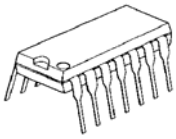
SINGLE SUPPLY WIDE BAND 3ch VIDEO AMPLIFIER

■ GENERAL DESCRIPTION

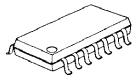
The **NJM2580** is a wide band 3ch video amplifier, operated on a single supply voltage. It is suitable for Y, Pb, and Pr signal because frequency range is 50MHz.

The **NJM2580** is suitable for Set Top Box, AV amplifier, and other high quality AV systems.

■ PACKAGE OUTLINE



NJM2580D



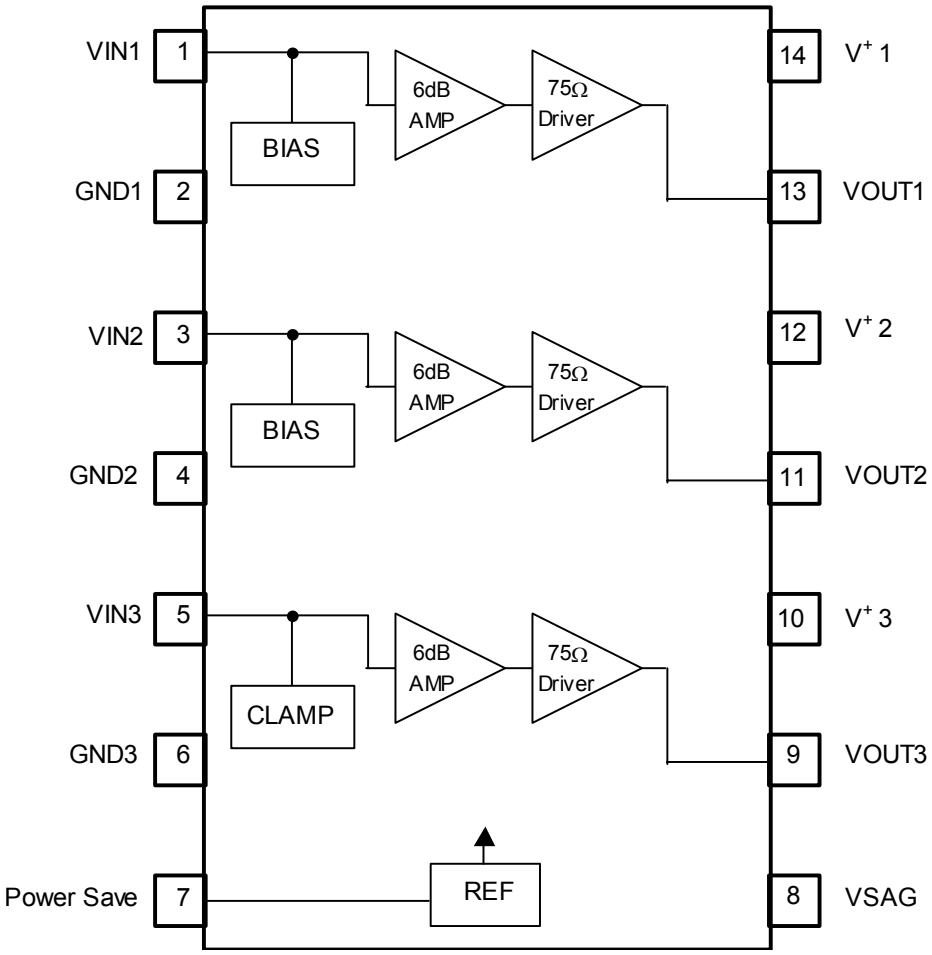
NJM2580M

NJM2580V

■ FEATURES

- Operating Voltage 4.5 to 5.5V
- Wide frequency range 0dB at 50MHz typ.
- Internal 6dB Amplifier
- Internal 75Ω Driver Circuit (2-system drive)
- Power Save Circuit
- Bipolar Technology
- Package Outline DIP14, DMP14, SSOP14

■ BLOCK DIAGRAM



■ **ABSOLUTE MAXIMUM RATINGS** (Ta=25°C)

PARAMETERS	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	12.0	V
Power Dissipation	P_D	(DIP) 620 (DMP) 430 (SSOP)520 *	mW
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +150	°C

(Note) At on a board of EIA/JEDEC specification. (114.3 x 76.2 x 1.6mm Two layers, FR-4)

