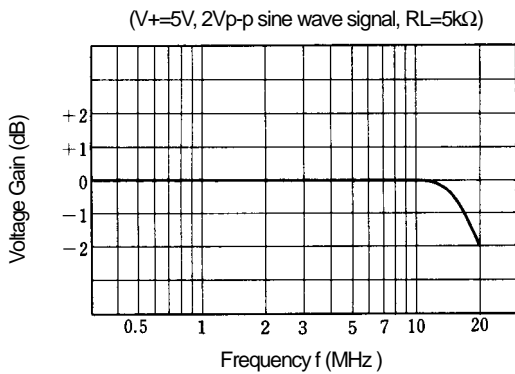
Input DC level vs. Temperature



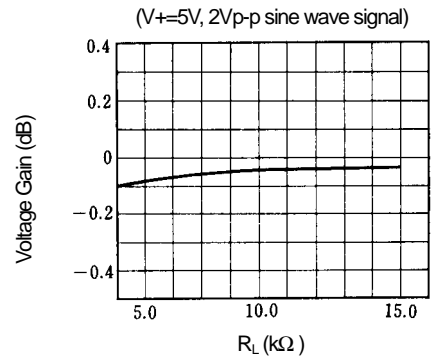
Output DC level vs. Temperature



Voltage Gain vs. Frequency

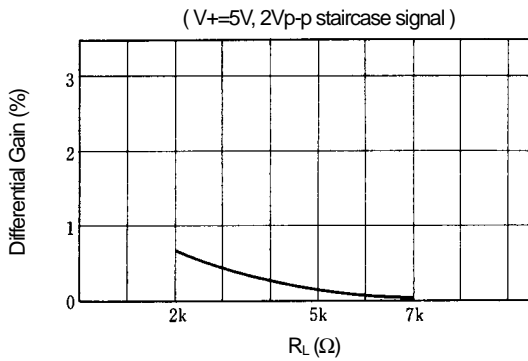


Voltage Gain vs. R_L

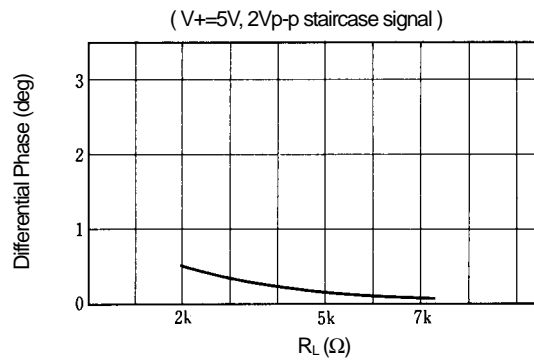


■ TYPICAL CHARACTERISTICS

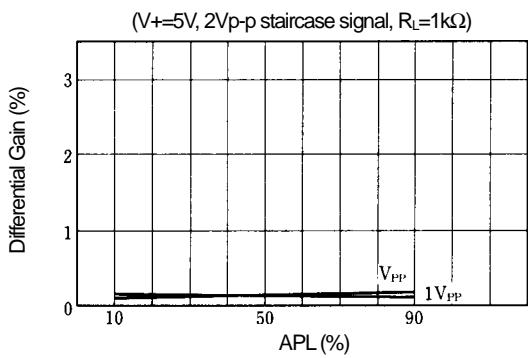
Differential Gain vs. R_L



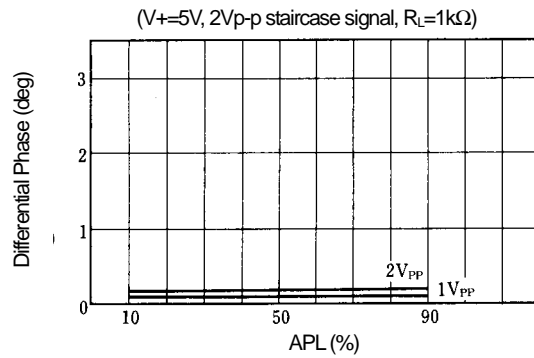
Differential Phase vs. R_L



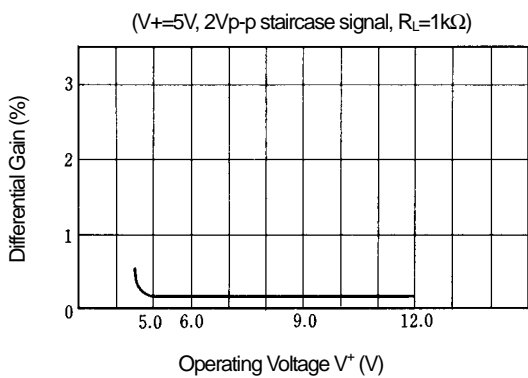
Differential Gain vs. APL



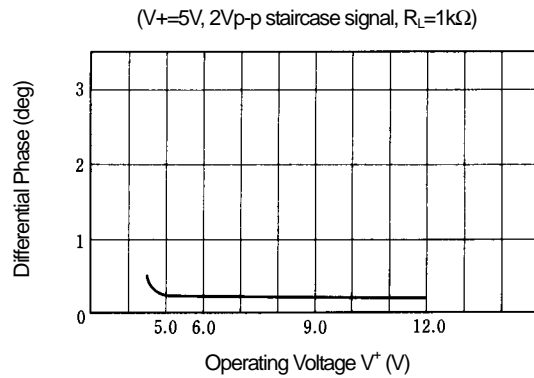
