

Type	Silicon Multi Chip IC
Package	DIL 52-Pin Plastic Package (Shrunk Type)
Application	IC for Color TV
Function	Multi-System Color TV Signal Processor (Built-in I ² C Bus Interface)

A Absolute Maximum Ratings					
No.	Parameter	Symbol	Rating	Unit	Note
1	Storage Temperature	Tstg	-55 to +125	°C	1
2	Operating Ambient Temperature	Topr	-20 to +70	°C	1
3	Operating Ambient Pressure	Popr	$1.013 \times 10^5 + 0.61 \times 10^5$ (1.0±0.6)	Pa (atm)	
4	Operating Constant Acceleration	Gopr	9810 (1000)	m/s ² (G)	
5	Operating Shock	Sopr	4900 (500)	m/s ² (G)	
6	Supply Voltage	Vcc	Vcc1 10.5 Vcc3, VDD1 6.0	V	
7	Supply Current	Icc	I9+I16+I33 169 I35+I48 33 I41 35	mA	
8	Power Dissipation	PD	1830	mW	2

Operating Supply Voltage Range	Vcc1	8.5V to 9.5V
Operating Supply Voltage Range	Vcc3, 4	4.7V to 5.3V
Operating Supply Current Range	I41	7mA to 20mA

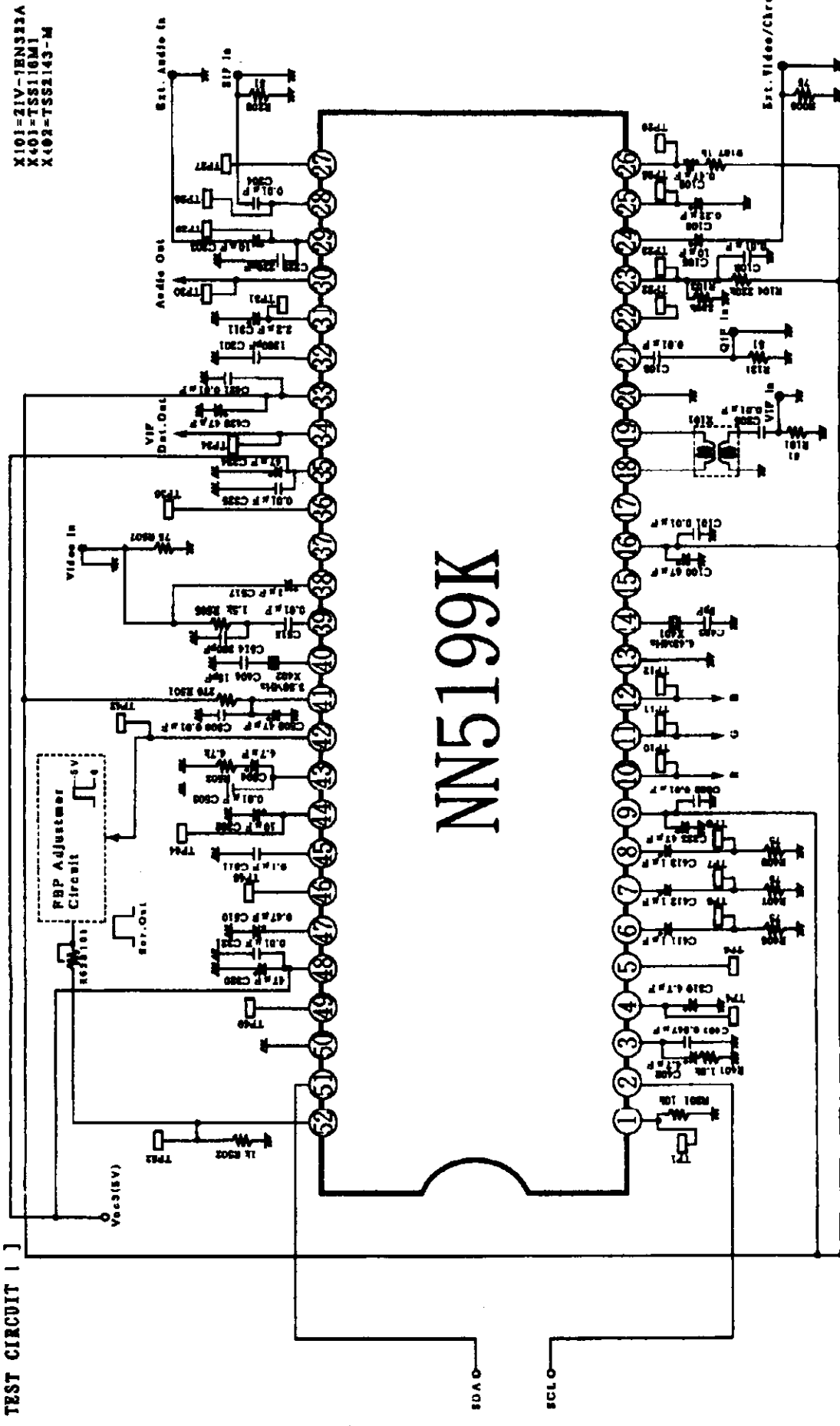
Note 1: The temperature of all items shall be Ta=25°C except storage temperature and operating ambient temperature.

