

To: SKWORTH

Attn: Miss Susan Cheng - Purchasing

CODE No.											total pages	69	page	1
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4702-020990-JY

PRODUCT STANDARDS

PART No. :		NN5099K
PACKAGE CODE No.	NFS-52D	

IC DIVISION

MATSUSHITA ELECTRONICS CORPORATION

_____	CHECKED BY	CHECKED BY	CREATED BY
_____	M. Hiramatsu	T. Konishi	N. Okamoto

DATE CREATED					



Type	Silicon Multi Chip IC
Package	DIL 52-Pin Plastic Package (Shrunk Type)
Application	IC for Color TV
Function	PAL/NTSC 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	-40 to +125	°C	1
2	Operating Ambient Temperature	Topr	-20 to +70	°C	1
3	Operating Ambient Pressure	Popr	$1.013 \times 10^5 \pm 0.61 \times 10^5$ (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, Vdd 6.0	V	
7	Supply Current	Icc	I ₉₊₁₁₆₊₁₃₃ 169 I ₃₅₊₁₄₈ 33 I ₄₁ 35	mA	
8	Power Dissipation	Pd	1481	mW	2

Operating Supply Voltage Range	Vcc1	8.1V to 9.5V
Operating Supply Voltage Range	Vcc3	4.4V to 5.0V
Operating Supply Voltage Range	Vdd1	4.7V to 5.3V
Operating Supply Current Range	I41	7mA to 20mA

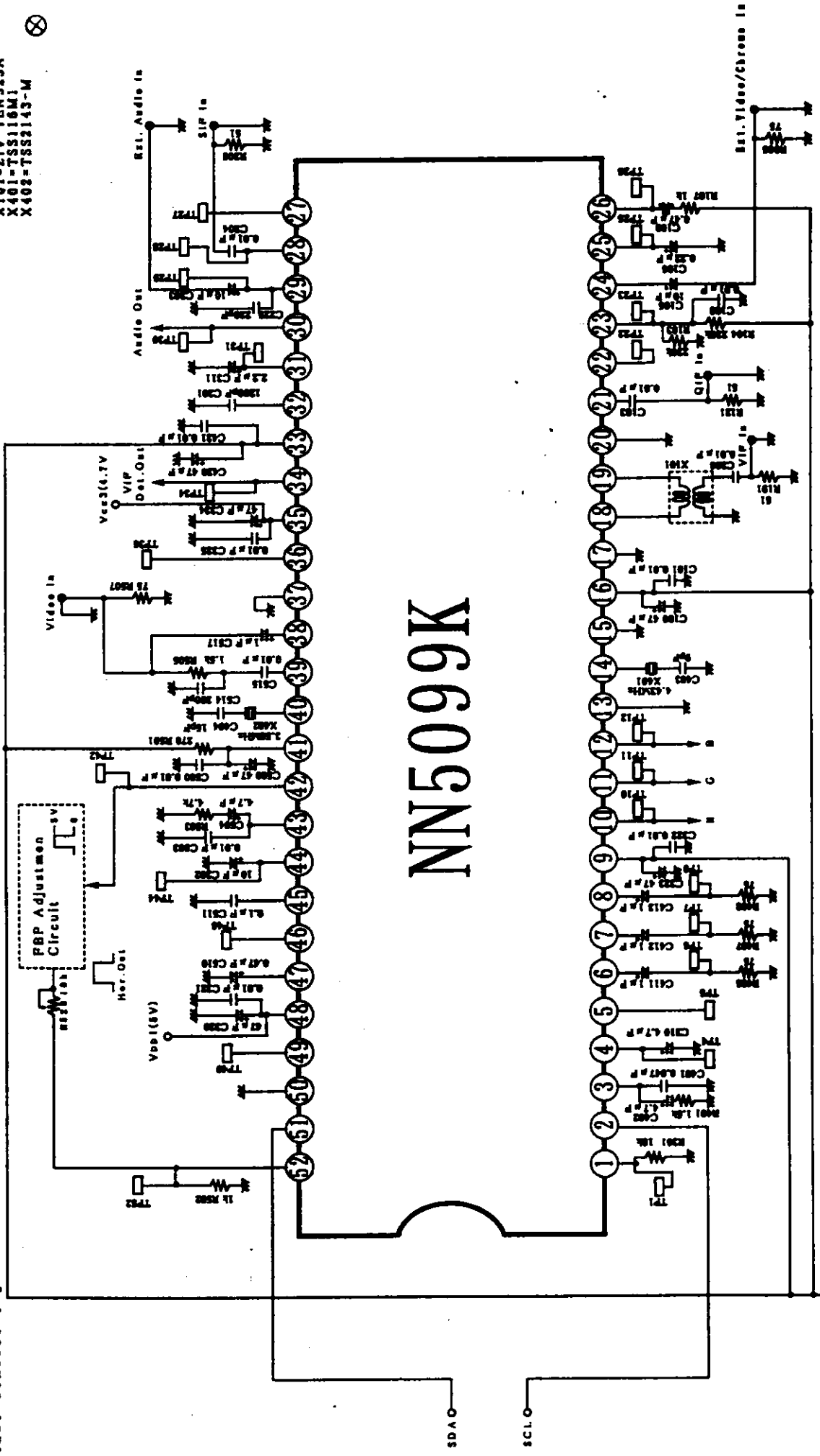
Note 1: The temperature of all items shall be Ta=25°C except storage temperature and operating ambient temperature.

