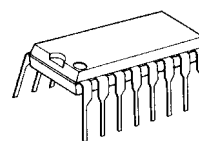


2-INPUT 3CHANNEL VIDEO SWITCH

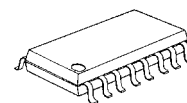
■ GENERAL DESCRIPTION

NJM2283 is a switching IC for switching over from one audio or video input signal to another. Internalizing 2 inputs and 1 output, and then each set of 3 can be operated independently. It is a higher efficiency video switch, featuring the supply voltage range 4.75 to 13.0V, the frequency feature 10MHz, and then Crosstalk 75dB (at 4.43MHz).

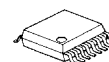
■ PACKAGE OUTLINE



NJM2283D



NJM2283M



NJM2283V

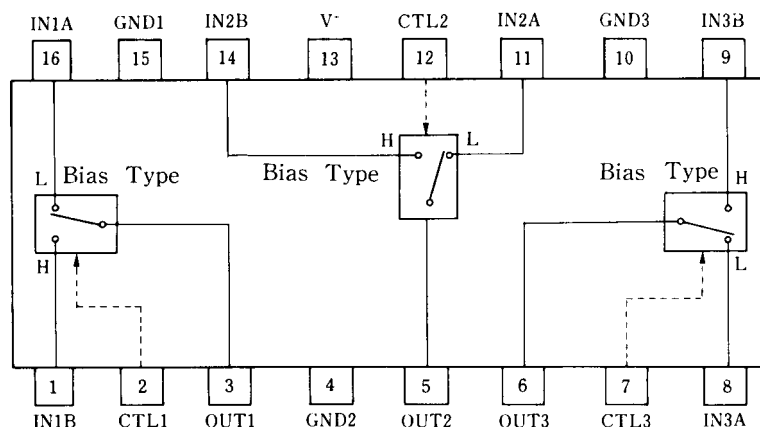
■ FEATURES

- 2 Input-1 Output 3 Circuits internalizing
- Wide Operating Voltage (4.75V to 13V)
- Crosstalk 75dB (at 4.43MHz)
- Wide Operating Supply Range 10MHz (2V_{P-P} Input)
- Wide Bandwidth Frequency
- Package Outline DIP16, DMP16, SSOP16

■ APPLICATIONS

- VCR, Video Camera, AV-TV, Video Disk Player.

■ BLOCK DIAGRAM



NJM2283D
NJM2283M
NJM2283V

■ MAXIMUM RATINGS

($T_a = 25^\circ\text{C}$)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	14	V
Power Dissipation	P_D	(DIP16) 700 (DMP16) 350 (SSOP16) 300	mW mW mW
Operating Temperature Range	T_{opr}	-40 to +85	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 to +125	$^\circ\text{C}$

■ ELECTRICAL CHARACTERISTICS

($V^+ = 5\text{V}$, $T_a = 25^\circ\text{C}$)

