PRELIMINARY

WIDE BAND 3 CIRCUITS VIDEO SWITCH

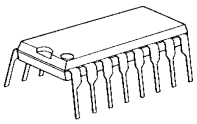
■ GENERAL DESCRIPTION

The **NJM2584** is a wide band 2-Input 1-Output 3-Circuit video switch.

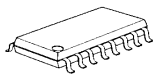
Frequency range is 50MHz for high quality AV system (D-terminal). One of input is a clamp type, and other two inputs are Bias type for comply with Y,U, and V signal.

The **NJM2584** is suitable for PTV, DTV, PDP and other high quality AV systems.

■ PACKAGE OUTLINE



NJM2584D

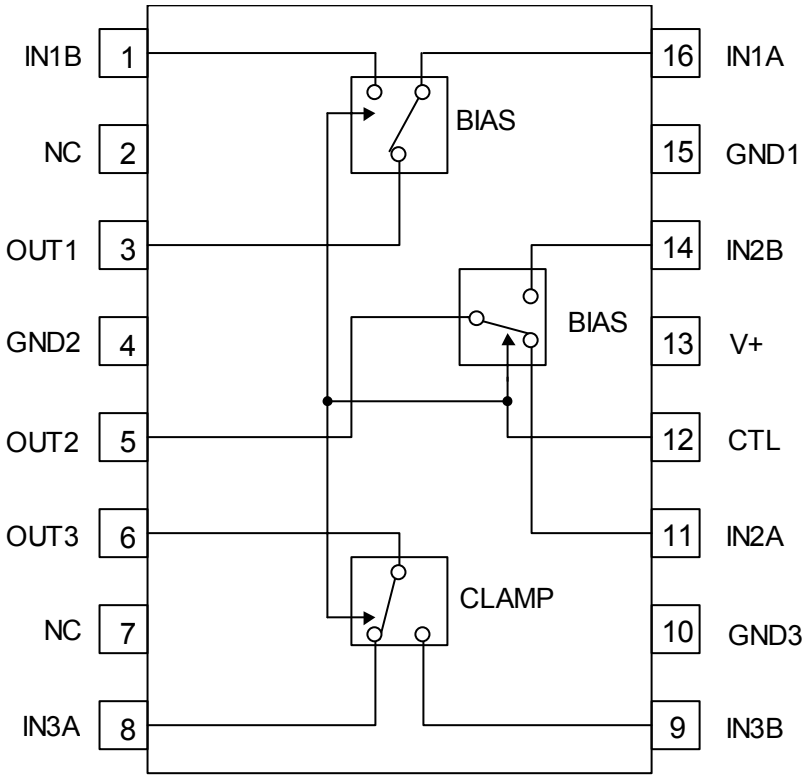


NJM2584M

■ FEATURES

- Operating Voltage 4.5 to 9.0V
- Wide frequency range 50MHz@0dB typ.
- Internal 2 input-1output 3-circuit video switch
- Operating Current 10mA typ.
- Bipolar Technology
- Package Outline DIP16, DMP16

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETERS	SYMBOL	RATINGS	UNIT
Supply Voltage	Vcc	10.0	V
Power Dissipation	P_D	(DIP) 500 (DMP) 300	mW
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +125	°C