Note 2: The above power dissipation shows the package power dissipation at Ta=70°C (Refer to sheet No.69).

Note 3: Refer to sheet No.68 for surge and latch-up related precaution items.

[TEST CIRCUIT 1]

X101-21V-7BN323A
X401-TSS116M1
X402-TSS2143-M



NN5099K

PRODUCT STANDARDS

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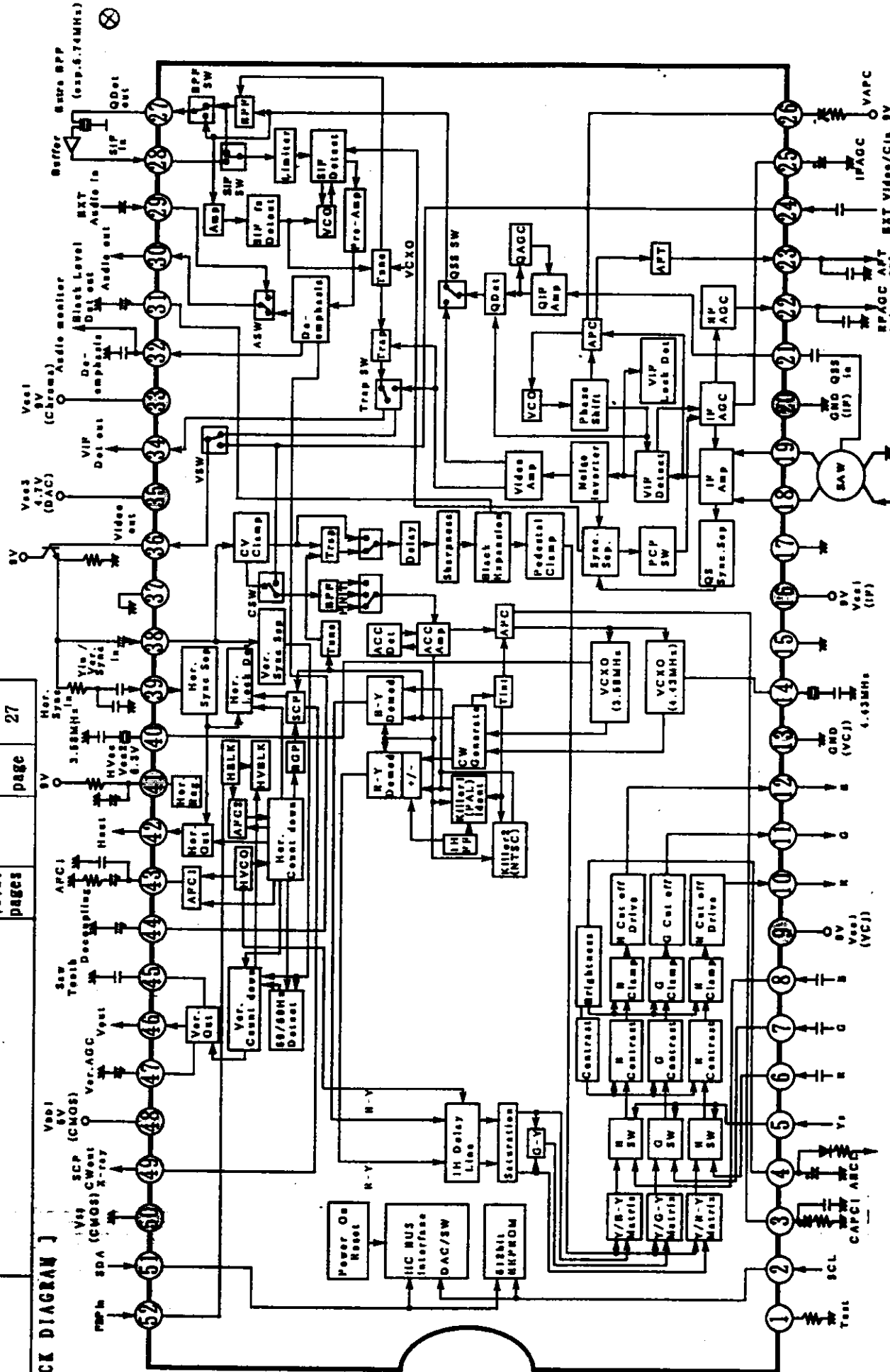
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D - I

