

Attn: Miss Susan Cheng - Purchasing

4702-620990-JY

PRODUCT STANDARDS

PART No. : NN5099K

NFS-52D

IC DIVISION

MATSUSHITA ELECTRONICS CORPORATION

CHECKED BY

CREATED BY

T. Konishi

N. Okamoto

DATE CREATED



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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	I ₄₁	7mA to 20mA

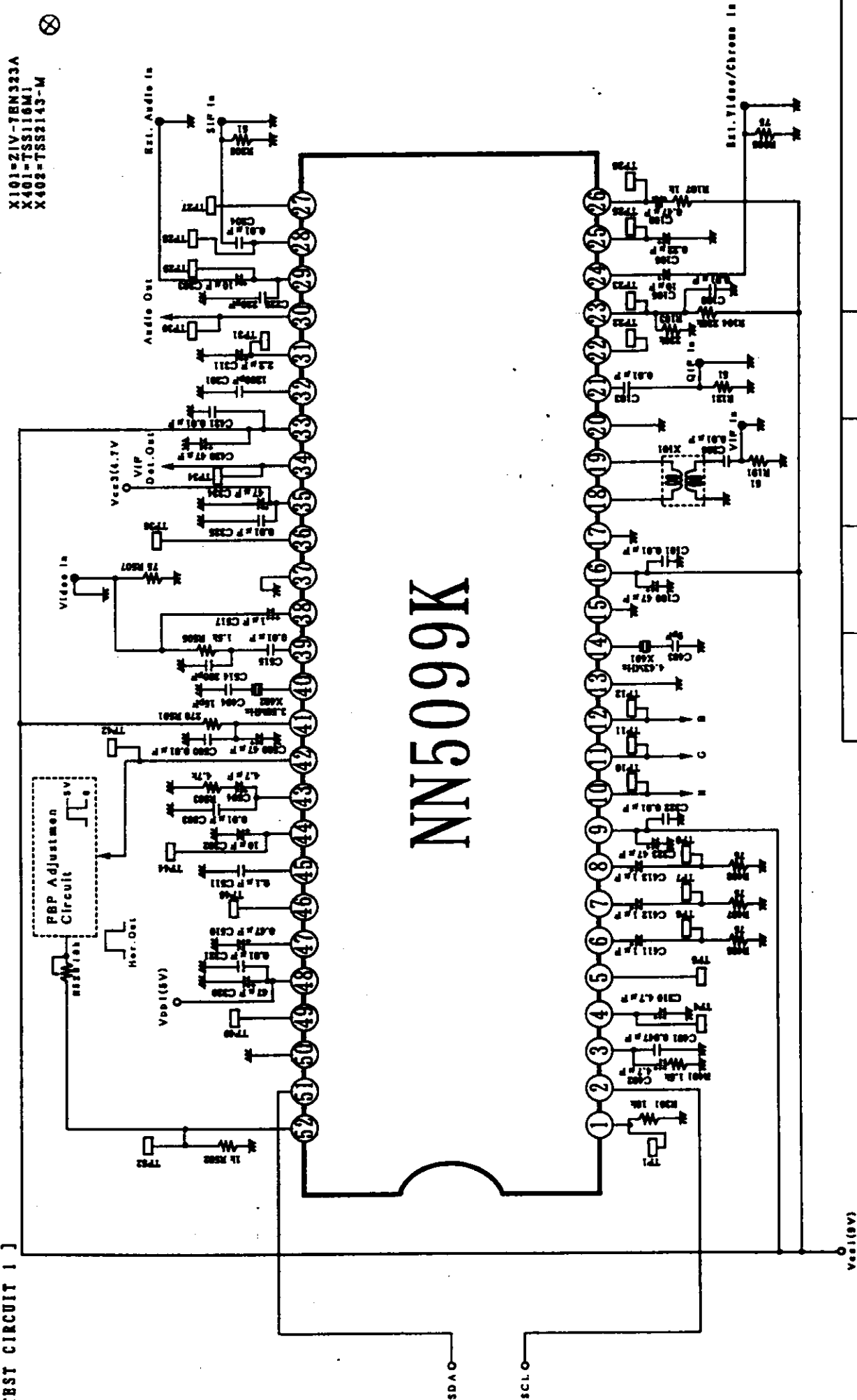
Note 1: The temperature of all items shall be Ta=25°C except storage temperature and operating ambient temperature.

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.

