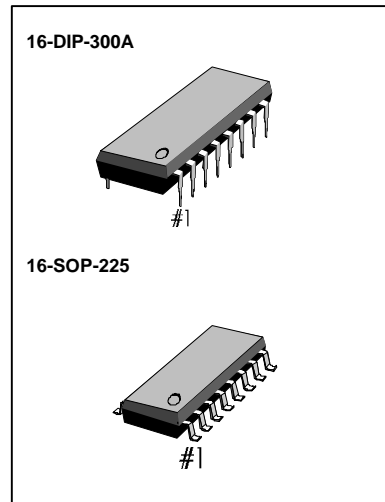


INTRODUCTION

The KS8805B is a superior low power-programmable dual frequency synthesizer (PLL) which can be used in high performance CT-1 cordless phone system with frequency range under 60 MHz in all over the world.

This device has two independent phase detectors and channel divider block for transmitter and receiver part.

It includes reference divider and auxiliary reference divider to generate independent reference frequency using a common reference oscillator. If required, all divider blocks can be fully programmed through MICOM serial interface.



ORDERING INFORMATION

Device	Package	Operating Temperature
† KS8805B	16-DIP-300A	- 30°C ~ + 75°C
† KS8805BD	16-SOP-225	

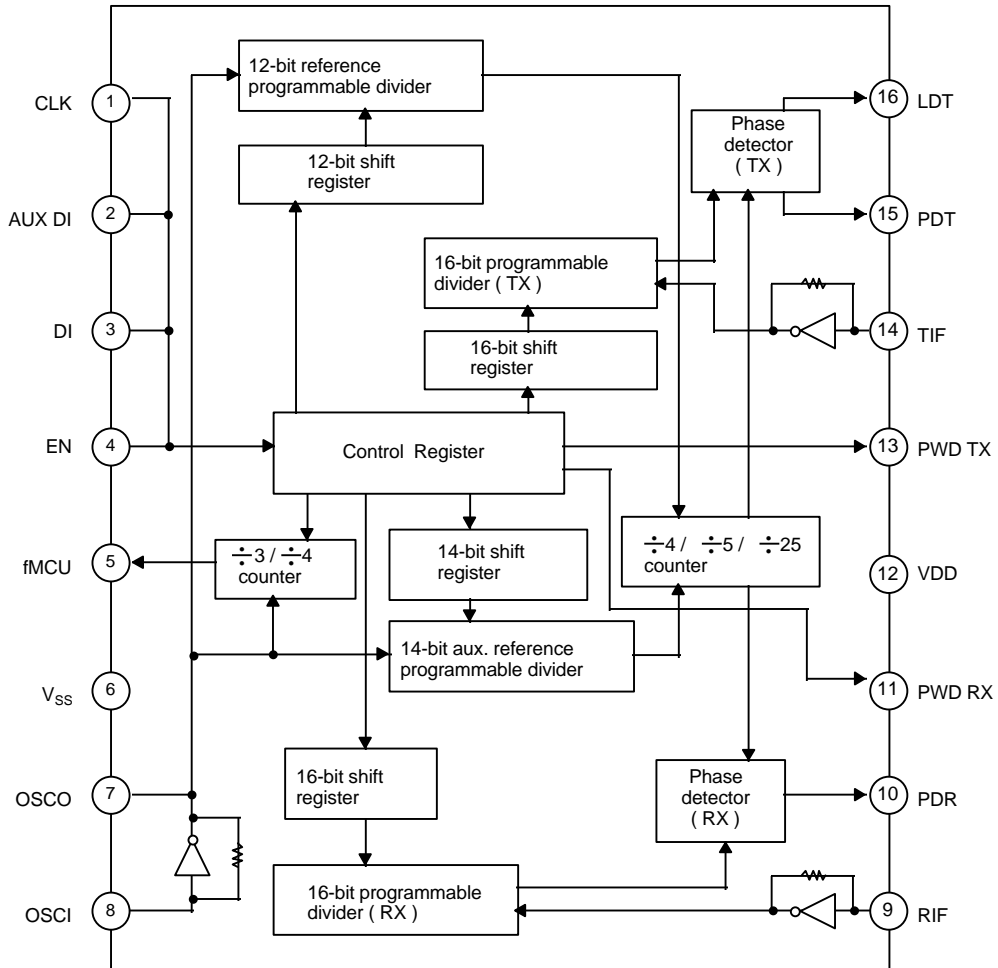
† New Product

FEATURES

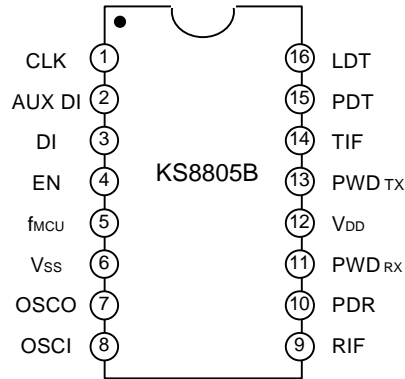
- Operating voltage range : 3.0 ~ 5.5V
- Superior supply current : 2.5mA (Typ) at 3.0V
- Included power saving mode function which can control the each register block according to program data of MICOM
- Included clock output with frequency of X-tal OSC $\pm 3 / \pm 4$ for MICOM or other system and clock output on / off control by MICOM
- Superior Max operating frequency range : 60MHz at 300 mVp-p, $V_{DD} = 3.0V$
- Internal reference oscillator can support the external X-tal which oscillates up to 16MHz
- Built - in Lock detect signal output
- Internal reference divider range : 16 ~ 4095
- Internal Auxiliary reference divider range : 16 ~ 16383
- Internal RX (TX) divider range : 16 ~ 65535



BLOCK DIAGRAM



PIN CONFIGURATION



PIN DESCRIPTION

Pin No	Symbol	Description
1	CLK	These pins are serial interface terminals for programming reference counter, auxiliary reference counter, TX channel counter, RX channel counter and control block with test mode and power saving mode.
2	AUX DI	
3	DI	
4	EN	
5	fMCU	Clock output terminal This output pin provides the clock source for Micom or other system as an output of $X - tal OSC \div 3 / \div 4$. Which can be controlled by the bit of the control register. Clock output on / off control is possible by MICOM.
6	VSS	Ground terminal.
7	OSCO	Oscillator output terminal. This output generates the reference frequency when it is connected to pin 8 with external X - tal.