[BLOCK DIAGRAM]





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[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 AFC1 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



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PRODUCT STANDARDS

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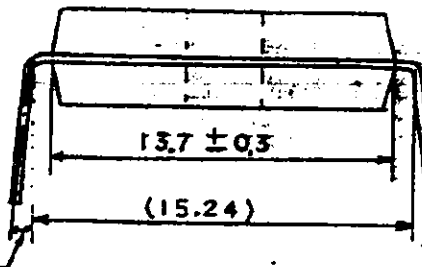
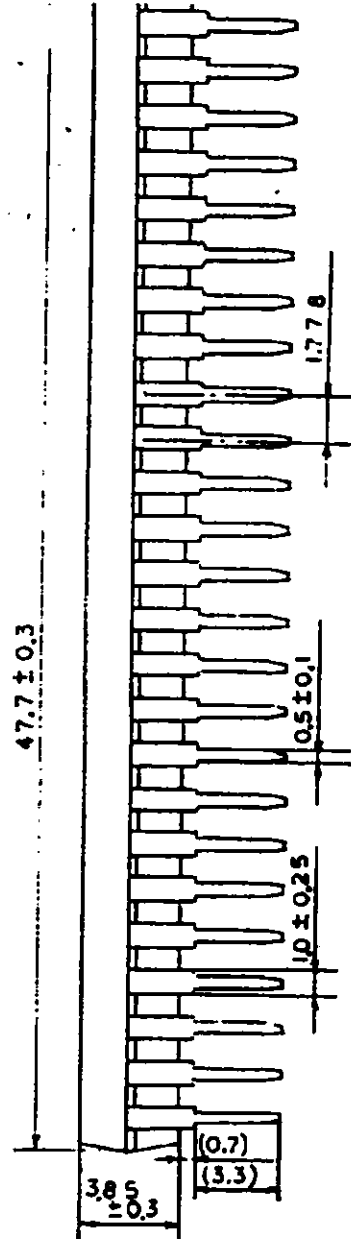
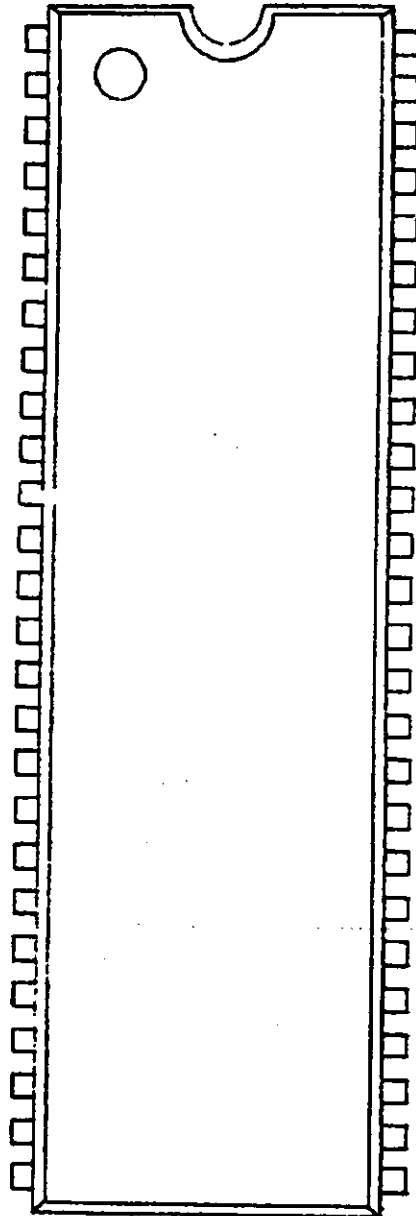
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Package Name

