G8D-380H-A

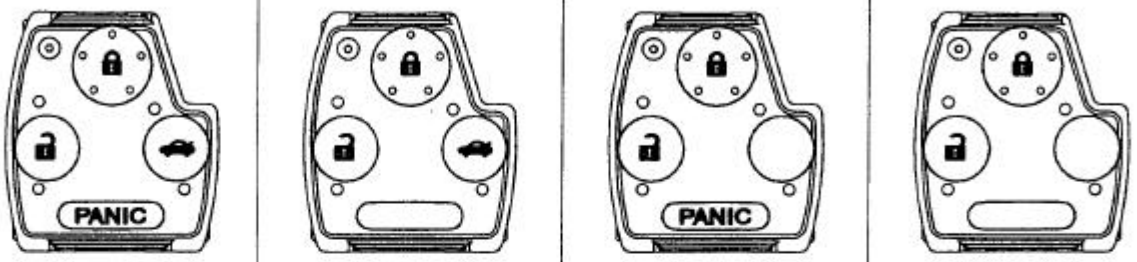
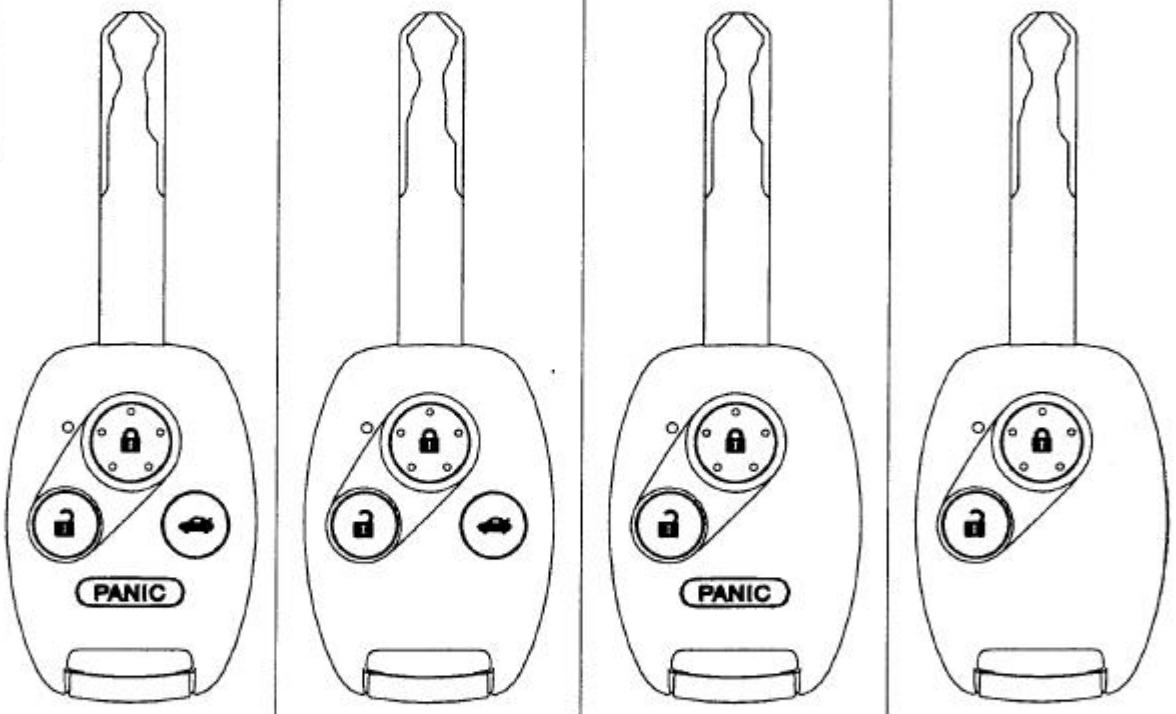
Transmitter, RF Keyless Entry System

<As for the undermentioned product,the amount of SW is different by the same circuit>

