SPECIFICATION

FOR APPROVAL

ISSUED DATE : **Feb. 13, 2001**

DOCUMENT NO. : **PDCM-605TM2-01**

CUSTOMER :

DESCRIPTION : **REMOCON MODULE**

MODEL NO. : **KSM-605TM2**

[KODENSHI KOREA CORP.]

ISSUED DEPT.			SBU		Q/A	
ISSUE	REVIEW	APPR'L	REVIEW	APPR'L	QC	QP

[CUSTOMER APPROVAL]

[REVISION]

NO.	DATE	REVISION ITEMS	ISSUED BY	APPR'D BY

1. Scope

The KSM-605TM2 consist of a PIN Photodiode of high speed and a preamplifier IC in the package as an receiver for Infrared remote control systems

2. Features

- ◆ One mold small package
- ◆ 5 Volt supply voltage, low power consumption
- ◆ Shielded against electrical field disturbance
- ◆ High immunity against ambient light
- ◆ Easy interface with the main board
- ◆ TTL and CMOS compatibility

3. Applications

TV, VTR, Acoustic Devices, Air Conditioners, Car Stereo Units, Computers, Interior controlling appliances, and all appliances that require remote controlling

4. Package Outline

See the attached Drawing No. D-KSM-ASY-74-0

5. Absolute Maximum Ratings (at 25℃ Unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Supply Voltage	Vcc	5.5	V
Operating Temperature	Topr	−10 ~ +60	℃
Storage Temperature	Tstg	−20 ~ +75	℃
Soldering Temperature	Tsol	260(Max 5 sec)	℃

6. Reliability Test

Parameter	Condition	
High Temperature *1	Ta=+60℃, Vcc=5.0V	t=240H
High Temperature/High Humidity *1	Ta=+60℃, 90%RH, Vcc=5.0V	t=240H
Low Temperature *1	Ta=−10℃, Vcc=5.0V	t=240H
Heat Cycle *1	−20℃(0.5H) ~ +75℃(0.5H) 20cycle	
Dropping *2	Test devices shall be dropped 3 time naturally onto hard wooden board from a 75㎝ height position	

Note : *1. (electro-optical characteristics) shall be satisfied after leaving 2hours in the normal temperature
*2. (electro-optical characteristics) shall be satisfied and no deforms and destructions of appearance(excepting deforms of terminals)

7. Electrical Characteristics (Ta= 25℃, Vcc= 5.0V)

Parameter	Symbol	Condition		Min.	Typ.	Max.	Unit
Supply Voltage	Vcc			4.5	5.0	5.5	V
Current Consumption	Icc	Input Signal = 0		-	1.2	2.5	mA
Peak Wavelength *3	λ_P			-	940	-	nm
B.P.F Center Frequency *4	fo			-	56.9	-	kHz
Arrival Distance *3	L	200±50Lux	0°	10	-	-	m
			±30°	7	-	-	m
H Level Output Voltage *3	V_{OH}	30cm over the ray axis		4.5	5.0	-	V
L Level Output Voltage *3	V_{OL}			-	0.1	0.5	V
H Level Output Pulse Width *3	T_{WH}	Burst Wave= 600μs Period= 1.2ms		500	600	700	μs
L Level Output Pulse Width *3	T_{WL}			500	600	700	μs
Output Form	Active Low Output						

Note : *3. It specifies the maximum distance between emitter and detector that the output waveform satisfies the standard(8-2,3) under the conditions below against the standard transmitter