8	OSCI	Oscillator input terminal. This output generates the reference frequency when it is connected to pin 7 with external X - tal.

PIN DESCRIPTION

Pin No	Symbol	Description
9	RIF	<ul style="list-style-type: none"> • Input terminal of RX channel counter • Usually, AC coupled output signal of VCO loop is introduced and the Minimum input signal level is 300mVp-p at 60 MHz
10	PDR	<ul style="list-style-type: none"> • There are 3 - kind output signal states in PDR pin. <ul style="list-style-type: none"> - If $f_{RX} > f_{REF}$ (f_{RX} is leading), the output is negative pulse state - If $f_{RX} < f_{REF}$ (f_{RX} is lagging), the output is positive pulse state - If $f_{RX} = f_{REF}$ (the same phase), the output is high impedance state
11	PWD _{RX}	<ul style="list-style-type: none"> • This output terminal offers the state of internal RX channel counter operation. If this pin state is high, internal RX channel counter is operating in power saving mode. So, this pin can be used in applying the power switch on / off control.
12	VDD	<ul style="list-style-type: none"> • Power supply input terminal
13	PWD _{TX}	<ul style="list-style-type: none"> • This output terminal offers the state of internal TX channel counter operation. If this pin state is high, internal TX channel counter is operating in power saving mode. So, this pin can be used in applying the power switch on / off control.
14	TIF	<ul style="list-style-type: none"> • Input terminal of TX channel counter • Usually, AC coupled output signal of VCO loop is introduced and the Minimum input signal level is 300mVp-p at 60 MHz
15	PDT	<ul style="list-style-type: none"> • There are 3 - kind output signal states in PDT pin. <ul style="list-style-type: none"> - If $f_{TX} > f_{REF}$ (f_{TX} is leading), the output is negative pulse state - If $f_{TX} < f_{REF}$ (f_{TX} is lagging), the output is positive pulse state - If $f_{TX} = f_{REF}$ (the same phase), the output is high impedance state
16	LDT	<ul style="list-style-type: none"> • Output terminal of lock detection waveforms This output pin is internally connected with TX - loop. High output state in LDT pin indicates out of internal operation.