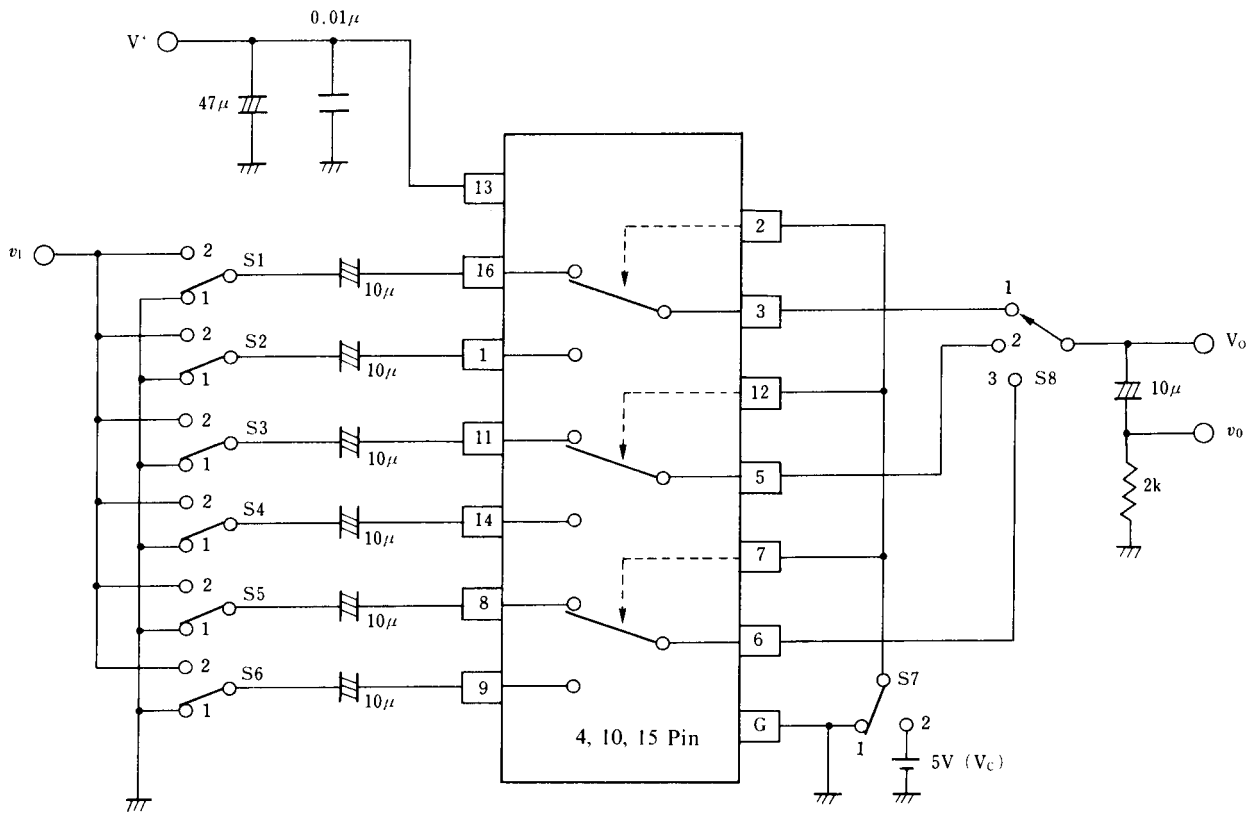
PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current (1)	I_{CC1}	$V^+ = 5\text{V}$ (Note1)	8.3	11.8	15.3	mA
Operating Current (2)	I_{CC2}	$V^+ = 9\text{V}$ (Note1)	10.4	14.8	19.2	mA
Voltage Gain	G_V	$V_I = 100\text{kHz}$, $2V_{P.P.}$, V_O / V_I	-0.6	-0.1	+0.4	dB
Frequency Gain	G_F	$V_I = 2V_{P.P.}$, V_O (10MHz) / V_O (100kHz)	-1.0	0	+1.0	dB
Differential Gain	DG	$V_I = 2V_{P.P.}$, Standard Staircase Signal	-	0.3	-	%
Differential Phase	DP	$V_I = 2V_{P.P.}$, Standard Staircase Signal	-	0.3	-	deg
Output offset Voltage	V_{OS}	(Note2)	-10	0	+10	mV
Crosstalk	CT	$V_I = 2V_{P.P.}$, 4.43MHz, V_O / V_I	-	-75	-	dB
Switch Change Over Voltage	V_{CH}	All inside Switch ON	2.5	-	-	V
Switch Change Over Voltage	V_{CL}	All inside Switch OFF	-	-	1.0	V