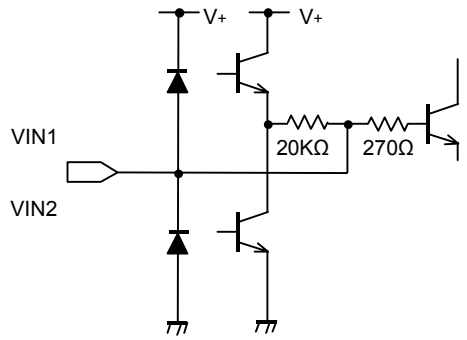
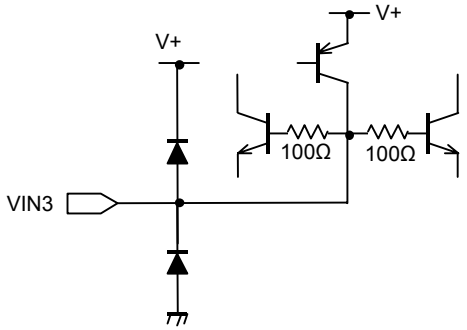
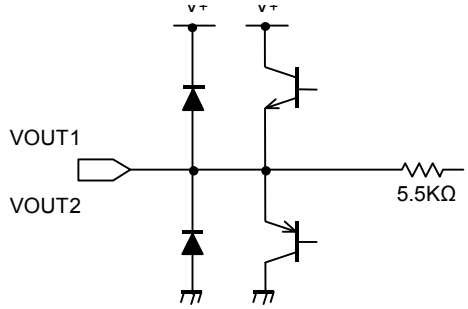
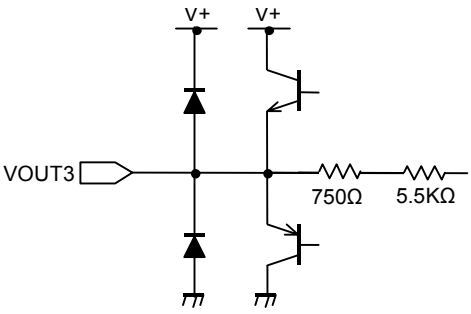
■ **ELECTRICAL CHARACTERISTICS** (V^+=5.0V, R_L=150Ω, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current	I_{CC}	No signal	-	23.0	33.0	mA
Operating Current (Power Save)	Isave	No signal, Power Save	-	-	1.2	mA
Maximum Output Voltage1	Vom1	BIAS input Vin=1kHz,Sin signal, THD=1%,	2.4	3.0	-	Vp-p
Maximum Output Voltage2	Vom2	CLAMP input Vin=1kHz,Sin signal, THD=1%,	2.2	2.4	-	Vp-p
Voltage Gain	Gv	Vin=1MHz, 1.0Vp-p Sin signal	6.0	6.4	6.8	dB
Band Width	f		-	50	-	MHz
Frequency Characteristic	Gf	Vin=50MHz / 1MHz, 1.0Vp-p, Sin signal	-	0	-	dB
Cross talk 1	CTB1	Vin=4.43MHz, 1.0Vp-p, Sin signal	-	-60	-50	dB
Cross talk 2	CTB2	Vin=50MHz, 1.0Vp-p, Sin signal	-	-40	-	dB
Differential Gain	DG	Vin=1.0Vpp 10step Video signal	-	0.3	-	%
Differential Phase	DP	Vin=1.0Vpp 10step Video signal	-	0.3	-	deg
S/N	SNv	Vin=1.0Vpp, 100% White Video signal	-	65	-	dB
Power Save Switch Change Voltage H Level	VthPH	IC Operating	2.0	-	V^+	V
Power Save Switch Change Voltage L Level	VthPL	IC Waiting	0	-	0.6	V

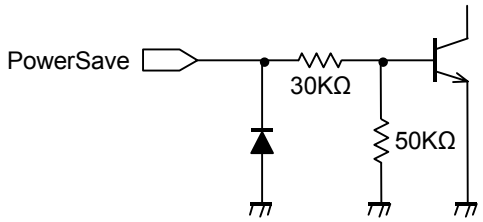
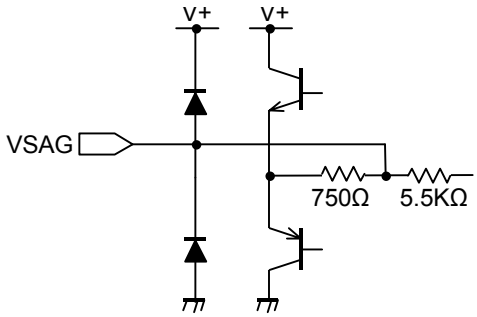
■ **MODE SWITCH FUNCTION**

PIN	MODE	NOTES
Power Save	H	Power Save: OFF
	L	Power Save: ON (Mute)
	OPEN	Power Save: ON (Mute)