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply voltage	V_{DD}	- 0.5 ~ 6.0	V
Input voltage	V_I	- 0.3 ~ $V_{DD} + 0.5$	V
Power dissipation	P_D	350	mW
Operating Temperature	T_{OPR}	- 30 ~ + 75	°C
Storage Temperature	T_{STG}	- 40 ~ + 125	°C

ELECTRICAL CHARACTERISTICS

(Ta = 25°C, V_{DD} = 3.0 to 5.5V unless otherwise specified)

Characteristic	Symbol	Test Conditions	V_{DD}	Min	Typ	Max	Unit
Operating voltage	V_{DD}	-	-	3.0	-	5.5	V
Input voltage	V_{IH}	$V_{OUT} = 0.5V$	3.0 5.5	2.1 3.85	- -	- -	V
	V_{IL}	$V_{DD} - 0.5V$	3.0 5.5	- -	- -	0.9 1.65	
Input current	I_{IH}	$V_{in} = V_{DD} - 0.5$	OSCI, RIF, TIF 5.5	3.0	-	-	30
				5.5	-	-	80
	I_{IL}	$V_{in} = 0$	OSCI, RIF, TIF 5.5	3.0	-	-	-30
				5.5	-	-	-80
Input frequency	f_{I1}	$V_{TIF} = 300mV_{P-P}$	-	-	-	60	MHz
	f_{I2}	$V_{RIF} = 300mV_{P-P}$	-	-	-	60	
	f_{I3}	$OSCI = 300mV_{P-P}$	-	-	-	16	
Output voltage	V_{OH}	$V_{in} = V_{DD}$ or 0	3.0 5.5	2.9 5.4	- -	- -	V
	V_{OL}	$I_{OUT} = 0$	3.0 5.5	- -	- -	0.1 0.1	
Output current	I_{OH}	$V_{OUT} = 2.5V$	3.0	0.2	-	-	mA
		$V_{OUT} = 5.0V$	5.5	0.55	-	-	
	I_{OL}	$V_{OUT} = 0.5V$	3.0	0.2	-	-	mA
		$V_{OUT} = 0.5V$	5.5	0.55	-	-	
Stand-by current	I_{SB}	All counters : power down mode	3.0	-	-	1.0	mA
			5.5	-	-	1.5	
Operating current	I_{DD}	$OSCI = 10.24MHz$ $V_{TIF} (V_{RIF}) = 300mV_{P-P}$	3.0	-	-	2.5	mA
			5.5	-	-	7.0	

MICOM (MCU) PROGRAM SUMMARY

Program format in MICOM (MCU) - MSB : 1'st input

CLK (Pin 1), AUXDI (Pin 2), DI (Pin 3) and EN (Pin 4) terminals are used for programming.
 DATA and CLK terminals are used for loading the data to internal shift-register.
 There are two formats which can be controlled by EN (Pin 4) input state.
 If the processing state of EN terminal is 'High', the control register and reference count register are selected.
 If the processing state of EN terminal is 'Low', TX-channel count register and RX-channel count register are selected.

Control register programming (8 bits)

In addition to special COC (Bit 6) function which can support the f_{MCU} ON / OFF, various operation are included.

Bit	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Name	PMC	COC	TM	AUX DI EN	fMCUS	PWD _{TX}	PWD _{RX}	PWD _{REF}
Description	Program Mode Control	Clock Output Control	Test Mode Control	AUX DI Input Enable	MCU Clock Select	TX part Power Down	RX part Power Down	REF part Power Down
Operation state	0	REF register $f_{MCU} \rightarrow$ ON	Normal	Normal (DI : 32bit)	$OSC \div 4$	Operating Mode	Operating Mode	Operating Mode
	1	Control register $f_{MCU} \rightarrow$ OFF	Test mode	AUXDI enable (Tx : 16bit)	$OSC \div 3$	Power Down Mode	Power Down Mode	Power Down Mode

< Table 1. Power down bits function in control register >

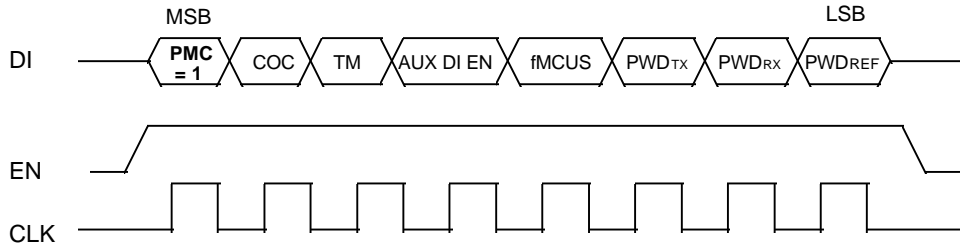
PWD _{TX} (Bit 2)	PWD _{RX} (Bit 1)	PWD _{REF} (Bit 0)	TX - Channel counter	RX - Channel counter	Reference frequency counter
0	0	0			
0	0	1			○
0	1	0		○	
0	1	1		○	○
1	0	0	○		
1	0	1	○		○
1	1	0	○	○	
1	1	1	○	○	○