(Note1) $S1 = S2 = S3 = S4 = S5 = S6 = S7 = 1$

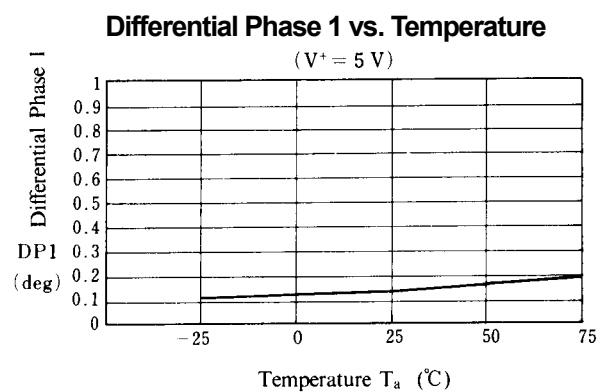
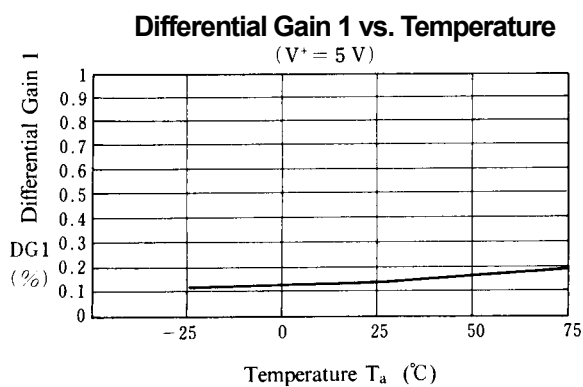
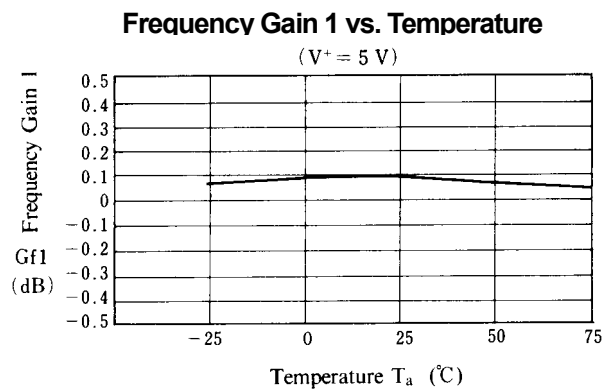
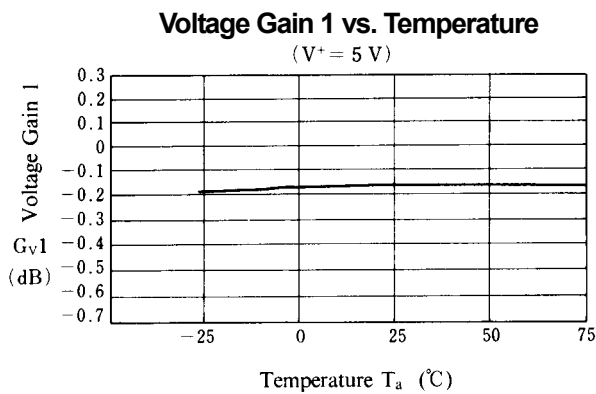
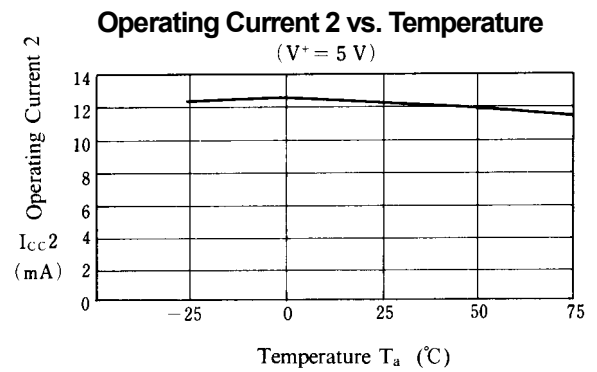
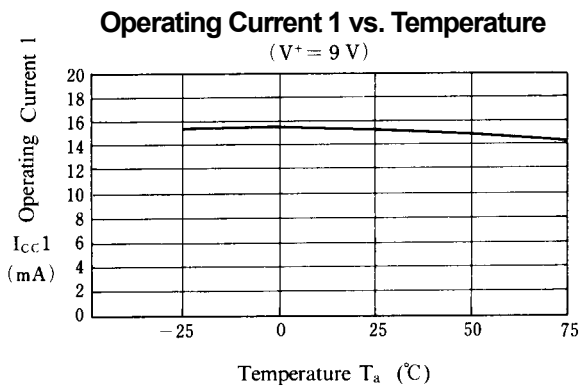
(Note2) $S1 = S2 = S3 = S4 = S5 = S6 = 1$, $S7 = 1 \rightarrow 2$ Measure the output DC voltage difference