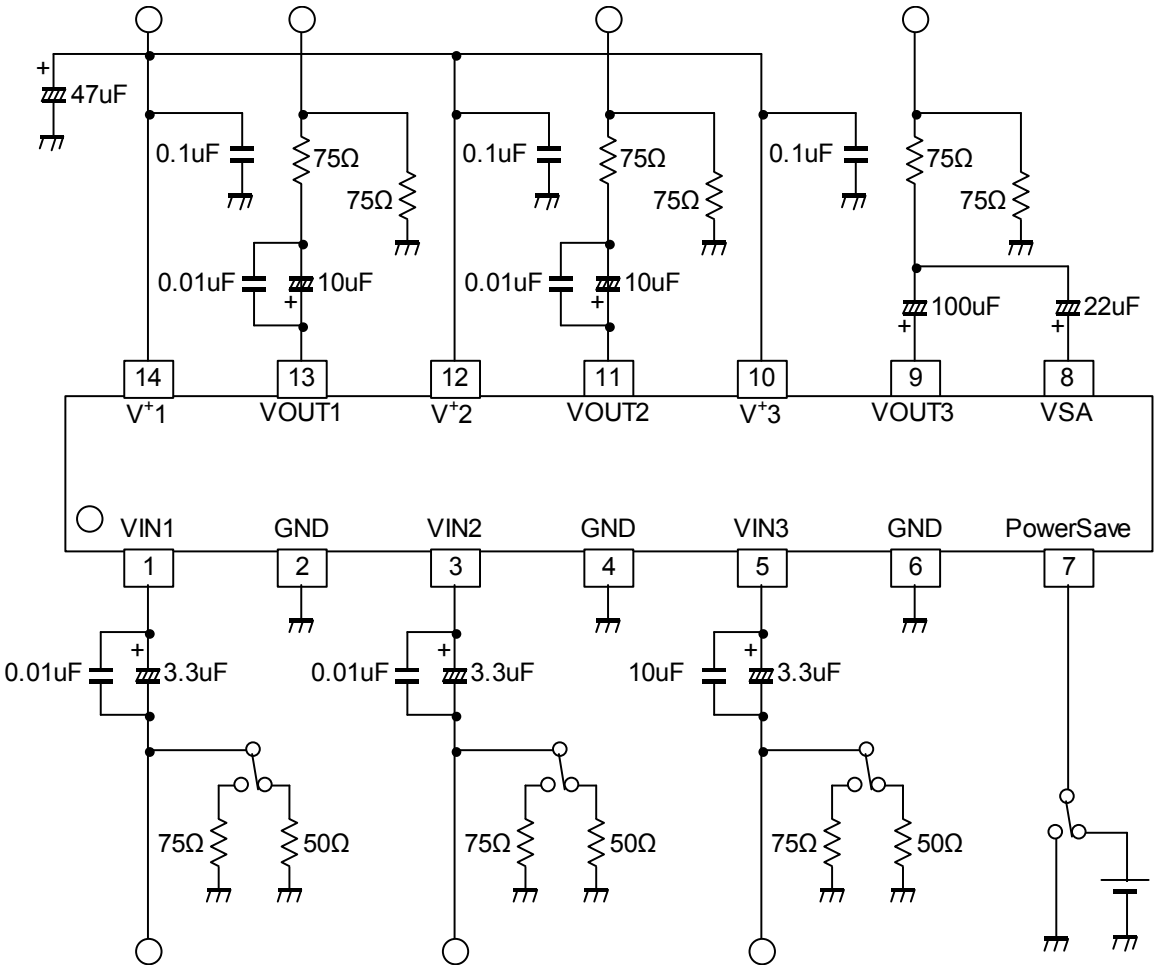
■ **EQUIVALENT CIRCUIT (V+=5V)**

PIN No.	NAME	INSIDE EQUIVALENT CIRCUIT	VOLTAGE
1 3	VIN1 VIN2		2.60V
5	VIN3		1.70V
13 11	VOUT1 VOUT2		2.55V
9	VOUT3		1.35V