Note 2: Power dissipation is at Ta=70°C (Refer to sheet No.62).

Note 3: Refer to sheet No.61 for surge and latch-up related precaution items.

[TEST CIRCUIT I]

X101=21V-TEN33A
X401=TSS116M1
X402=TSS2143-M



(A2)(15V)

D - 1

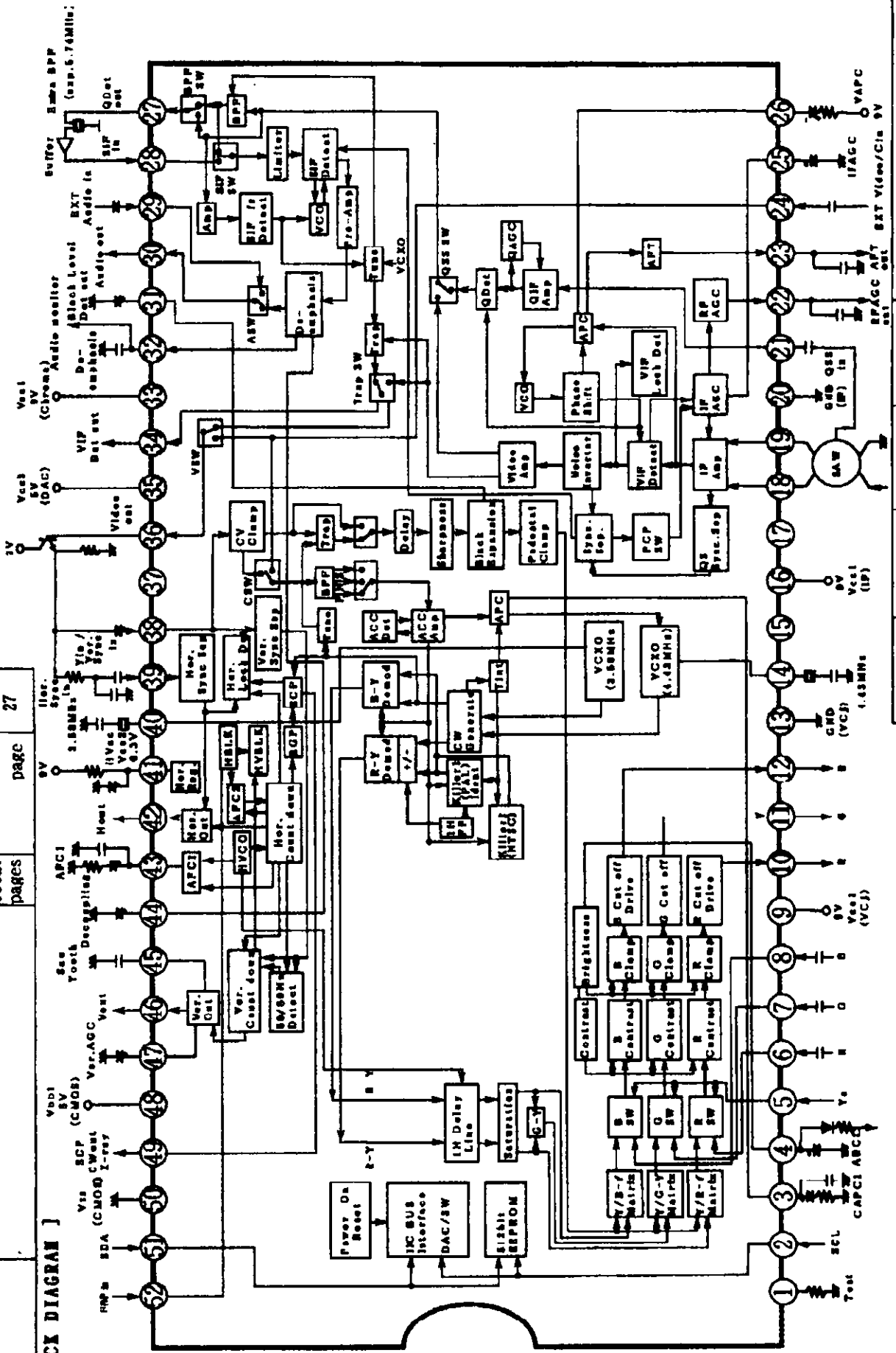
PRODUCT STANDARDS

VN5199X

total pages

27

[BLOCK DIAGRAM]



[Pin Description]

Pin NO.	Pin Description	Pin NO.	Pin Description
1	TEST	27	QIF DETECT OUTPUT
2	SCL	28	SIF INPUT
3	CHROMA APC FILTER	29	EXTERNAL AUDIO INPUT
4	ABCL	30	AUDIO OUTPUT
5	Ys INPUT	31	BLACK LEVEL DETECT FILTER
6	EXTERNAL R INPUT	32	DE-EMPHASIS FILTER /AUDIO MONITOR OUTPUT
7	EXTERNAL G INPUT	33	VCC1(CHROMA)