■ TERMINAL EXPLANATION

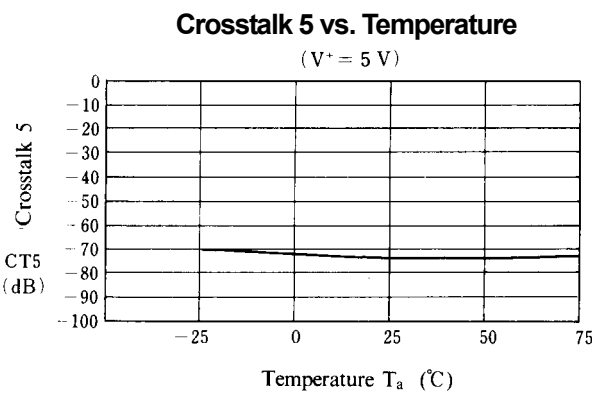
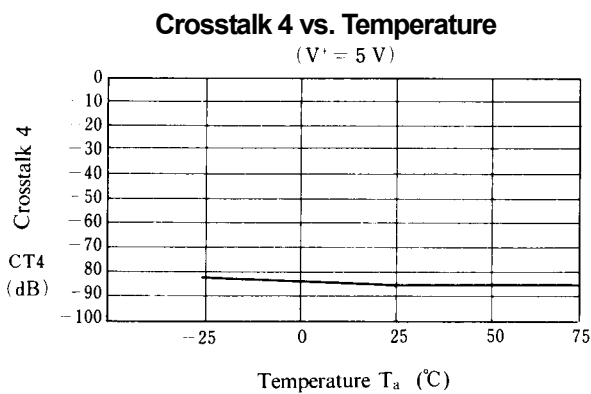
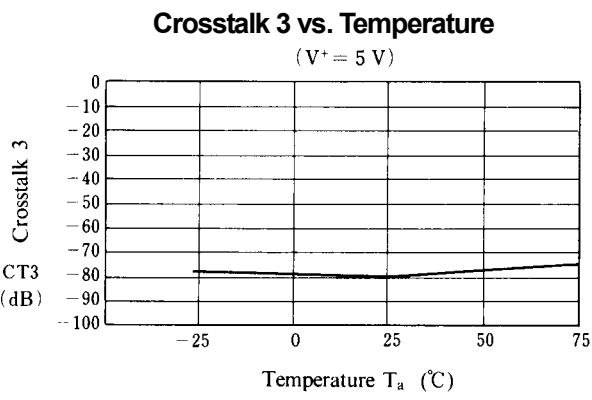
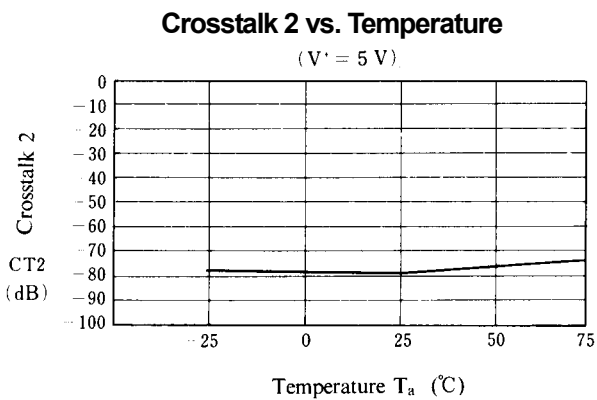
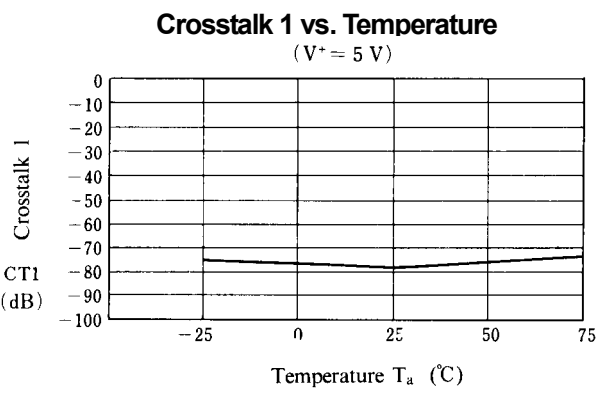
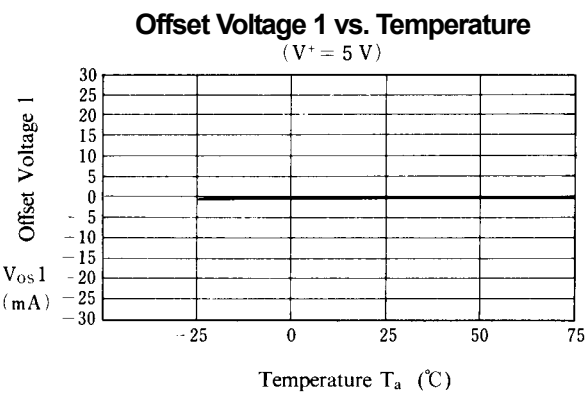
PIN No.	PIN NAME	VOLTAGE	INSIDE EQUIVALENT CIRCUIT
16 1 11 14 8 9	IN 1 A IN 1 B IN 2 A IN 2 B IN 3 A IN 3 B [Input]	2.5V	
2 12 7	CTL 1 CTL 2 CTL 3 [Switching]		
3 5 6	OUT1 OUT2 OUT3 [Output]	1.8V	
13	V ⁺	5V	
15 4 10	GND 1 GND 2 GND 3		