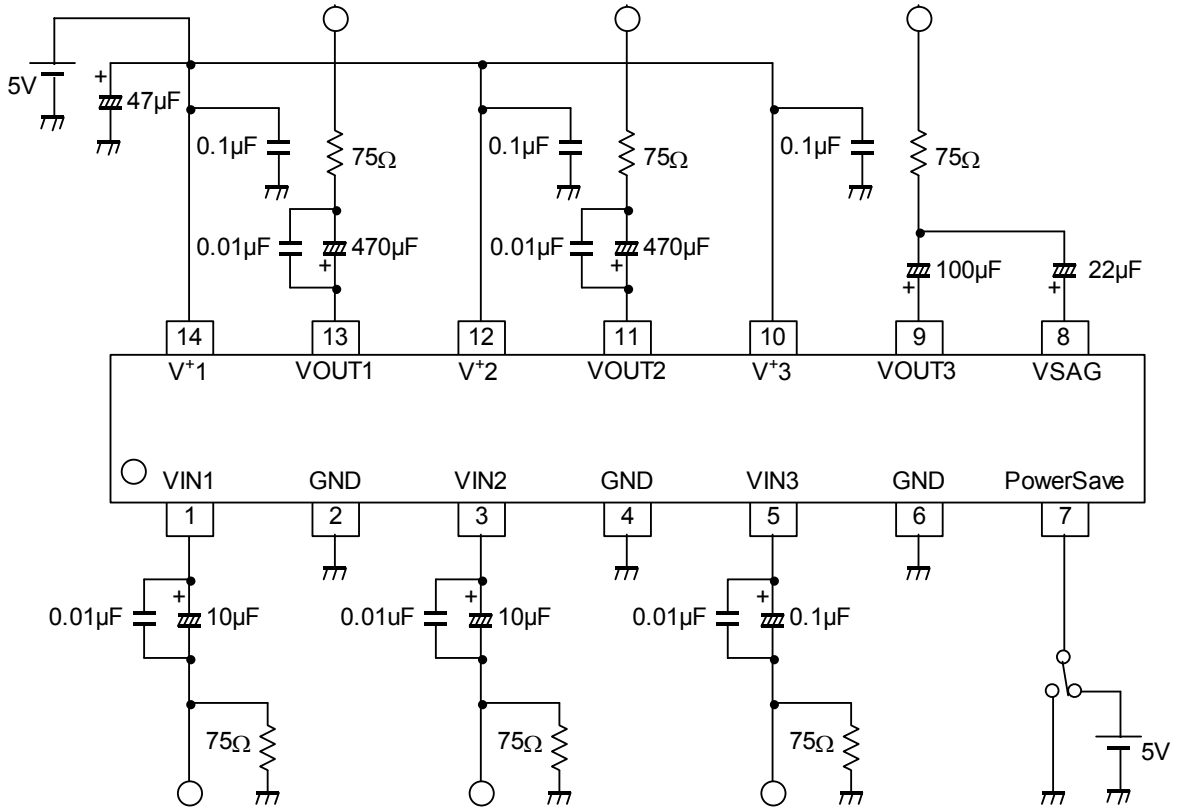
■ **EQUIVALENT CIRCUIT (V+=5V)**

PIN No.	NAME	INSIDE EQUIVALENT CIRCUIT	VOLTAGE
7	Power Save		0V
8	VSAG		1.40V
14 12 10	V^+1 V^+2 V^+3		5V
2 4 6	GND1 GND2 GND3		0V