【Product No.】	【Function of SW】	【Amount of SW】
G8D-380H-A-NP	LOCK,UNLOCK,BOOT RELESE	3SW
G8D-380H-A-NT	LOCK,UNLOCK,PANIC	3SW
G8D-380H-A-NTP	LOCK,UNLOCK	2SW

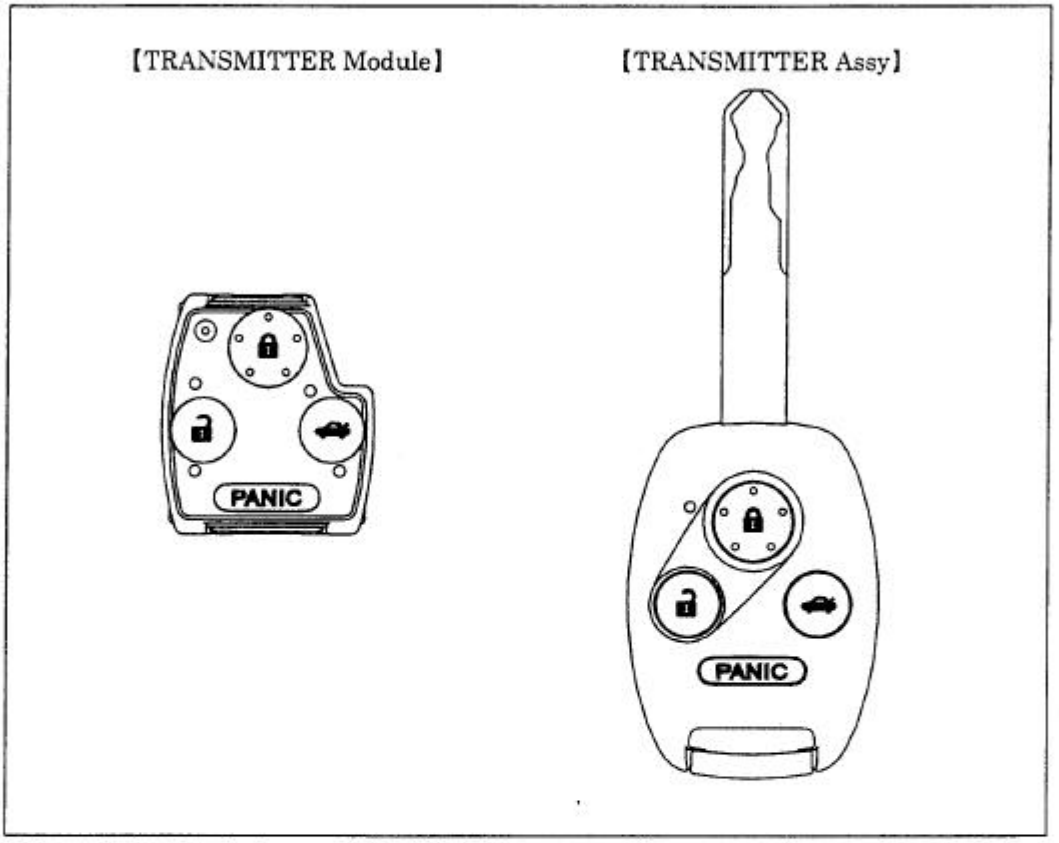
Table of contents

Rough sketch

	G8D-380H-A	G8D-380H-A-NP	G8D-380H-A-NT	G8D-380H-A-NPT
Module				
Assy				

2. User's manual (provisionally)

REMOTE TRANSMITTER



You can lock and unlock your vehicle with the remote transmitter.

LOCK

When you push the LOCK button, all the doors will lock.

You cannot lock any of the doors with the remote transmitter if any door is open or the key is in the ignition switch.

UNLOCK

When you push the UNLOCK button , all the doors will unlock.

You cannot unlock any of the doors with the remote transmitter if the key is in the ignition switch.

When you push the UNLOCK button more than about 1.0 second , the window will open.