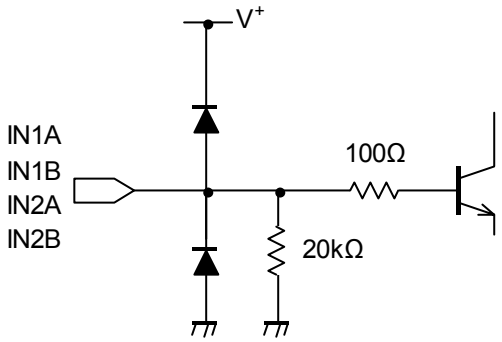
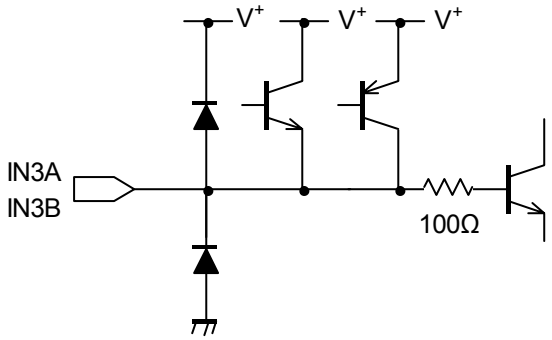
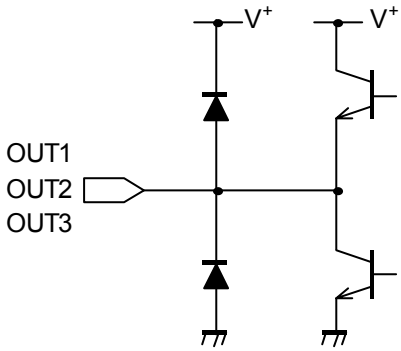
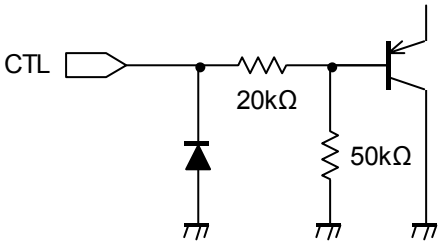
■ELECTRICAL CHARACTERISTICS (Vcc=5.0V, R_L=10kΩ, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current	I_{CC}	No signal	-	10.0	TBD	mA
Maximum input Voltage1	Vim1	BIAS input	3.2	3.5	-	Vp-p
Maximum input Voltage 2	Vim2	CLAMP input	2.4	2.6	-	Vp-p
Maximum Output Voltage 1	Vom1	BIAS input, Vin=1kHz,Sin signal,THD=1%,	3.2	3.5	-	Vp-p
Maximum Output Voltage 2	Vom2	CLAMP input, Vin=1kHz,Sin signal,THD=1%,	2.4	2.6	-	Vp-p
Voltage Gain	Gv	Vin=1MHz,2.0Vp-p Sin signal	-0.5	0	0.5	dB
Differential Gain (Channel)	ΔGvl	Vin=1MHz,2.0Vp-p Sin signal	-0.2	0	0.2	dB
Differential Gain (Block)	ΔGvB	Vin=1MHz,2.0Vp-p Sin signal	-0.2	0	0.2	dB
Band Width	f		-	50	-	MHz
Frequency Characteristic	Gf	Vin=1MHz / 50MHz ,1.0Vp-p, Sin signal	-	0	-	dB
Channel Cross talk 1	CTI1	Vin=4.43MHz,2.0Vp-p, Sin signal	-	-70	-60	dB
Channel Cross talk 2	CTI2	Vin=50MHz,2.0Vp-p, Sin signal	-	-40	-	dB
Block Cross talk 1	CTB1	Vin=4.43MHz,2.0Vp-p, Sin signal	-	-70	-60	dB
Block Cross talk 2	CTB2	Vin=50MHz,2.0Vp-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
Switch Change Voltage H Level	VthH		2.0	-	V^+	V
Switch Change Voltage L Level	VthL		0	-	0.6	V