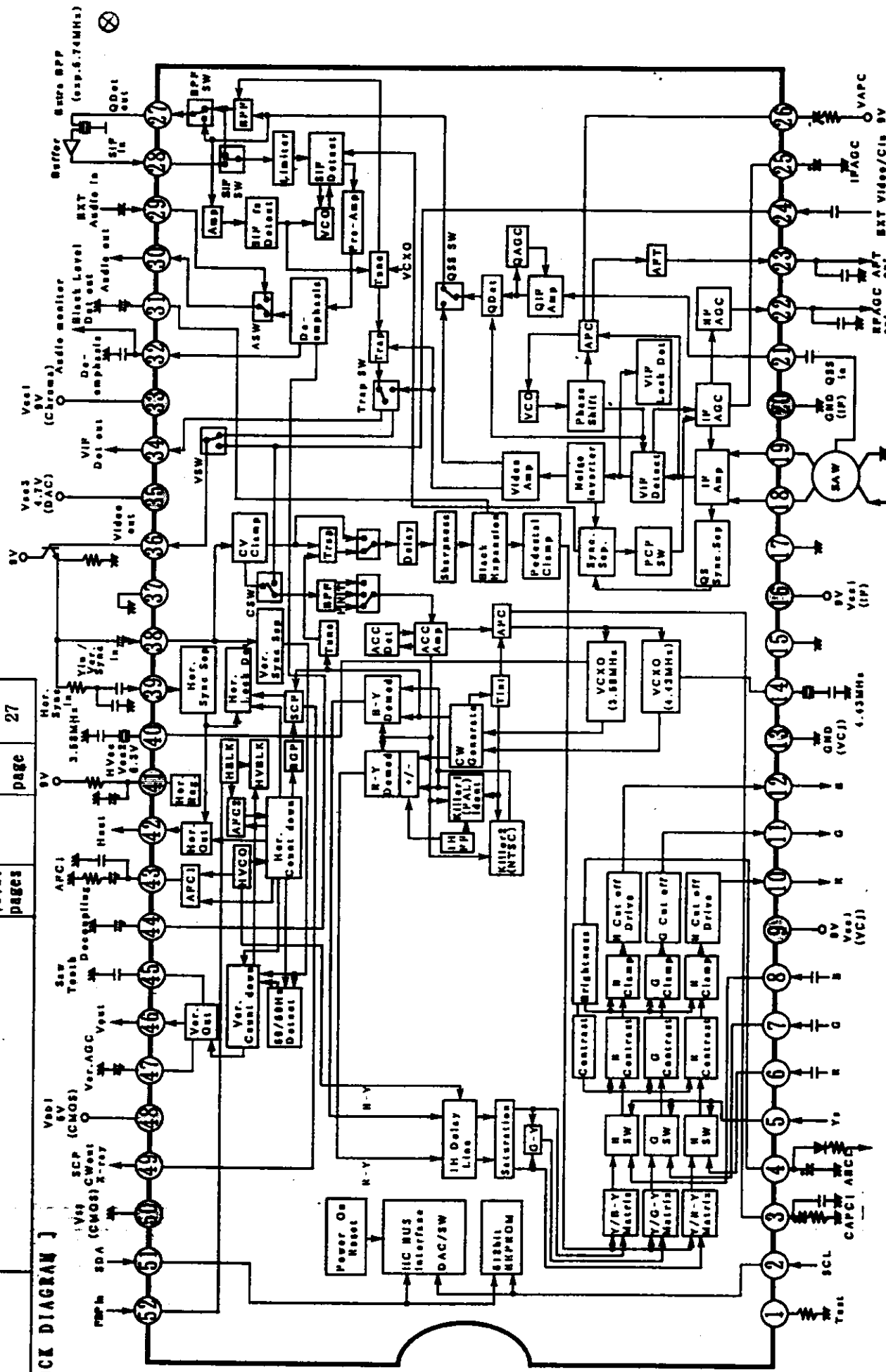
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[TEST CIRCUIT 1]