BOOT RELEASE

To open the boot , push the BOOT RELEASE button for approximately one second.

The boot will not open if the key is in the ignition switch.

PANIC MODE

Panic mode allows you to remotely sound your vehicle's horn to attract attention. To activate this mode , press and hold the PANIC button for about one seconds. Your vehicle's horn will beep for about 30 seconds.

To cancel Panic mode before 30 seconds , press any button on the remote transmitter. You can also turn the ignition switch is in ON.

3. Block diagram

This is the block diagram concerning to the transmitter

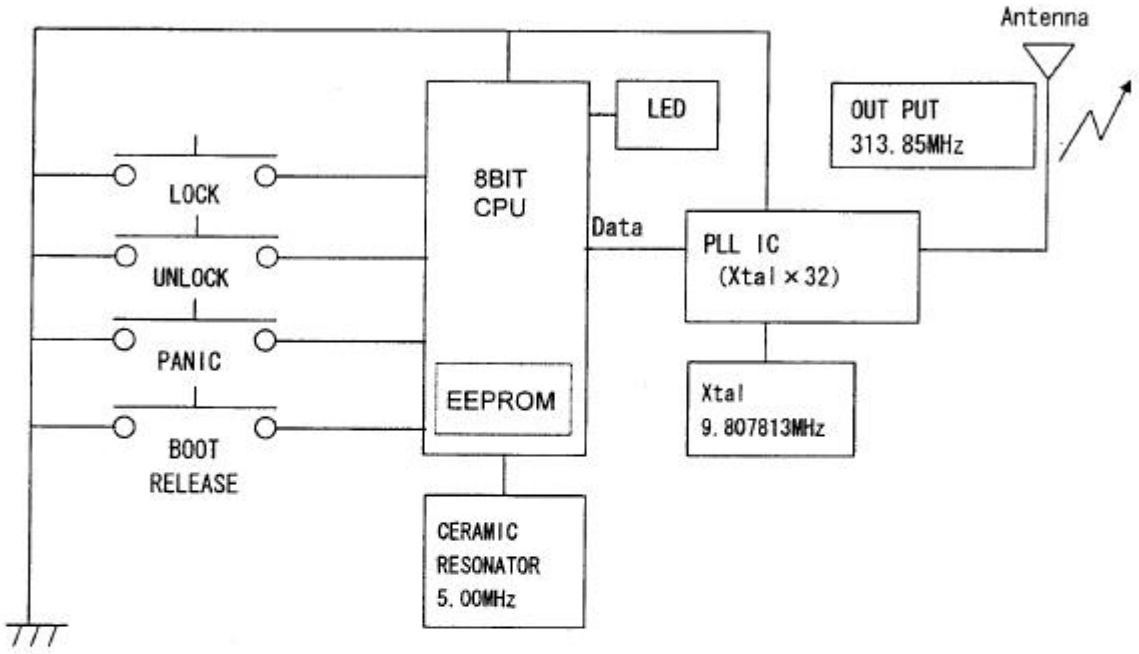


Figure 3.1 block diagram of the transmitter

Switch combination

OMRON MODEL NAME	SW QTY	LOCK	UNLOCK	PANIC	BOOT RELEASE
G8D-380H-A	4	○	○	○	○
G8D-380H-A-NP	3	○	○	×	○
G8D-380H-A-NT	3	○	○	○	×
G8D-383H-A-NTP	2	○	○	×	×

4. Specification

4.1 CPU

Type	UPD789860 (8bit) Manufacturer: NEC Corporation
ROM	4K bytes
RAM	128 bytes
EEPROM	32 bytes
Clock frequency	5MHz
Clock frequency generation	Ceramic resonator
Package	20pin SSOP

4.2 RF block

Carrier frequency	313.8~313.9MHz
Frequency generation	Crystal resonator
Modulation	FSK
Bit transmission rate	1000bps or 2000bps
Bandwidth	120KHz
RF output power (field strength)	6000 μ V/m

4.3 Others

Dimension	33.5mm × 29.8mm × 8.4mm
Weight	10g
Battery	Lithium cell (CR1616) Manufacturer: MATSUSHITA Battery corporation
Operation Voltage	DC 3V, 20mA
Operation temperature	-20℃ ~ +60℃

5. Features

5.1 Transmission frame

The transmission begins immediately in case of any button is pressed.