[illegible]

■ TYPICAL CHARACTERISTICS



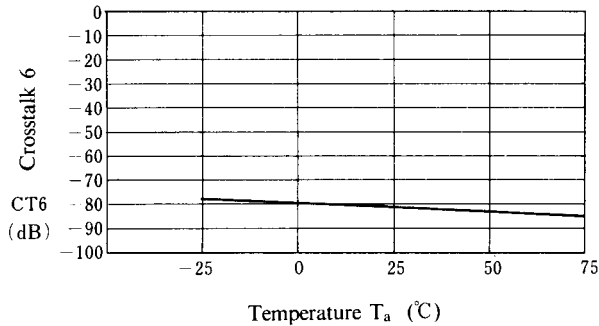
■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS

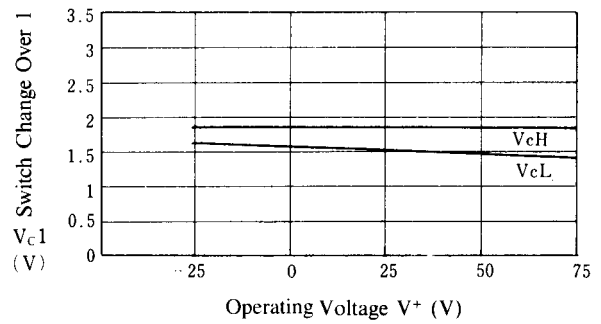
Crosstalk 6 vs. Temperature

($V^+ = 5\text{ V}$)



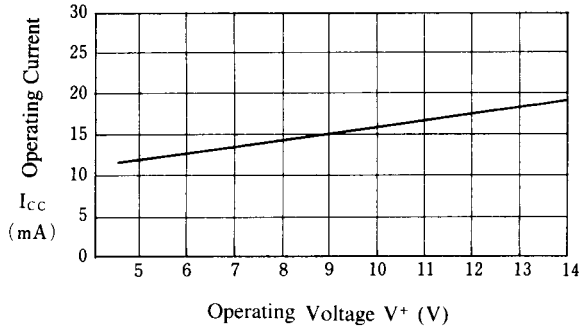
Switch Change Over 1 vs. Operating Voltage

($V^+ = 5\text{ V}$)



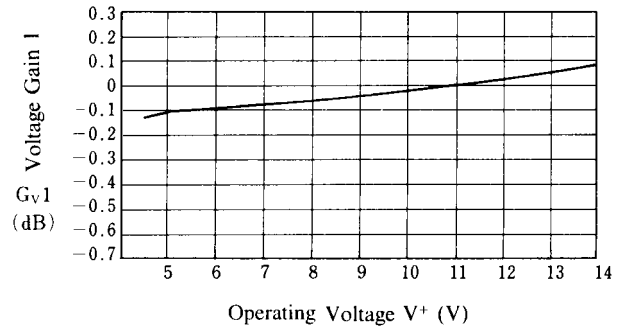
Operating Current vs. Operating Voltage

($T_a = 25^\circ\text{C}$)



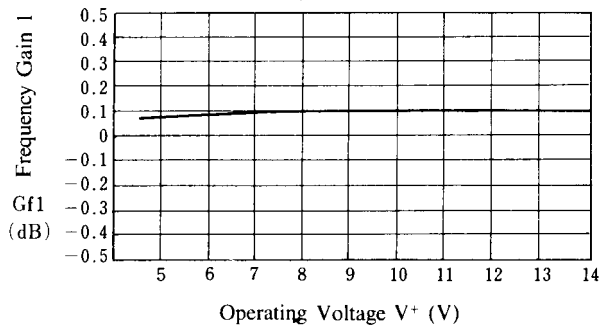
Voltage Gain 1 vs. Operating Voltage

($T_a = 25^\circ\text{C}$)