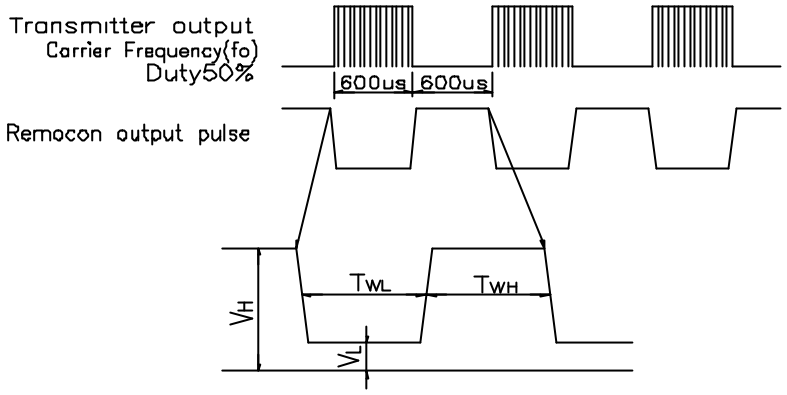
1) Measuring place : Indoor without extreme reflection of light
2) Ambient light source : Detecting surface illumination shall be irradiate 200±50Lux under ordinary white fluorescence lamp without high frequency lightning
3) Standard transmitter : Burst wave indicated in drawing(8-1) of standard transmitter shall be arranged to 50mVp-p under the measuring circuit specified in drawing(8-2,3)

*4. B.P.F Center Frequency(fo) of each model is shown below

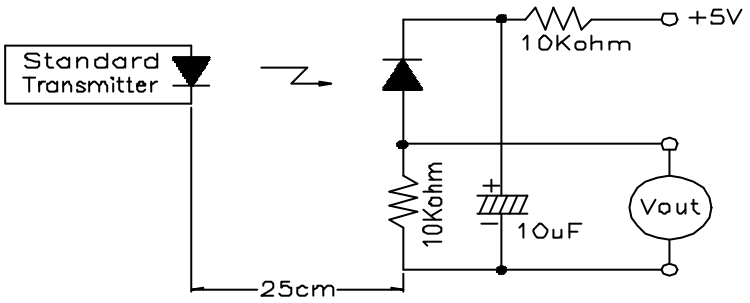
Molde No.	B.P.F Center Frequency(kHz)
KSM-○○1○○	40.0
KSM-○○2○○	36.7
KSM-○○3○○	37.9
KSM-○○4○○	32.7
KSM-○○5○○	56.7

8. Measure Method

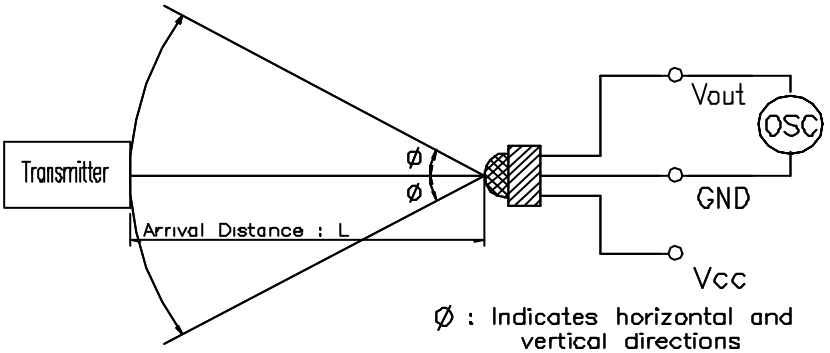
8-1. Output Pulse Width



8-2. Standard Transmitter



8-3. Test Condition of Arrival Distance



9. Standard Inspection

Among electrical characteristics, total quantity shall be inspected as below

9-1. Front distance between emitter and detector

9-2. Current consumption

9-3. H level output voltage

9-4. L level output voltage

10. Caution(When use and storage of this device)

10-1. Store and use where there is no force causing transformation or change in quality

10-2. Store and use when there is no extreme humidity

10-3. Solder the lead-pin within the condition of ratings. after soldering do not add extrorse force

10-4. The performance of remote control system depends on environments condition and ability of peripheral parts, Customer should evaluate the performance as total system in those conditions after system up with components such as commander, Micom and this receiver module