○ : Power down mode operating



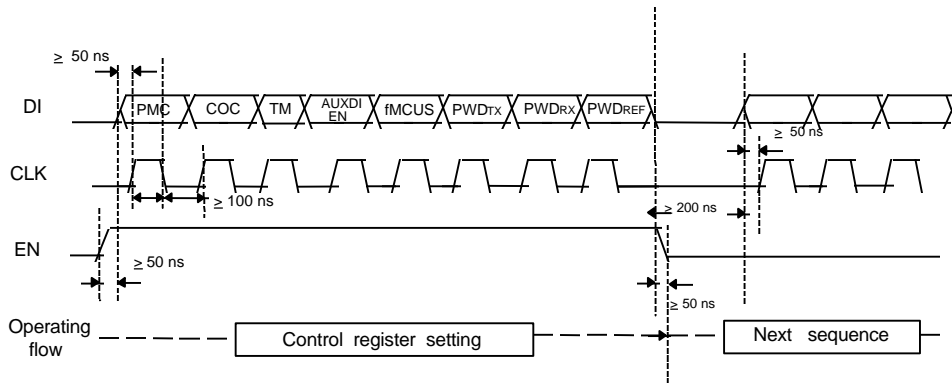
- Flow chart and timing diagram of the control Register [PMC (Bit 7) = 1 (High)]

When programming the control register, PMC (bit 7) data and EN data must be set to '1'.



- Input data format of control register programming

The following timing diagrams show how to set the input data of the CLK, AUXDI, DI and EN pin, and what is the timing margin each other. EN - Data set - up time and CLK - EN delay time should be Min. 50 ns, and data hold time need to be Min. 100ns. In addition to that time, operating wait time in register setting is Min. 200 ns.



Reference Register (32 bits)

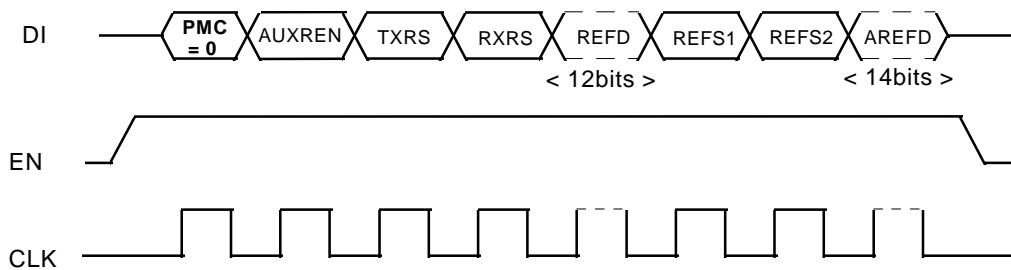
Bit	Bit 31	Bit 30	Bit 29	Bit 28	Bit 27 ~ 16 Ref - 12Bit	Bit 15	Bit 14	Bit 13 ~ 0 Aref - 14Bits
Name	PMC	AUXREN	TXRS	RXRS	REFD	REFS1	REFS2	AREFD
Description	Program Mode Control	Auxiliary Reference Block Enable	TX Ref. Freq. Select	RX Ref. Freq. Select	Ref. Program Data	Ref. Freq. Select 1	Ref. Freq. Select 2	Auxiliary Reference Program Data
Operation state	0	REF register	Disable	TXfREF = fR2	RXfREF = fR2	12-bits Programmable Reference Counter	Refer to Table 2.	Auxiliary 14-bits Programmable Reference Counter
	1	Control register	Enable	TXfREF = fR1	RXfREF = fR1			Auxiliary 14-bits Programmable Reference Counter