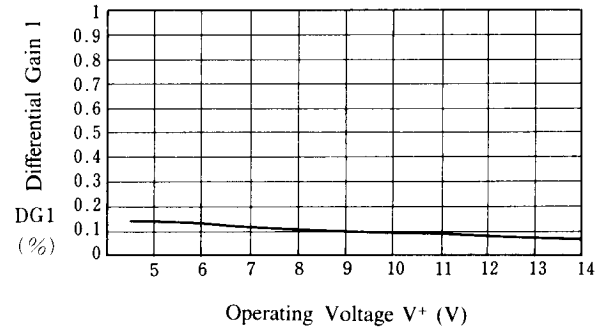
Frequency Gain 1 vs. Operating Voltage

($T_a = 25^\circ\text{C}$)



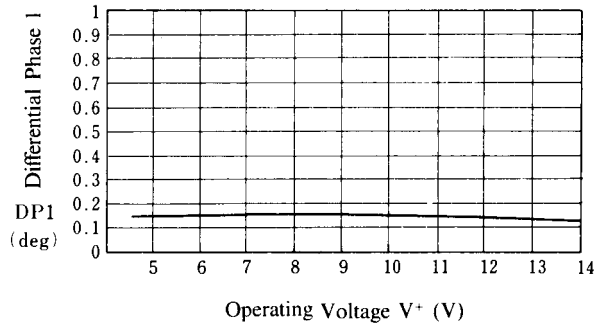
Differential Gain 1 vs. Operating Voltage

($T_a = 25^\circ\text{C}$)

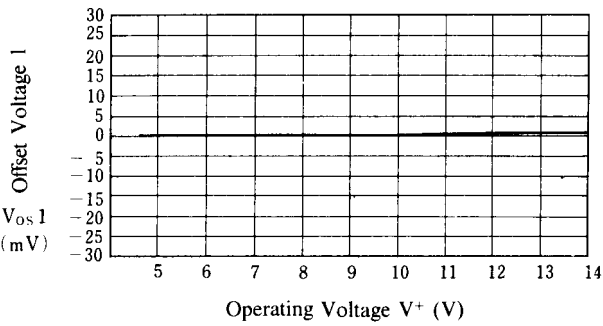


■ TYPICAL CHARACTERISTICS

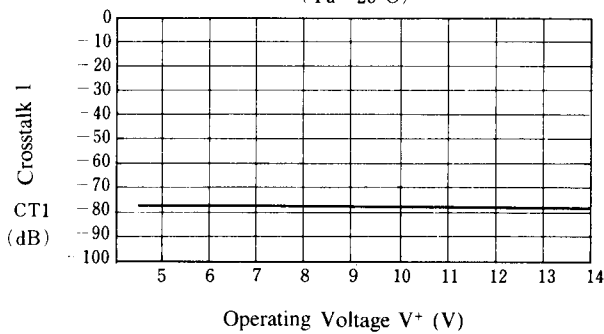
Differential Phase 1 vs. Operating Voltage
($T_a = 25^\circ\text{C}$)



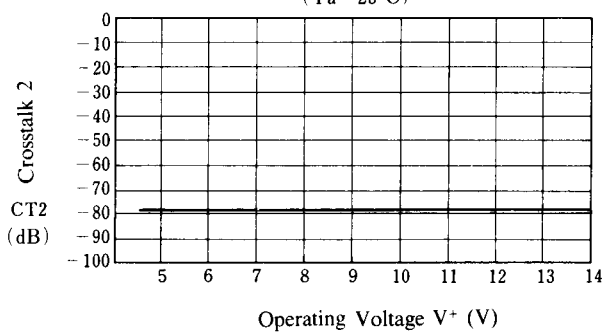
Offset Voltage 1 vs. Operating Voltage
($T_a = 25^\circ\text{C}$)



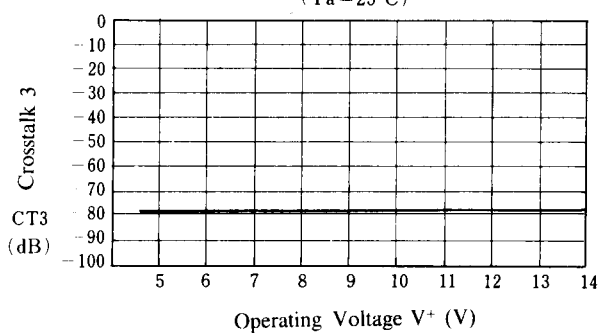
Crosstalk 1 vs. Operating Voltage
($T_a = 25^\circ\text{C}$)