The transmission frame consists of the synchronous frame and the data frame. The synchronous frame has 324 bit codes that it will be used for the receiver to wake up. The data frame consists of 28-bit length identification code, 24-bit security code, 4-bit function code and 8-bit quality check code.(sometimes). 16000000 different identification codes are available. The security code is always changed in case of any of the buttons is pressed. The transmission time is typically 220 milliseconds.

5.2 Battery saving

To prevent the battery exhaustion, the microcomputer of the transmitter is usually inactive. When the button will be pressed, the microcomputer wakes up immediately and judges which button is pressing. Then the microcomputer constructs the transmission frame and radiates it from the antenna. After transmitting, the microcomputer switches stand-by mode by itself.

6.2 Parts layout

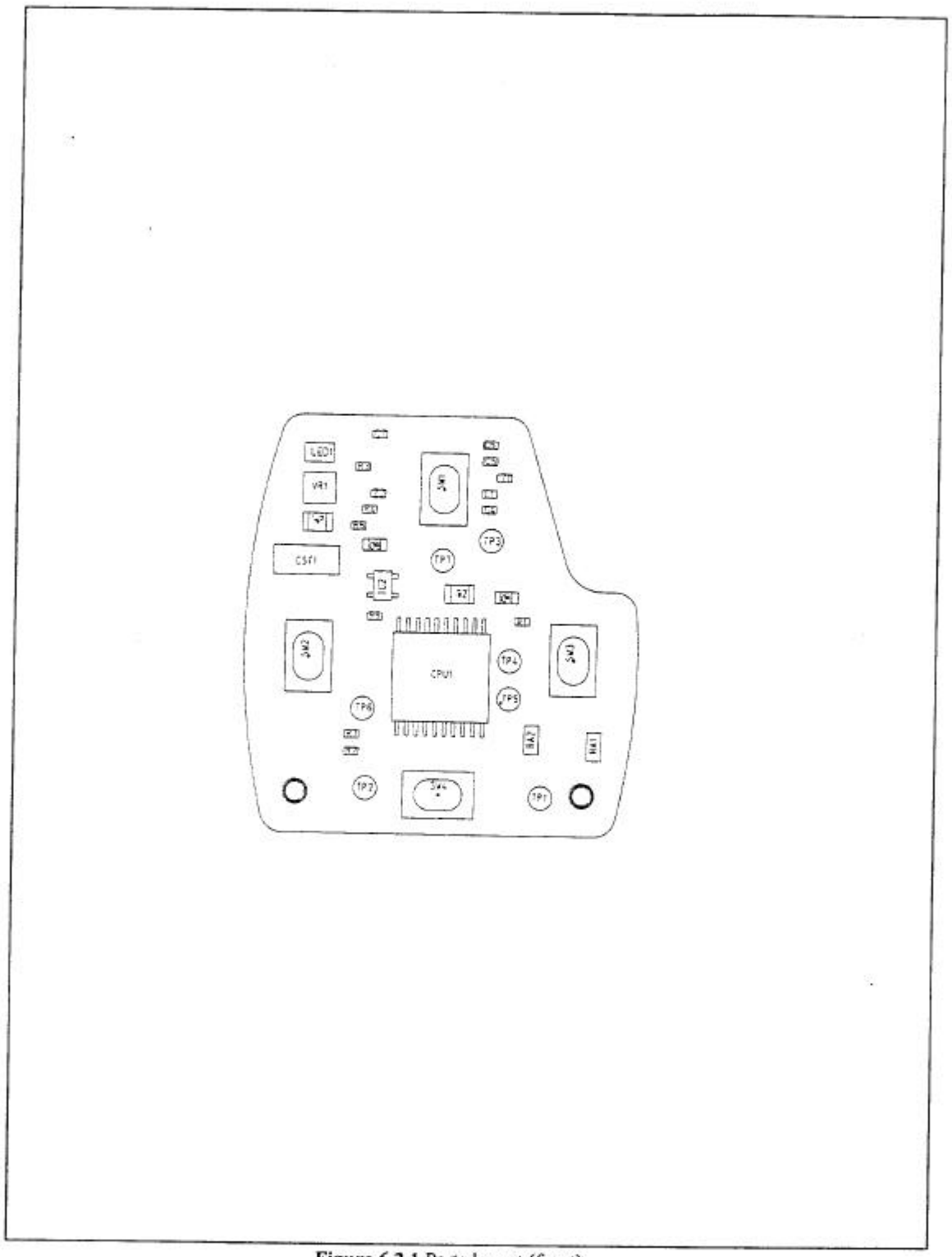


Figure 6.2.1 Parts layout (front)