NN5099K

[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 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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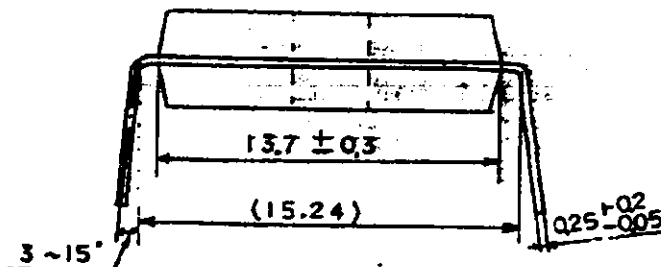
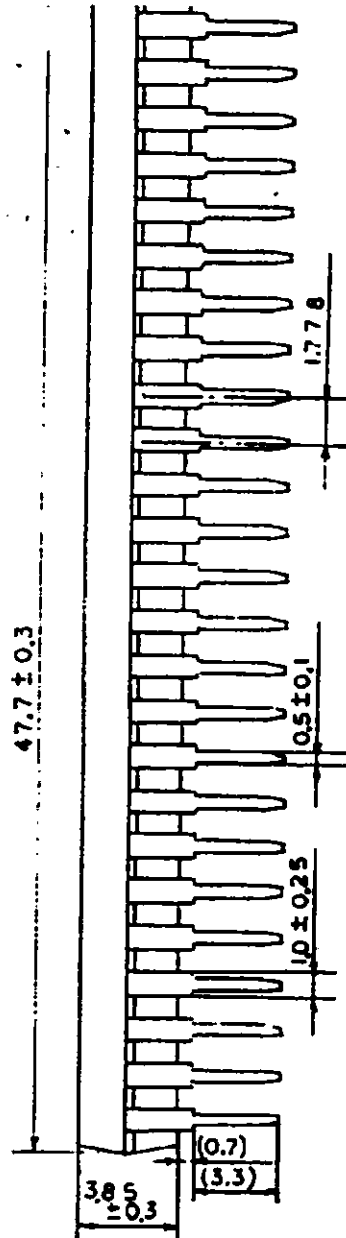
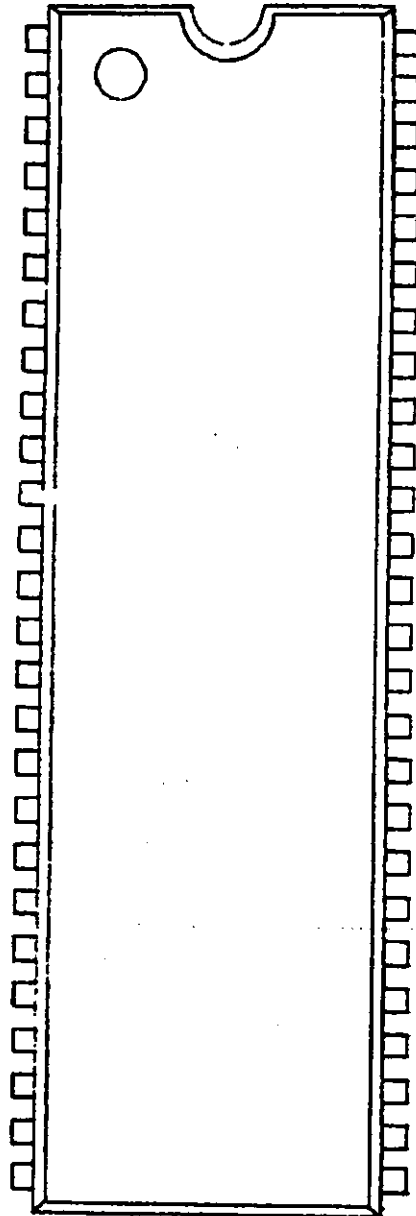
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Package Name

NFS-52D

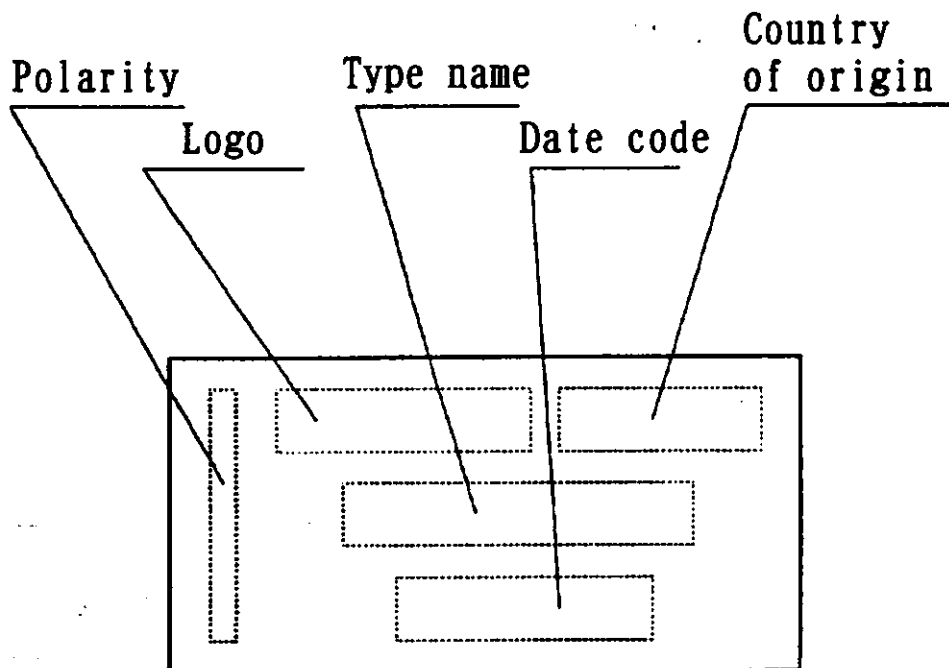
Unit: ■



Package : NFS-52D

Method : ~~Ink Marking~~ • Laser Marking

Layout : Standard

~~Special <Designated/Rank/Custom Code>~~



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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