NFS-52D

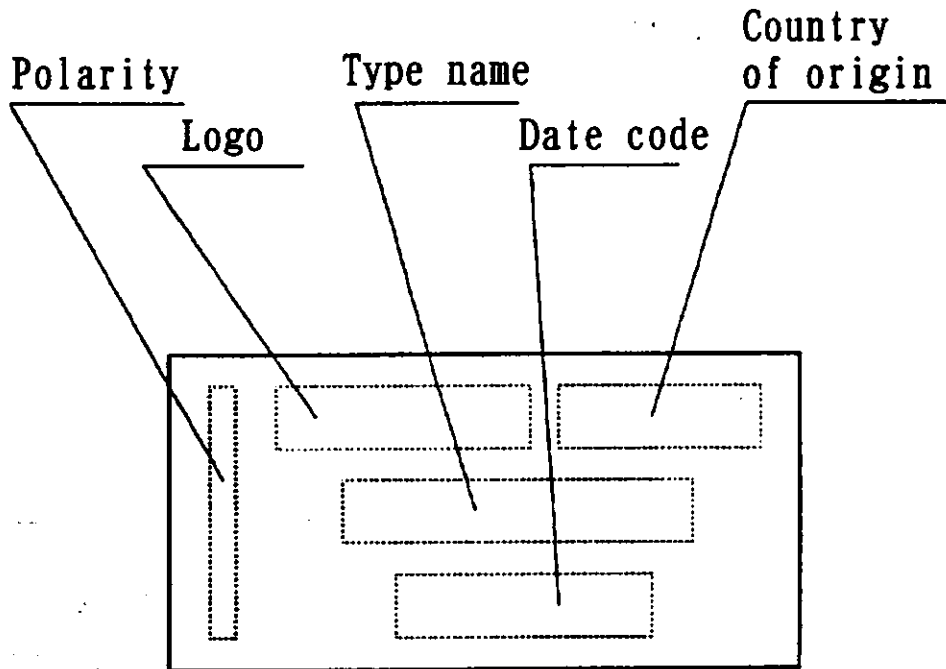
Unit: ■



Q25^{+0.02}_{-0.05}

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		total pages	page	36

Package : NFS-52D
Method : Ink Marking · Laser Marking
Layout : Standard Special <Designated/Rank/Custom Code>