8	EXTERNAL B INPUT	34	VIF DETECT OUTPUT
9	VCC1(VCJ)	35	VCC3(DAC)
10	R OUTPUT	36	VIDEO OUTPUT
11	G OUTPUT	37	TEST2
12	B OUTPUT	38	Y INPUT/VERTICAL SYNC. INPUT
13	GND(VCJ)	39	HORIZONTAL SYNC. INPUT
14	CHROMA VCX01(4.43MHz)	40	CHROMA VCX02(3.58MHz)
15	N.C	41	VCC2(HORIZONTAL VCC)
16	VCC1(VIF/SIF)	42	HORIZONTAL PULSE OUTPUT
17	N.C	43	HORIZONTAL APC1 FILTER
18	VIF INPUT(1)	44	AUDIO DE-COUPLING FILTER
19	VIF INPUT(2)	45	VERTICAL SAW TOOTH
20	GND(VIF/SIF)	46	VERTICAL OUTPUT
21	QIF INPUT	47	VERTICAL AGC FILTER
22	RF AGC OUTPUT	48	VDD(CMOS)
23	AFT OUTPUT	49	SCP/CW OUTPUT/X-RAY
24	EXTERNAL VIDEO/CHROMA INPUT	50	VSS(CMOS)
25	IF AGC FILTER	51	SDA
26	VIF APC FILTER	52	FBP INPUT