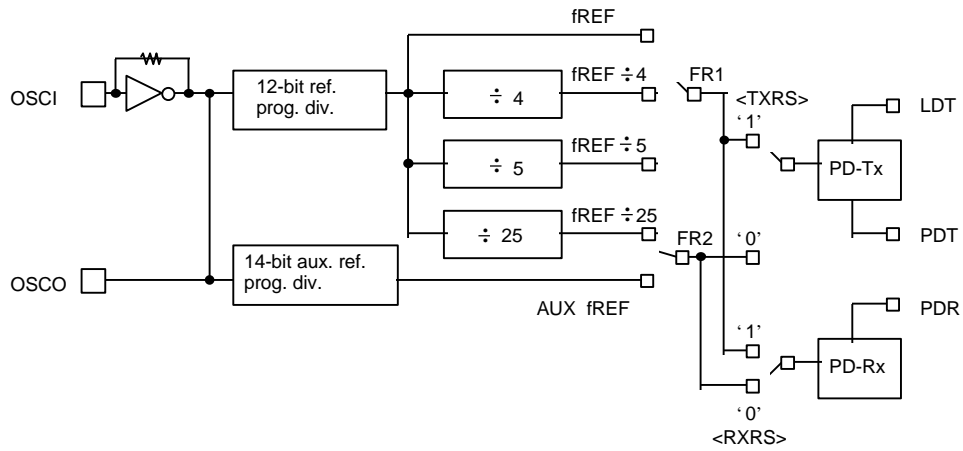
<Table 2. Reference frequency select >

AUXREN (Bit 30)	REFS1 (Bit 15)	REFS2 (Bit 14)	fR1	fR2
0	0	0	$f_{REF} \div 4$	$f_{REF} \div 25$
0	0	1	f_{REF}	$f_{REF} \div 25$
0	1	0	$f_{REF} \div 4$	$f_{REF} \div 25$
0	1	1	$f_{REF} \div 5$	$f_{REF} \div 25$
1	0	0	$f_{REF} \div 4$	AUXFREF
1	0	1	f_{REF}	AUXFREF
1	1	0	$f_{REF} \div 4$	AUXFREF
1	1	1	$f_{REF} \div 25$	AUXFREF

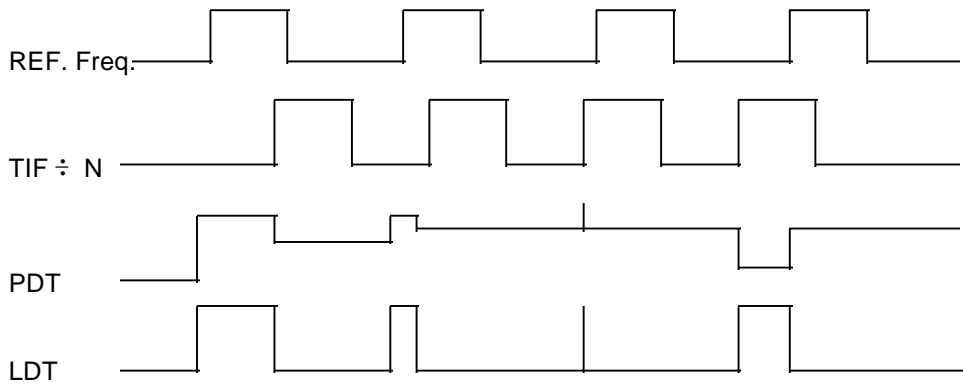
- Flow chart and timing diagram of the reference Register [PMC (Bit 31) = '0' (Low state)]

When programming the reference register, PMC (bit 7) data must be set to '0' and EN data pin is set to 'High state'.





<Fig. 1 Reference frequency selection block >

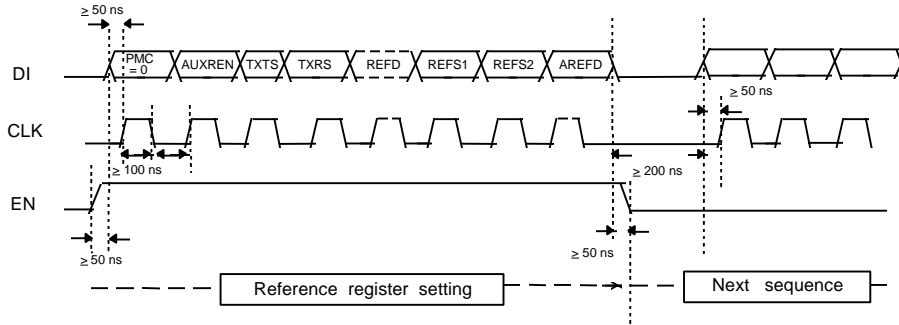


<Fig. 2 Phase detector/Lock detector output waveforms>

- Input data format in reference register programming

The following timing diagram show how to program the input data format in reference register setting, and how much is the timing margin each other.

EN - Data set - up time and CLK - EN delay time should be Min. 50ns, and data hold time need to be Min. 100ns. In addition to that time, operating wait time in register setting is Min. 200 ns.