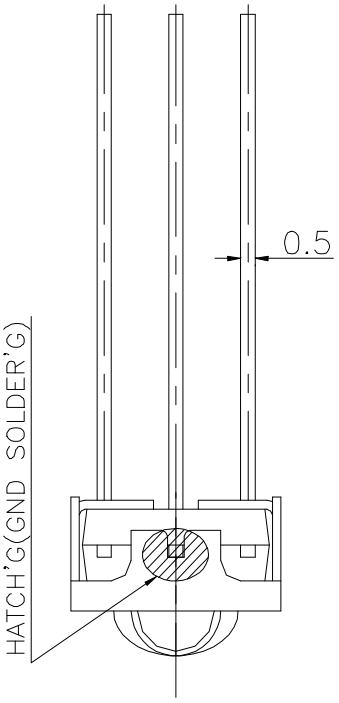
10-5. Put Decoupling Condenser(47㎌ ~100㎌) between Vcc and GND for reduce the noise from power supply line

11. Others

In case where any trouble or questions arise, both parties agree to make full discussion covering the said problem

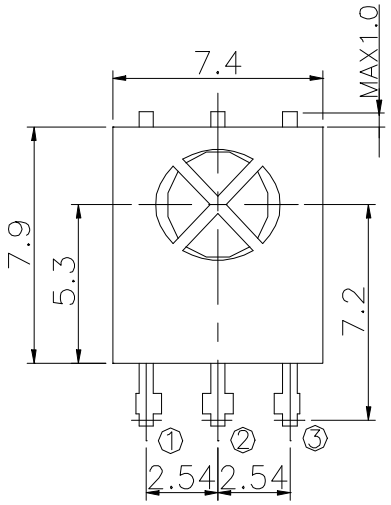
MARK	REVISION	DATE	NAME	SIGN

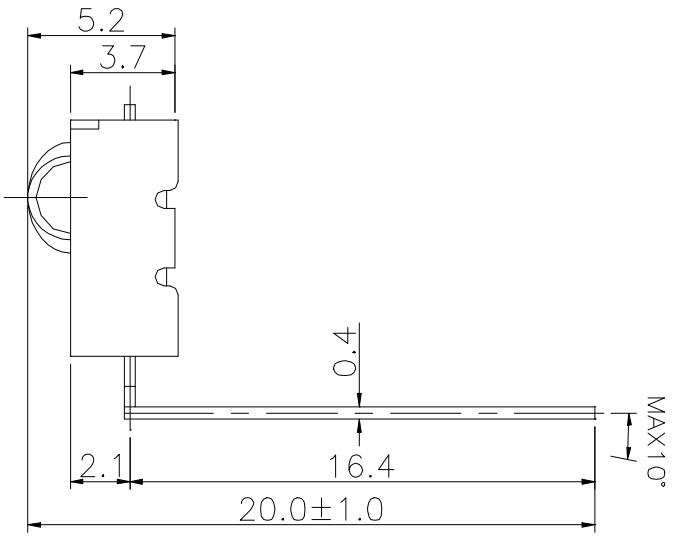
GENERAL TOLERANCE(±)						
Dimension \ Grade	0	1	2	3	4	5
~4 and below	0.005	0.05	0.08	0.1	0.2	0.5
4~16 and below	0.05	0.08	0.1	0.2	0.3	0.8
16~64 and below	0.08	0.1	0.2	0.3	0.5	1.2
63~250 and below	0.1	0.2	0.3	0.5	0.8	1.8



NOTE

1. PIN CONFIG
   - ① Vout
   - ② GND
   - ③ Vcc
2. G.T : ±0.3





NO	DESCRIPTION	MAT'L	DIMENSION	REMARK

ISSUED DERT.			
ISSUE	REVIEW	REVIEW	APPR'L

Q'TY	
UNIT	MM
SCALE	4/1

TITLE

KSM-605TM2

DRAWING NO	REF DWG NO
D-KSM-ASY-74-0	

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