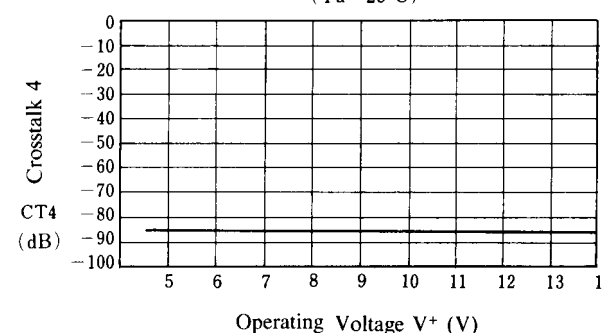
Crosstalk 2 vs. Operating Voltage
($T_a = 25^\circ\text{C}$)



Crosstalk 3 vs. Operating Voltage
($T_a = 25^\circ\text{C}$)



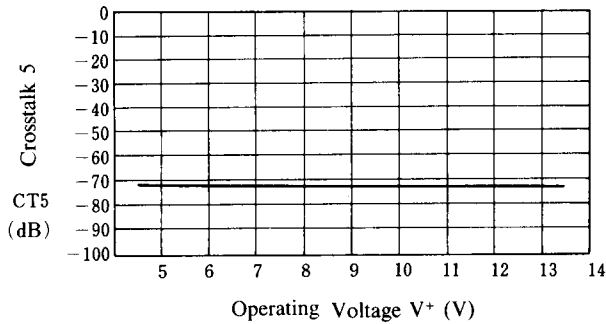
Crosstalk 4 vs. Operating Voltage
($T_a = 25^\circ\text{C}$)



■ TYPICAL CHARACTERISTICS

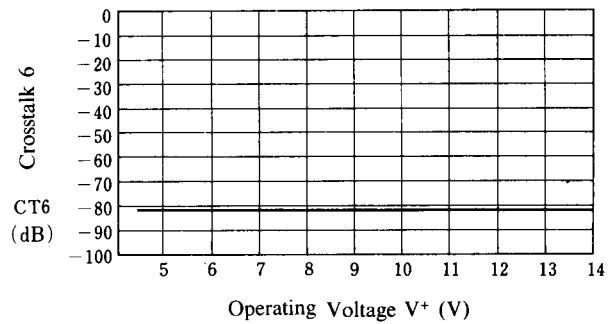
Crosstalk 5 vs. Operating Voltage

($T_a = 25^\circ\text{C}$)



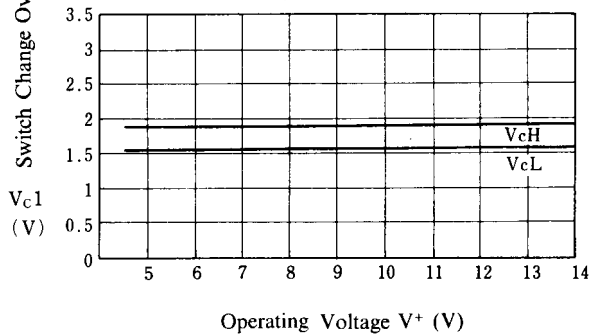
Crosstalk 6 vs. Operating Voltage

($T_a = 25^\circ\text{C}$)



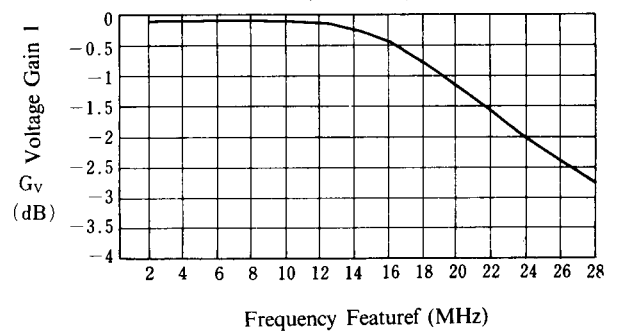
Switch Change Over 1 vs. Operating Voltage

($T_a = 25^\circ\text{C}$)



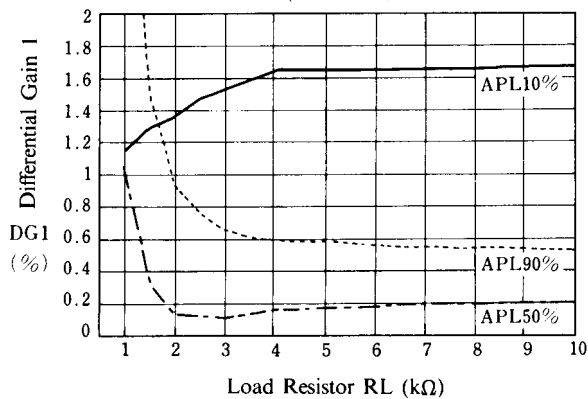
Voltage Gain 1 vs. Frequency Feature

($T_a = 25^\circ\text{C}$)