PLL TX / RX count register Programming

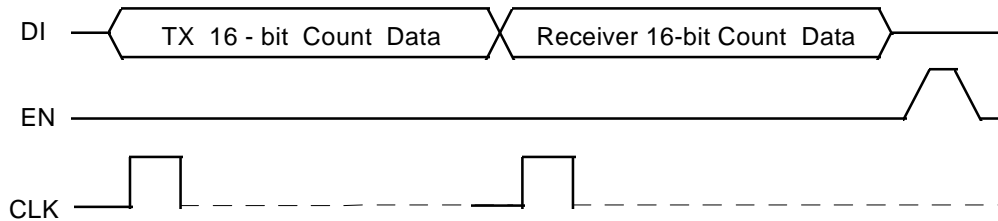
There are two type programming method in TX / RX 16 Bits divider setting.

The one is 3 - Pin used programming and the other is 4 - Pin used programming. If the 4 - Pin used programming method is applied for the faster operating time, AUXDI Pin is added.

When the TX / RX count register is setting, EN Pin state is 'low'.

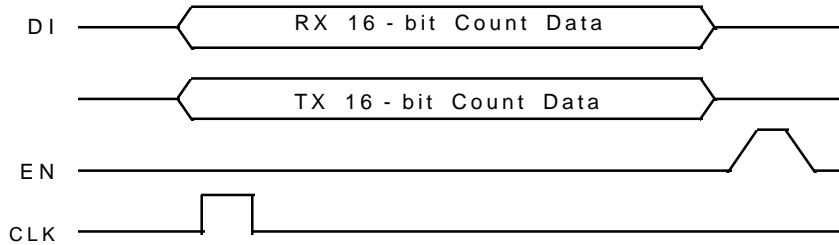
- Normal Programming [AUXDIEN = 'Low' (0)]

When the three pin interface method is applied, AUXDIEN (Bit 4) operating state must be 'Low' in control register



- AUXDI Pin - used Programming [AUXDIEN = 'High' (1)]

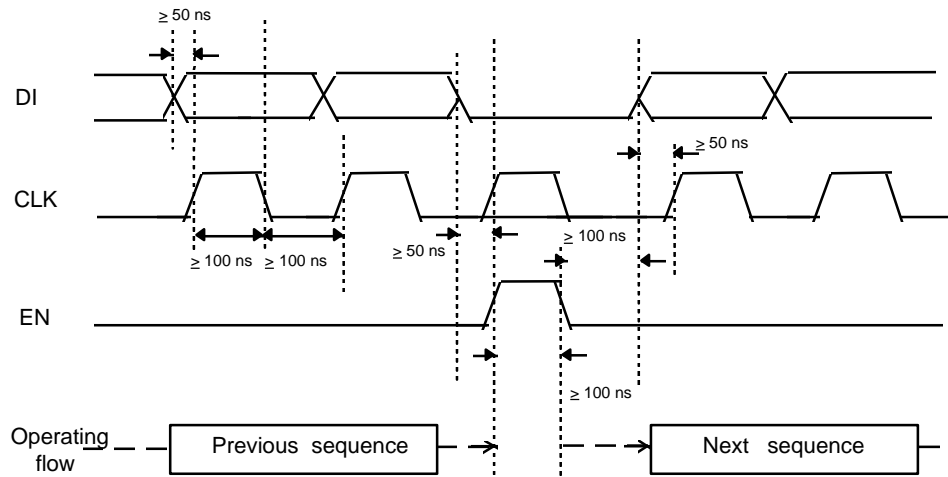
When the 4 - pin interface method is applied, AUXDIEN (Bit 4) operating state must be 'High' in control register