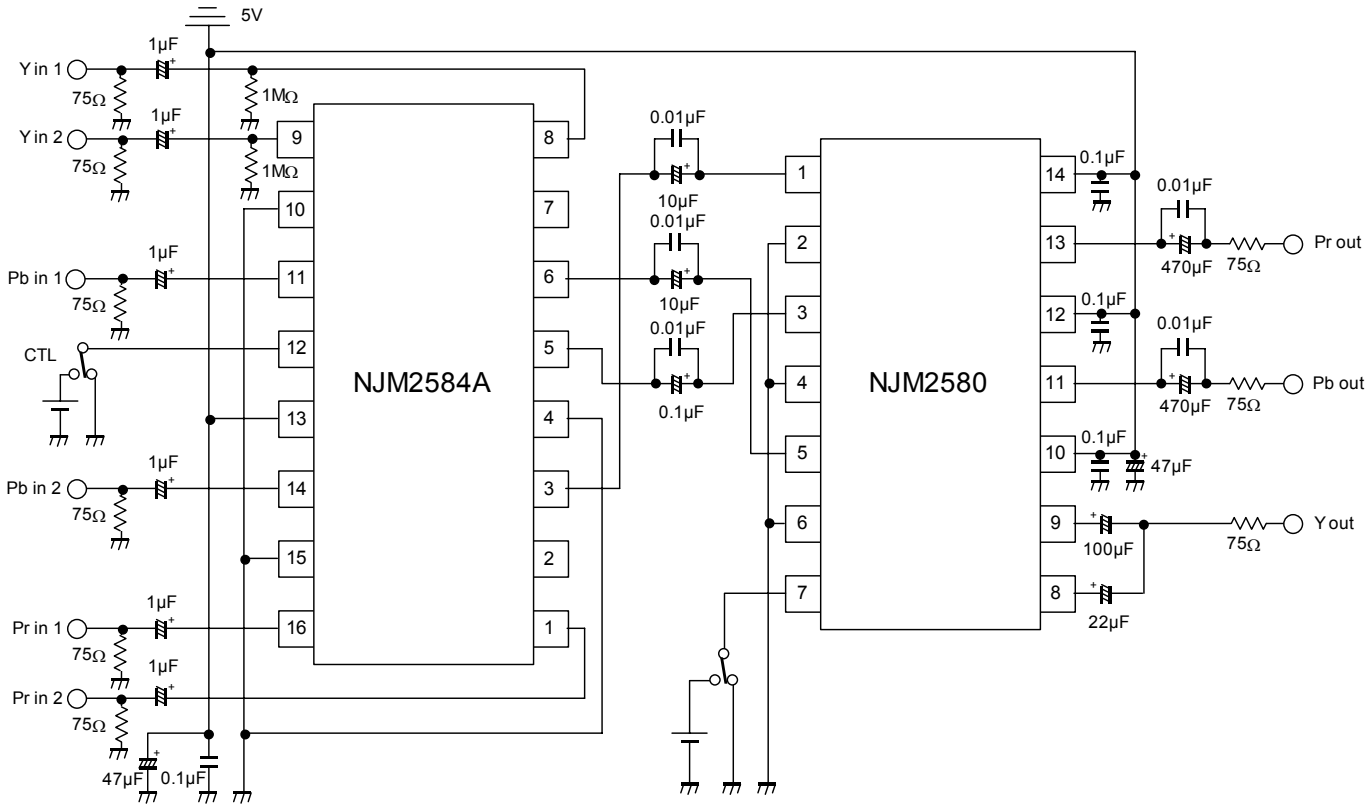
■ **TEST CIRCUIT**



■ APPLICATION CIRCUIT 1

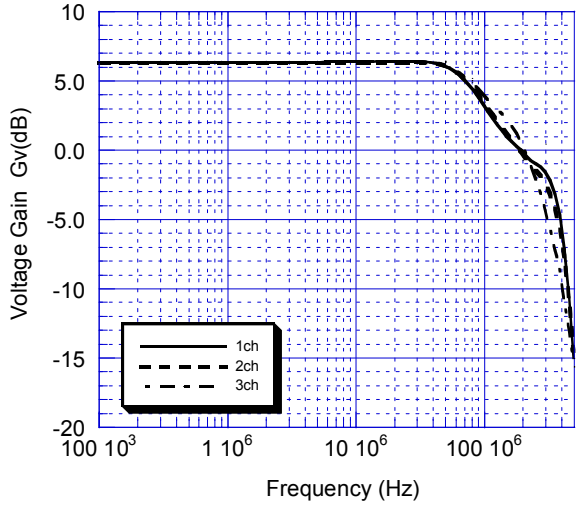


■ APPLICATION CIRCUIT 2

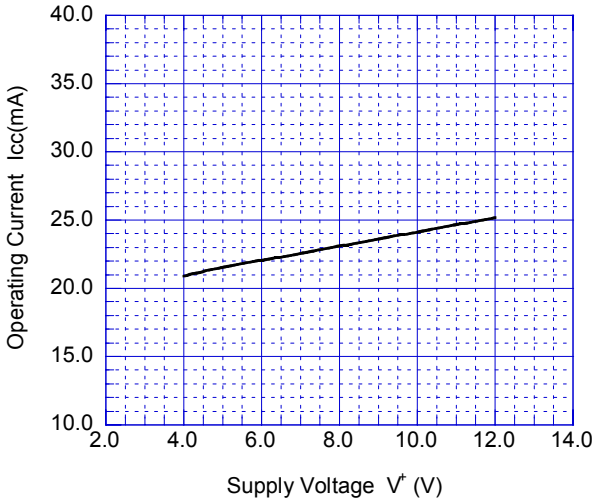


■ TYPICAL CHARACTERISTICS

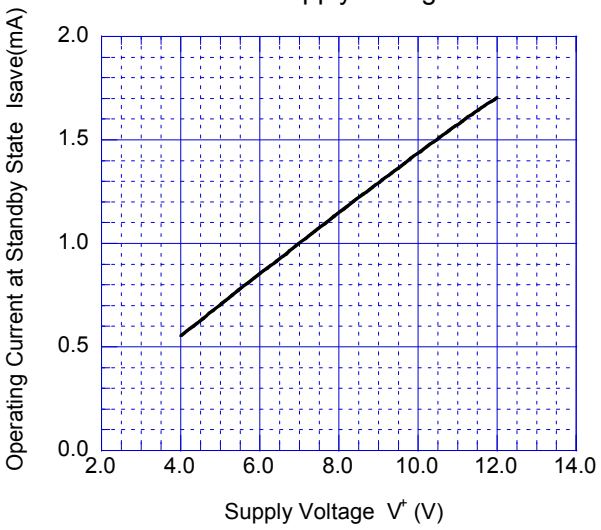
Voltage Gain vs. Frequency



Operating Current vs. Supply Voltage