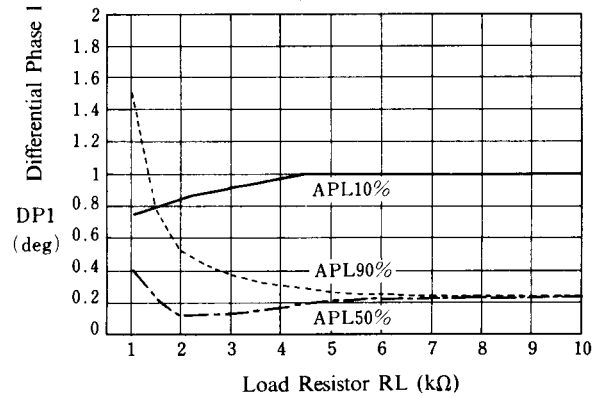
Differential Gain 1 vs. Load Resistor

($T_a = 25^\circ\text{C}$)

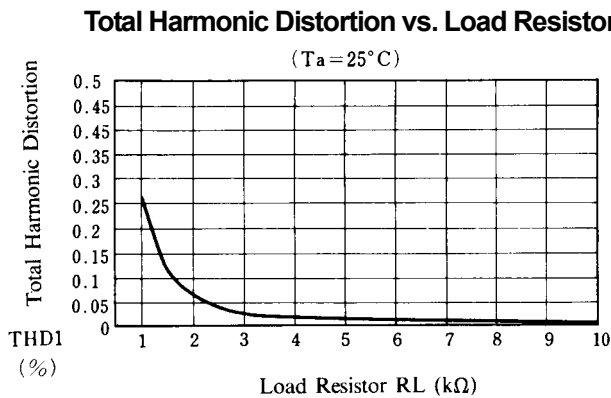
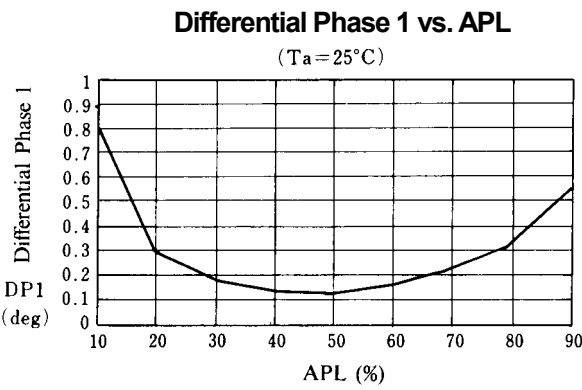
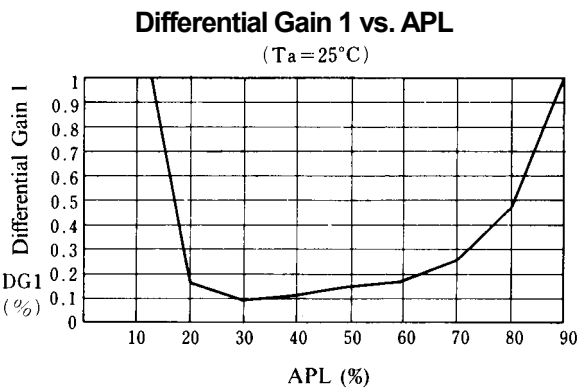


Differential Phase 1 vs. Load Resistor

($T_a = 25^\circ\text{C}$)

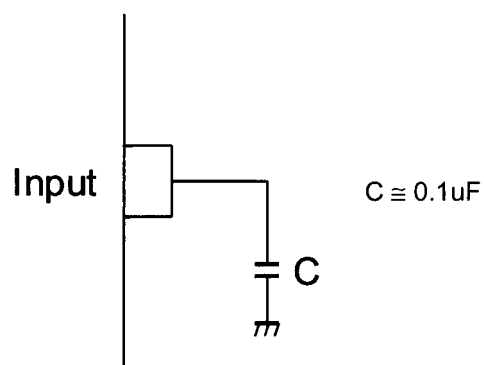


■ TYPICAL CHARACTERISTICS



■ APPLICATION

This IC requires 0.1 μ F capacitor between INPUT and GND for bias type input at mute mode.



[CAUTION]

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