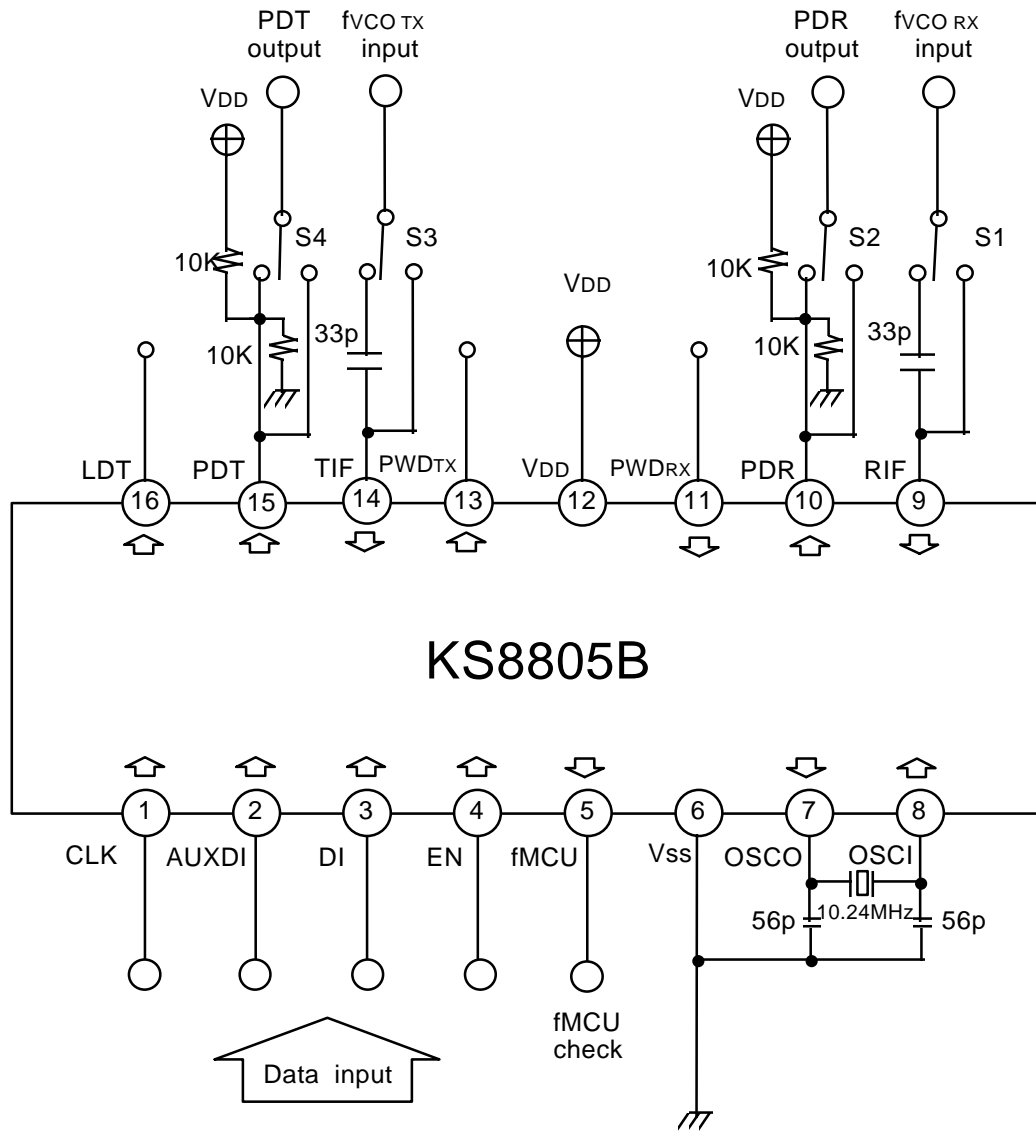
- Input data format in TX / RX count register programming

The following timing diagrams show how to set the input data of the DI, CLK and EN pins, and what is the timing margin each other.

Needless to set CLK state, EN data will be operated.