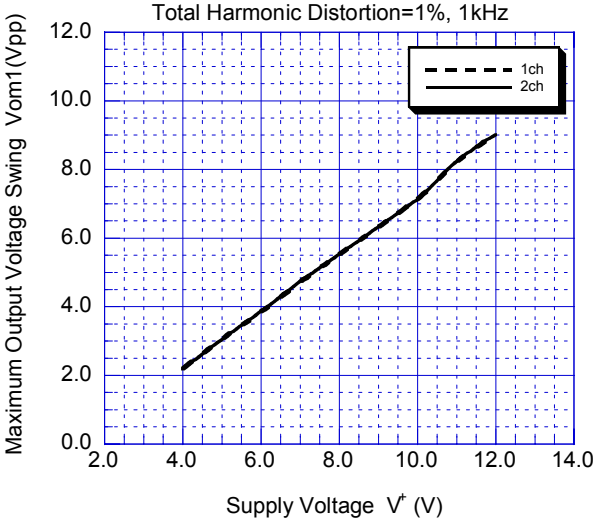


Operating Current at Standby State vs. Supply Voltage



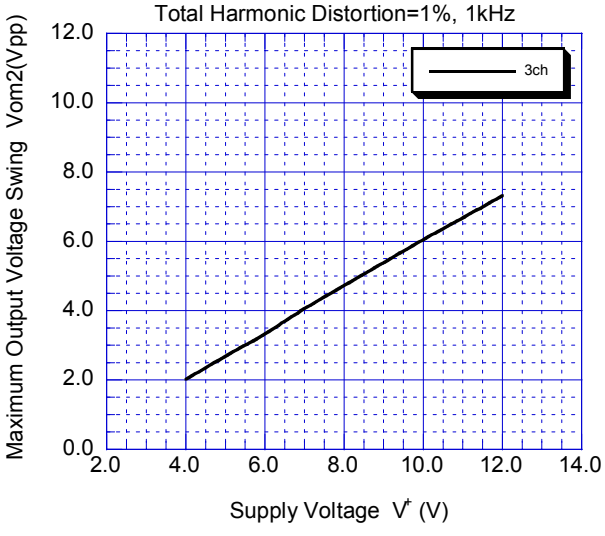
Maximum Output Voltage Swing vs. Supply Voltage (BIAS Type Input)

Total Harmonic Distortion=1%, 1kHz



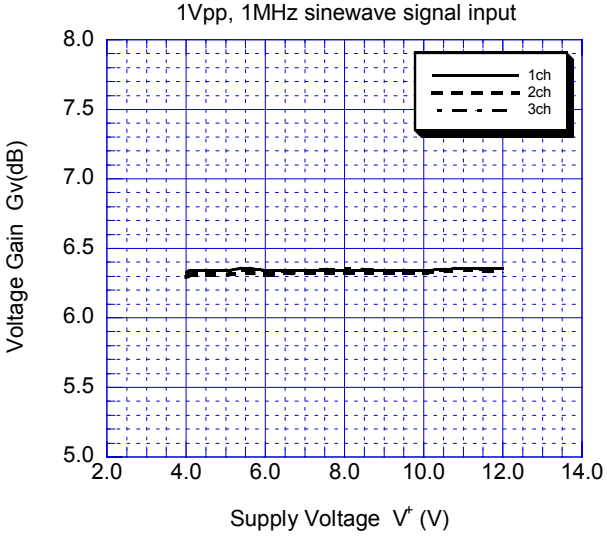
Maximum Output Voltage Swing vs. Supply Voltage (CLAMP Type Input)