Eff. Date

Eff. Date

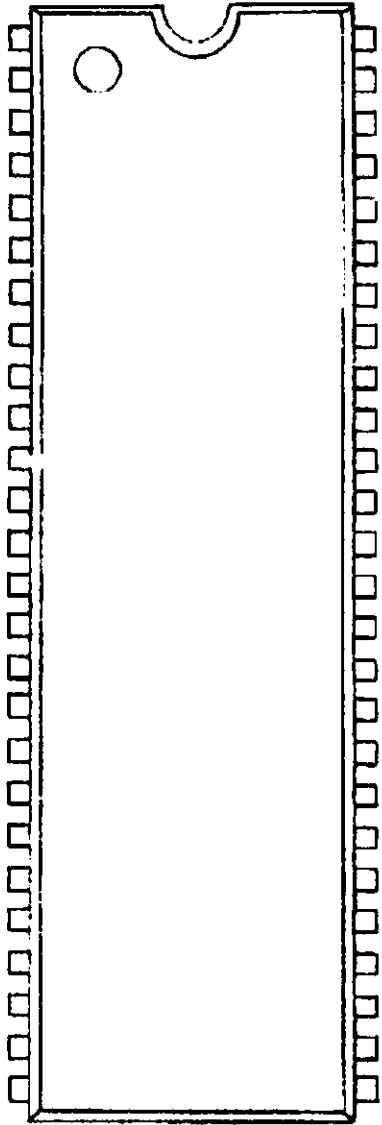
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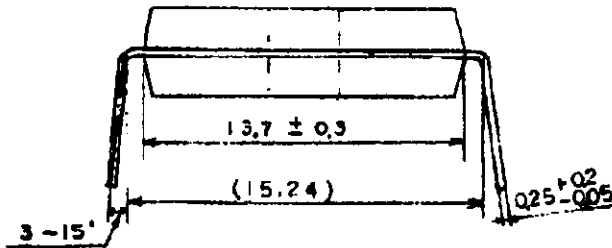
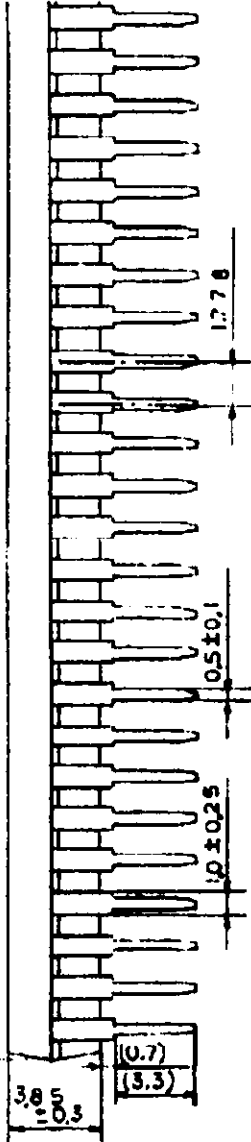
Package Name