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PRODUCT STANDARDS

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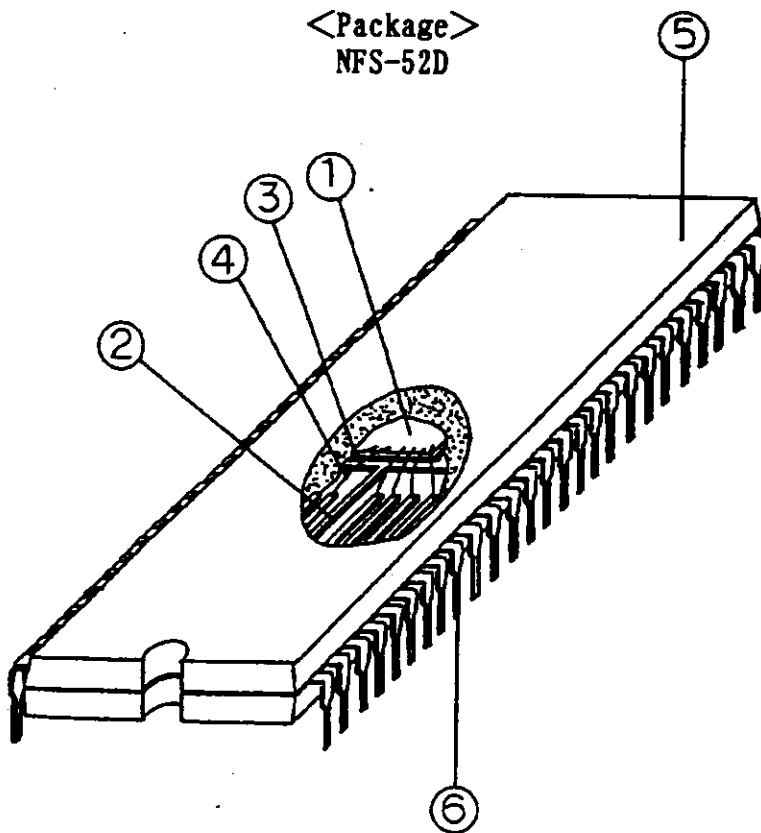
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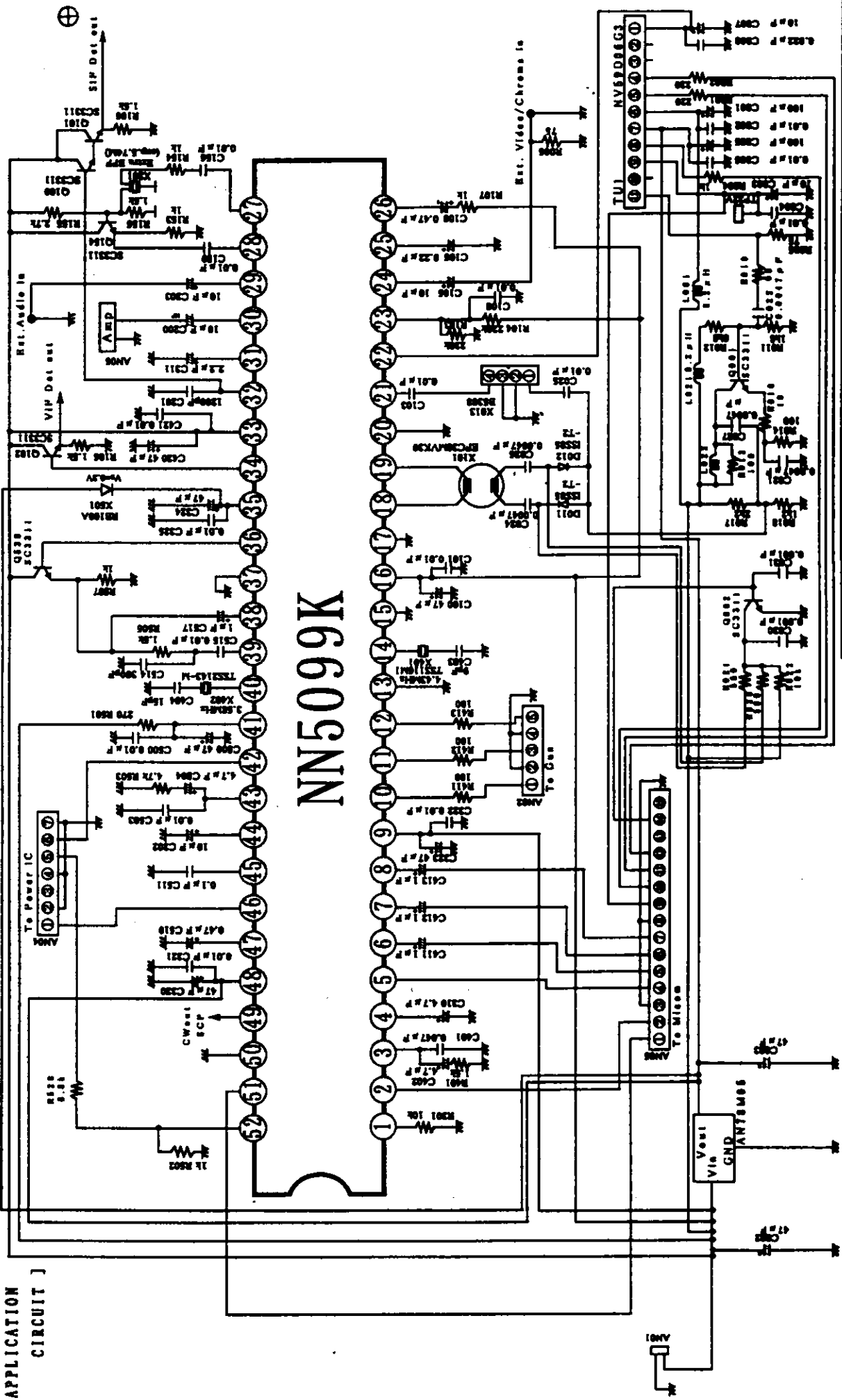
[Structure]

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	Multiplunger mold	⑤

<Package>
NFS-52D



[APPLICATION
CIRCUIT]



NN509K