Total Harmonic Distortion=1%, 1kHz



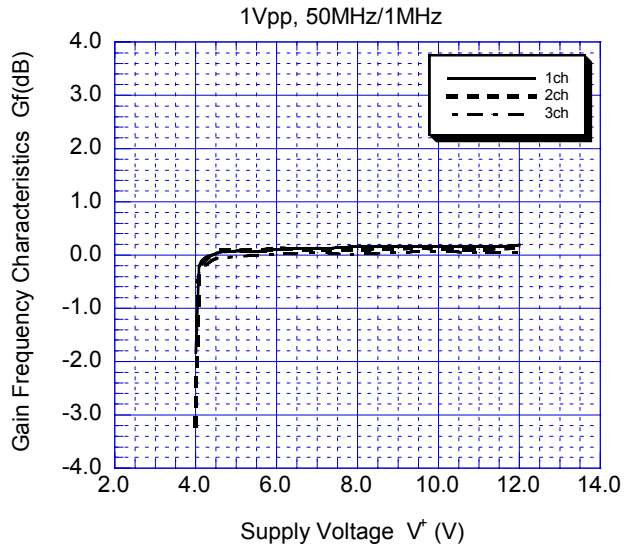
Voltage Gain vs. Supply Voltage

1Vpp, 1MHz sinewave signal input

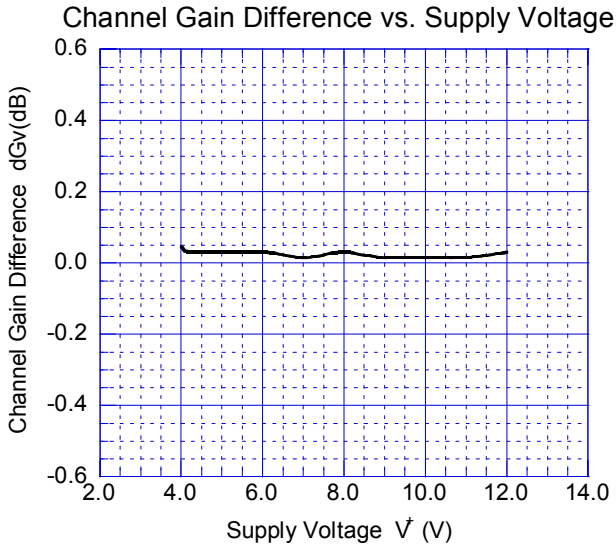


■ TYPICAL CHARACTERISTICS

Gain Frequency Characteristics vs. Supply Voltage

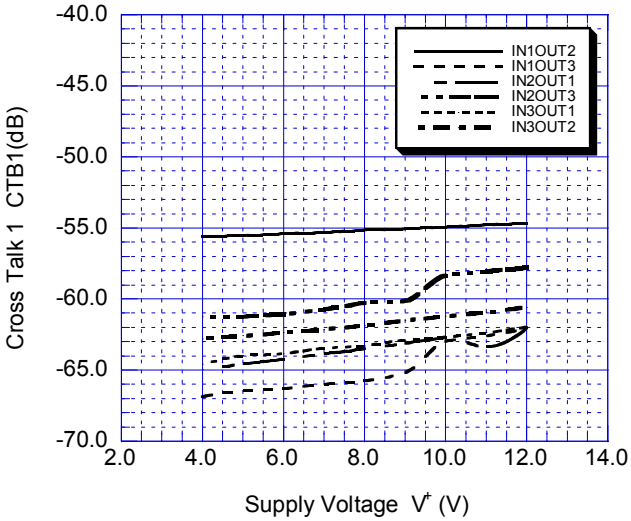


Channel Gain Difference vs. Supply Voltage



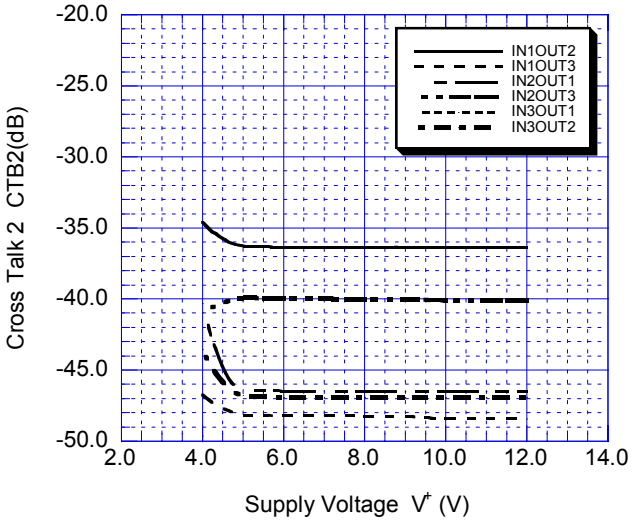
Cross Talk 1 vs. Supply Voltage

1Vpp, 4.43MHz sinewave signal input



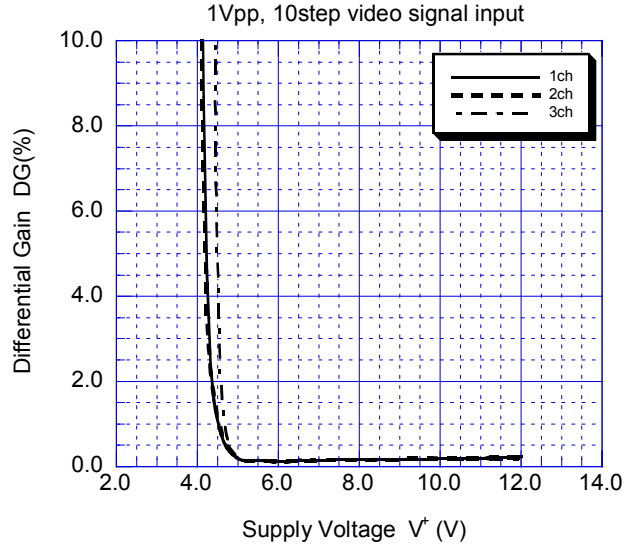
Cross Talk 2 vs. Supply Voltage

1Vpp, 50MHz sinewave signal input



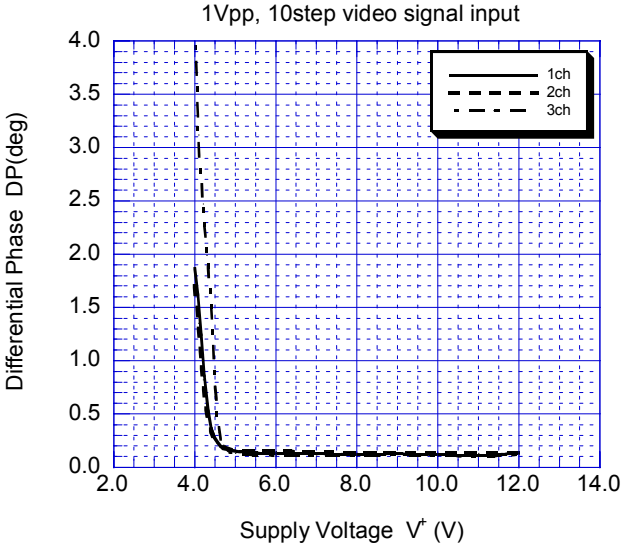