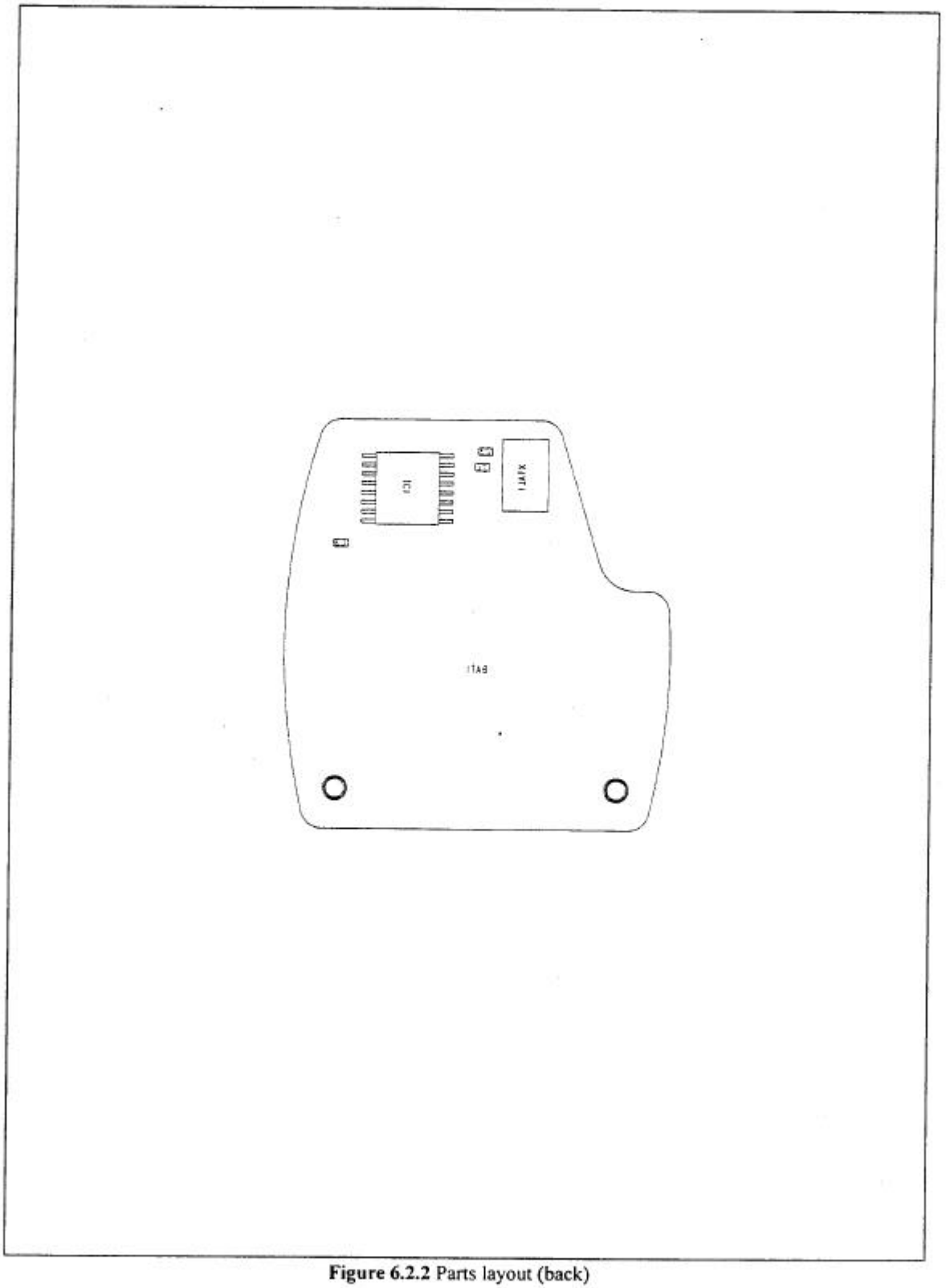


Figure 6.2.2 Parts layout (back)

6.3 Pattern layout

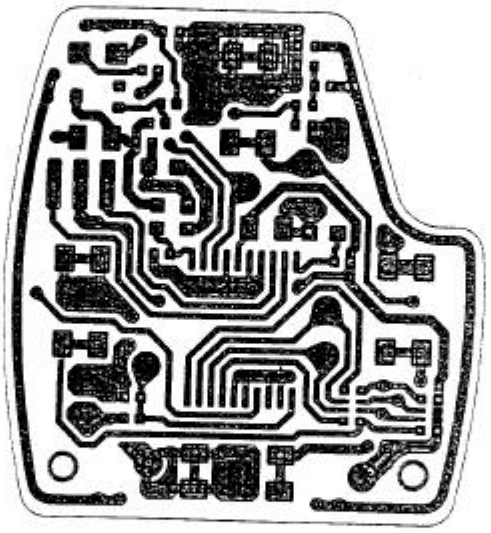


Figure 6.3.1 Pattern layout (front)

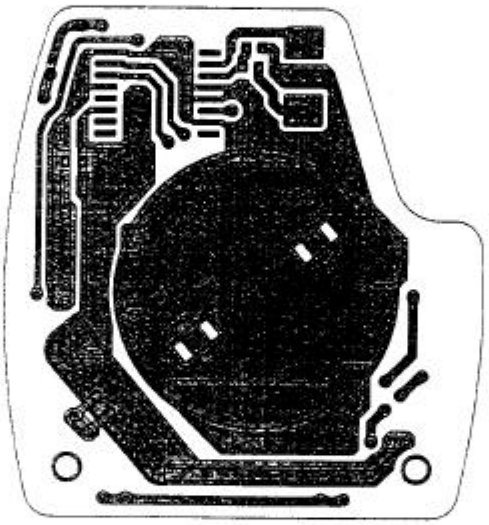


Figure 6.3.2 Pattern layout (back)

No	PARTS NAME	MANUFACTURE	QTY	MATERIAL/MODEL	APPEARANCE /SPECIFICATION	REMARKS
21	CHIP INDUCTOR	MURATA	1	LQP15HN82NJ02D	82nH 50V(±2%)	Z2
22	TACTILE SWITCH	CITIZEN	4	LS8J6M-T	530gf	SW1,SW2,SW3,SW4
23	TERMINAL(+)	SYOUSHIN SEIMITSU	1	CH5210		
24	TERMINAL(-)	SYOUSHIN SEIMITSU	1	CH5210		
25	CASE,UPPER	F-PLUS	1	PLASTIC		
26	CASE,LOWER	F-PLUS	1	PLASTIC		
27	KNOB RUBBER	SHINETSU	1	SILICON RUBBER		
28	BATTERY	MATSUSHITA	1	CR1616		
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(KEYLESS TRANSMITTER)
G8D-380H-A SHEET No (2/2)
PARTS LIST