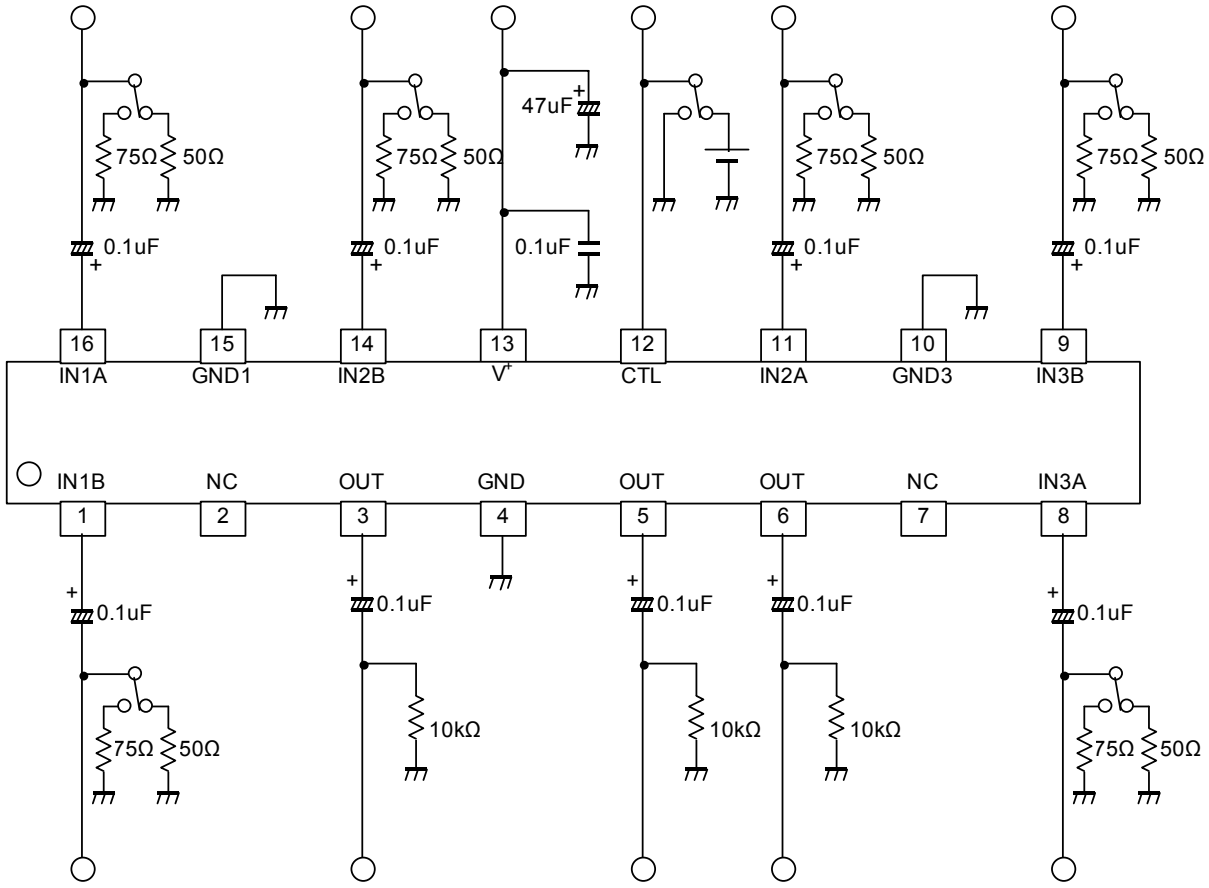
■MODE SWITCH FUNCTION

PIN	MODE	NOTES
Control	H	B channel output
	L	A channel output
	OPEN	A channel output