Differential Gain vs. Supply Voltage

1Vpp, 10step video signal input



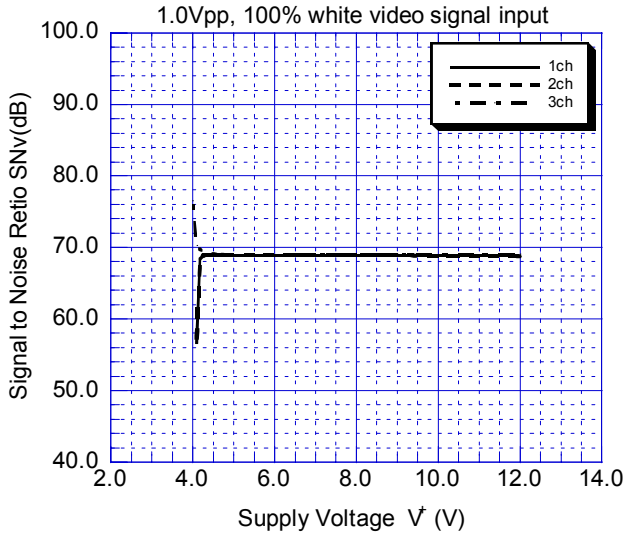
Differential Phase vs. Supply Voltage

1Vpp, 10step video signal input

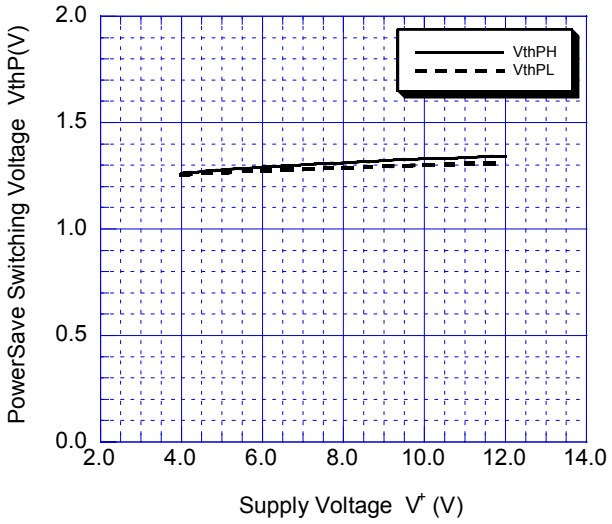


■ TYPICAL CHARACTERISTICS

Signal to Noise Retio vs. Supply Voltage



PowerSave Switching Voltage vs. Supply Voltage



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Данный компонент на территории Российской Федерации

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Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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