Differential Phase vs. APL



Differential Gain vs. Operating Voltage

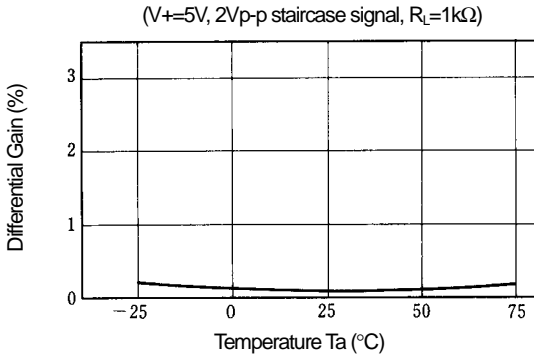


Differential Phase vs. Operating Voltage

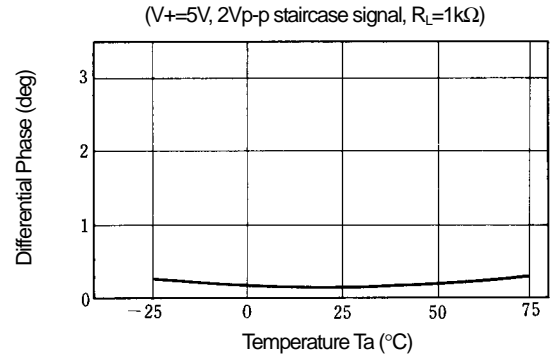


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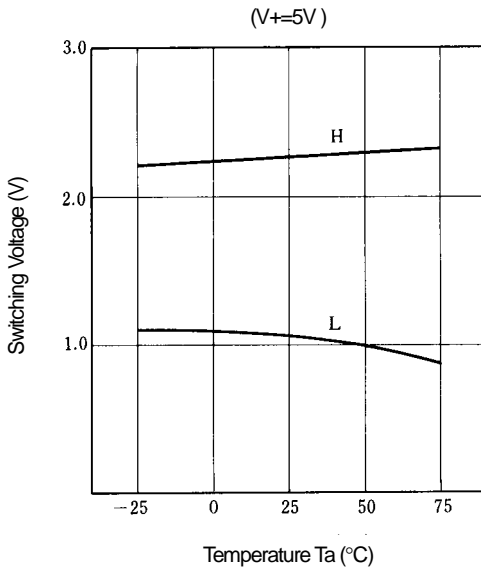
Differential Gain vs. Temperature



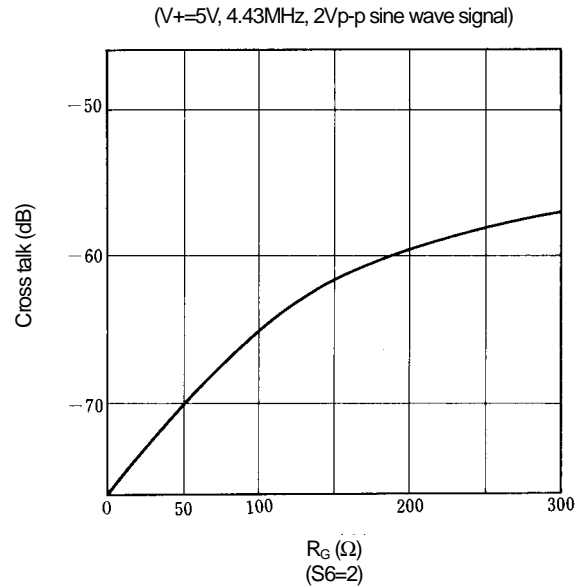
Differential Phase vs. Temperature



Switching Voltage vs. Temperature



Cross talk vs. R_G



[CAUTION]

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