NFS-52D

Unit: mm



47.7 ± 0.3

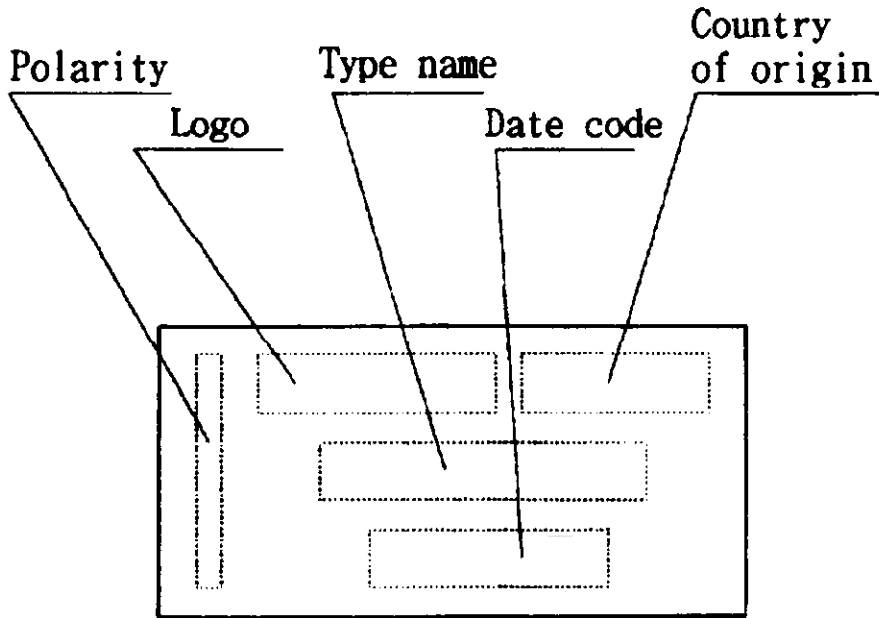


Package : NFS-52D

Method : ~~Ink Marking~~ · Laser Marking

Layout : Standard

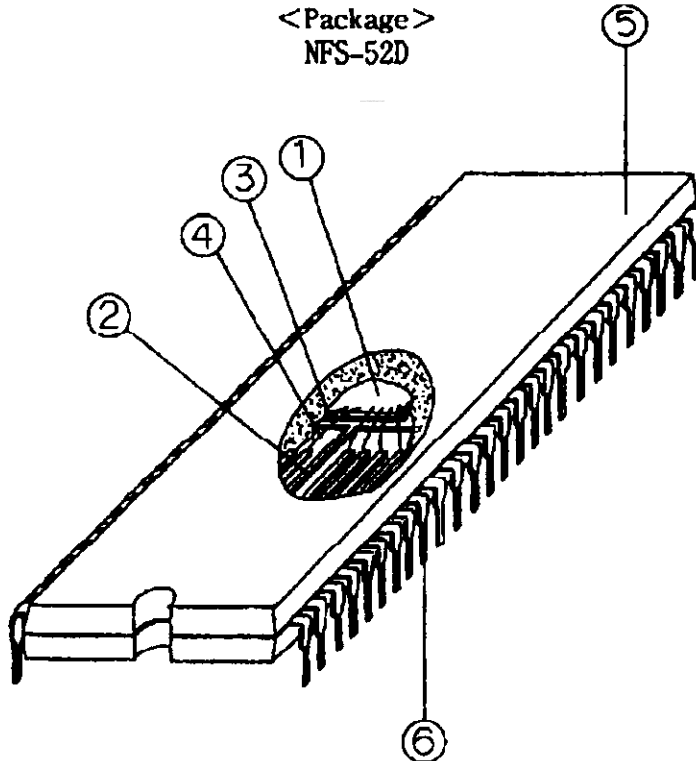
~~Special Designated Rank/ Customer Code~~