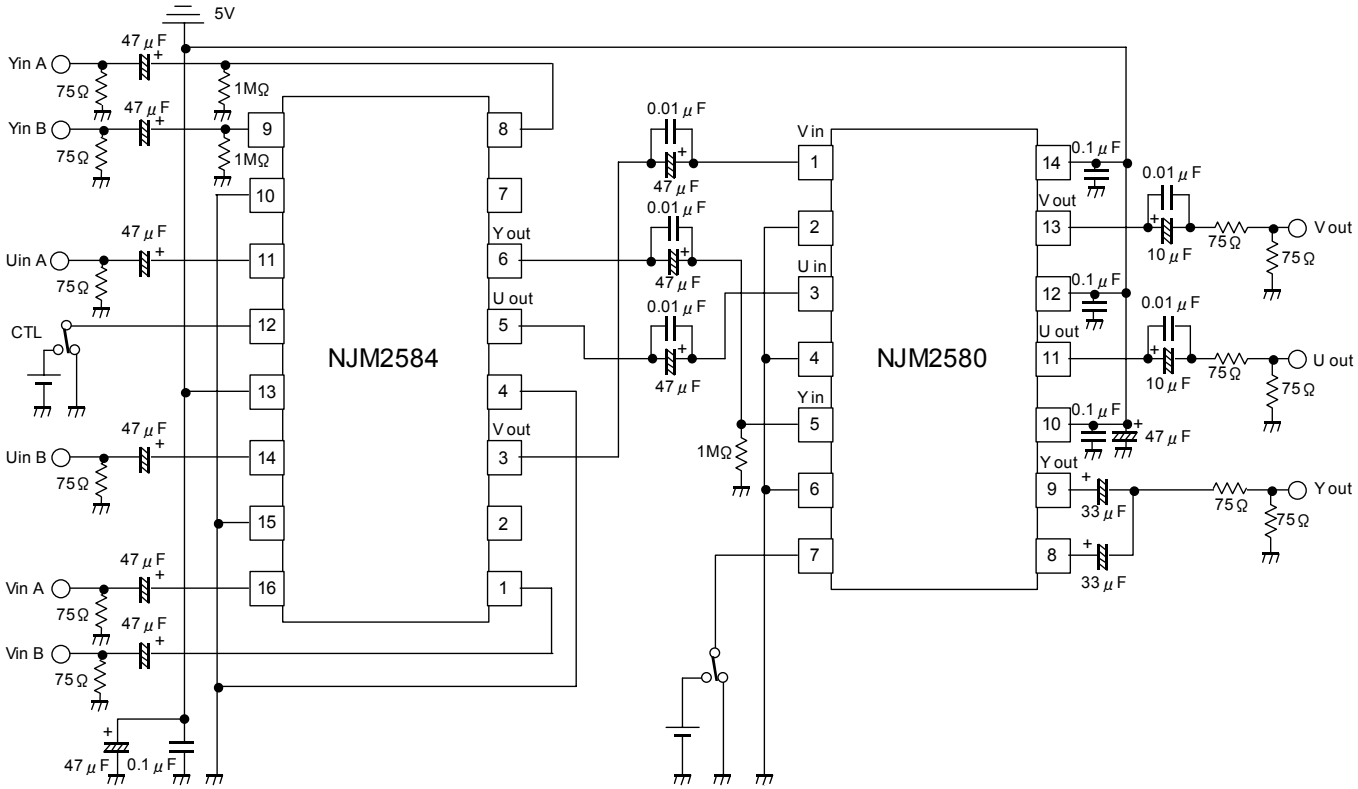
■ **EQUIVALENT CIRCUIT**

PIN No.	PIN NAME	INSIDE EQUIVALENT CIRCUIT
1 11 14 16	IN1A IN1B IN2A IN2B	
8 9	IN3A IN3B	
3 5 6	OUT1 OUT2 OUT3	
12	CTL	
13	V+	———
4 10 15	GND	———

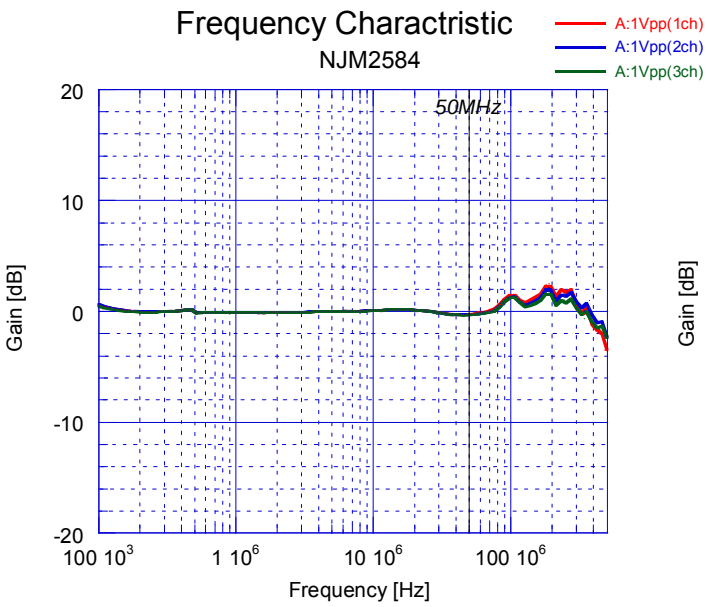
■ TEST CIRCUIT

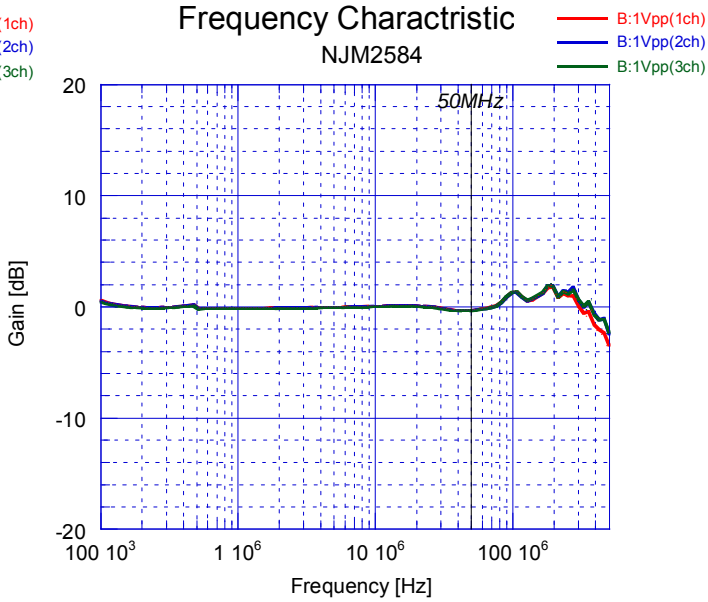


■ APPLICATION CIRCUIT



■ TYPICAL CHARACTERISTICS





■ APPLICATION

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