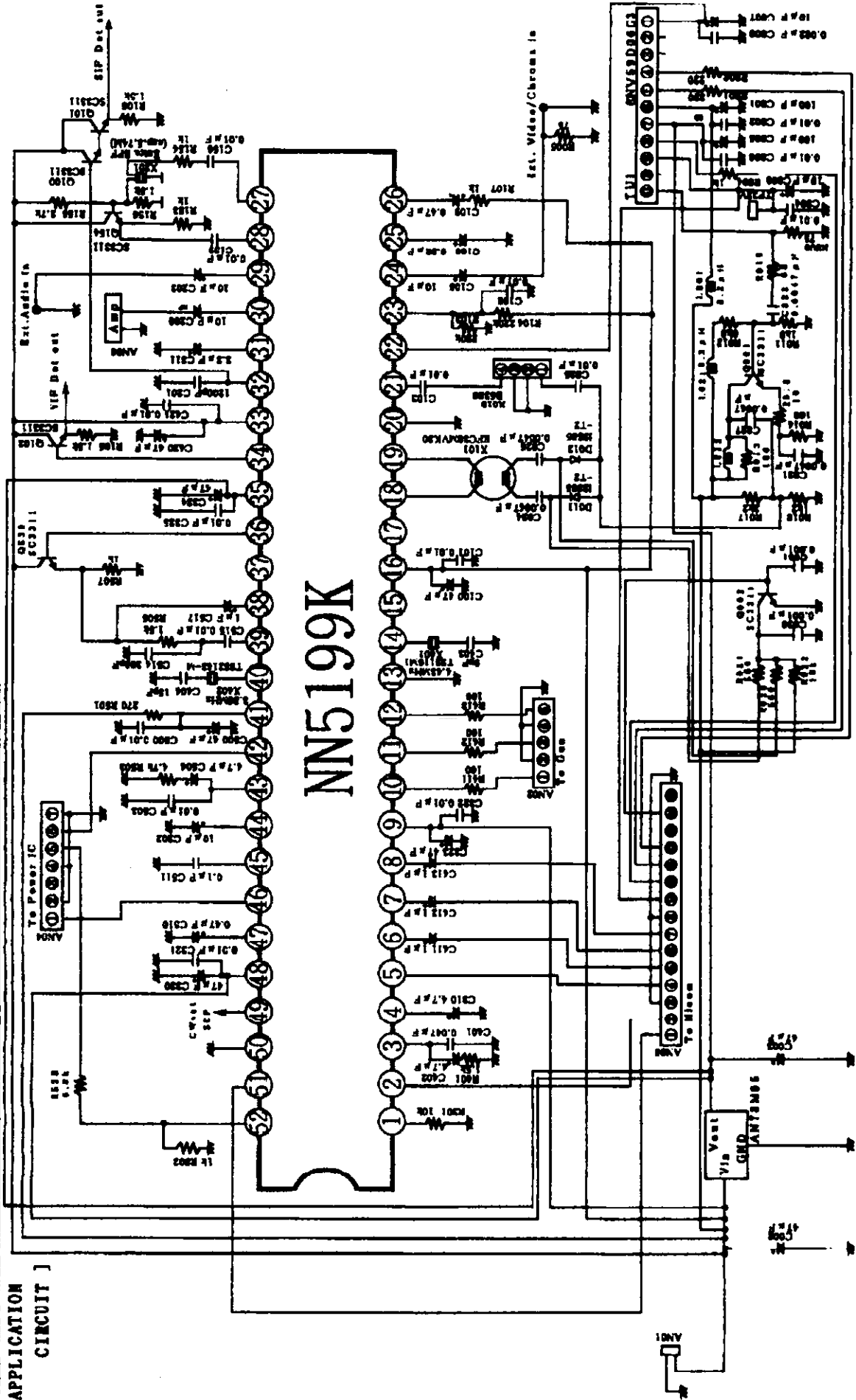
[Structure]

Chip surface passivation	SiN	①
Lead frame material	Cu group	②,⑥
Internal lead surface treatment	Ag plating	②
External lead surface treatment	Solder dip	⑥
Chip mounting method	Ag paste	③
Wire bonding method	Thermosonic bonding	④
Wire material, diameter	Au, Diameter: 30 μ m	④
Mold material	Epoxy	⑤
Molding method	Multipunger mold	⑤

<Package>
NFS-52D



[APPLICATION
CIRCUIT]



NN5199K

G		Recommended Conditions				
No.	Item	Symbol	Recommended Range		Unit	Note
1	Pin Voltage	V_1	0	11	V	
2	Pin Voltage	V_2	0	6	V	
3	Pin Voltage	V_5	0	6	V	
4	Pin Voltage	V_{22}	0	V_{17}	V	
5	Pin Voltage	V_{23}	0	V_{17}	V	
6	Pin Voltage	V_{52}	0	V_9	V	
7	Circuit current	I_{10}	-4	4	mA	
8	Circuit current	I_{11}	-4	4	mA	
9	Circuit current	I_{12}	-4	4	mA	
10	Circuit current	I_{27}	-2	2	mA	
11	Circuit current	I_{28}	-0.15	0.15	mA	
12	Circuit current	I_{29}	-0.5	0.5	mA	
13	Circuit current	I_{34}	-2	2	mA	
14	Circuit current	I_{38}	-0.8	0.1	mA	
15	Circuit current	I_{39}	-0.8	0.1	mA	
16	Circuit current	I_{42}	-5	0.1	mA	
17	Circuit current	I_{46}	-2	2	mA	
18	Circuit current	I_{49}	-0.3	1	mA	

Note : Do not apply voltage or current externally to any pin not listed in this table.
As for circuit current, (+) is the current flowing into the IC and (-) is the current flowing out of the IC.