TEST CIRCUIT



APPLICATION CIRCUIT

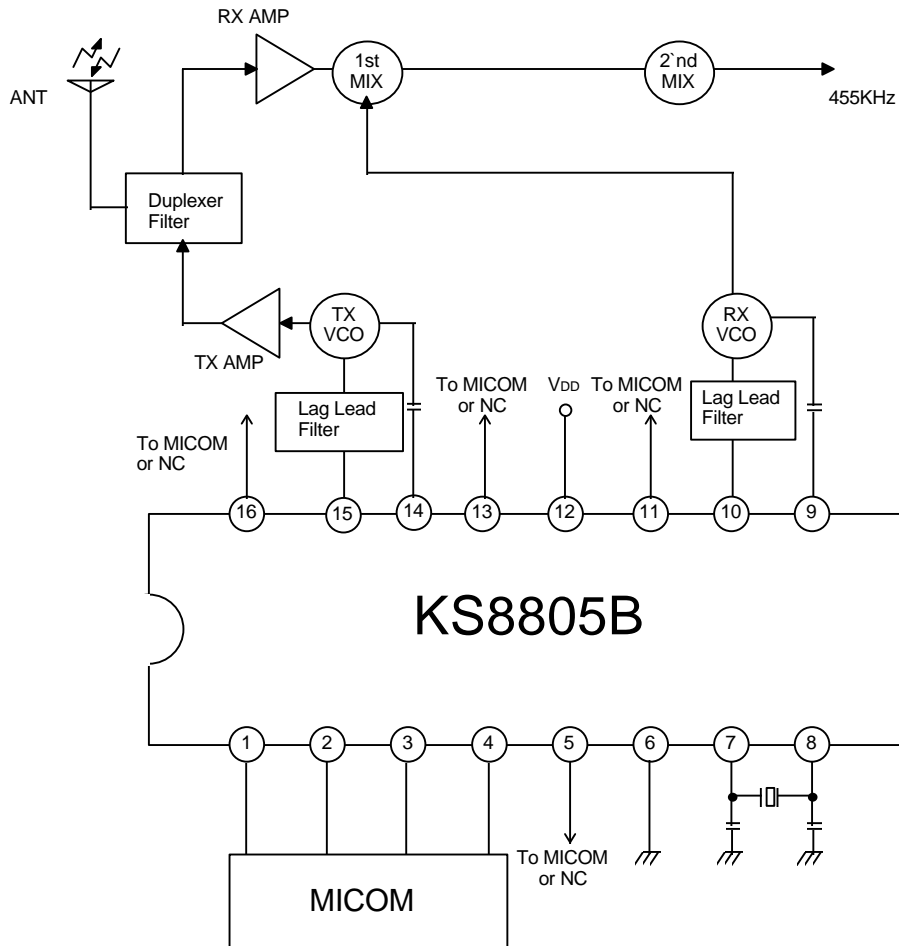


TABLE 1 :Channel & Frequency table to Base/Remote (KOREA)

BASE

CH	Rx (f _{REF} = 5KHz)			Tx (f _{REF} = 5KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	49.695	39.000	7800	46.510	46.510	9302
2	49.710	39.015	7803	46.530	46.530	9306
3	49.725	39.030	7806	46.550	46.550	9310
4	49.740	39.045	7809	46.570	46.570	9314
5	49.755	39.060	7812	46.590	46.590	9318
6	49.670	38.975	7795	46.610	46.610	9322
7	49.845	39.150	7830	46.630	46.630	9326
8	49.860	39.165	7833	46.670	46.670	9334
9	49.770	39.075	7815	46.710	46.710	9342
10	49.875	39.180	7836	46.730	46.730	9346
11	49.830	39.135	7827	46.770	46.770	9354
12	49.890	39.195	7839	46.830	46.830	9366
13	49.930	39.235	7847	46.870	46.870	9374
14	49.990	39.295	7859	46.930	46.930	9386
15	46.970	39.275	7855	46.970	46.970	9394

REMOTE

CH	Rx (f _{REF} = 5KHz)			Tx (f _{REF} = 5KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	46.510	38.815	7163	49.695	49.695	9939
2	46.530	38.835	7167	49.710	49.710	9942
3	46.550	38.855	7171	49.725	49.725	9945
4	46.570	38.875	7175	49.740	49.740	9948
5	46.590	38.895	7179	49.755	49.755	9951
6	46.610	35.915	7183	49.670	49.670	9934
7	46.630	35.935	7187	49.845	49.845	9969
8	46.670	35.975	7195	49.860	49.860	9972
9	46.710	35.015	7203	49.770	49.770	9954
10	46.730	35.035	7207	49.875	49.875	9975
11	46.770	36.075	7215	49.830	49.830	9966
12	46.830	36.135	7227	49.890	49.890	9978
13	46.870	36.175	7235	49.930	49.930	9986
14	46.930	36.235	7247	49.990	49.990	9998
15	46.970	36.275	7255	49.970	49.970	9994

TABLE 2 :Channel & Frequency table to Base/Remote (USA 1)

BASE

CH	Rx (f _{REF} = 5KHz)			Tx (f _{REF} = 5KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	49.670	38.975	7795	46.610	46.610	9322
2	49.845	39.150	7830	46.630	46.630	9326
3	49.860	39.165	7833	46.670	46.670	9334
4	49.770	39.075	7815	46.710	46.710	9342
5	49.875	39.180	7836	46.730	46.730	9346
6	49.830	39.135	7827	46.770	46.770	9354
7	49.890	39.195	7839	46.830	46.830	9366
8	49.930	39.235	7847	46.870	46.870	9374
9	49.990	39.295	7859	46.930	46.930	9386
10	49.970	39.275	7855	46.970	46.970	9394

REMOTE

CH	Rx (f _{REF} = 5KHz)			Tx (f _{REF} = 5KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	46.610	35.915	7183	49.670	49.670	9934
2	46.630	35.935	7187	49.845	49.845	9969
3	46.670	35.975	7195	49.860	49.860	9972
4	46.710	36.015	7203	49.770	49.770	9954
5	46.730	36.035	7207	49.875	49.875	9975
6	46.770	36.075	7215	49.830	49.830	9966
7	46.830	36.135	7227	49.890	49.890	9978
8	46.870	36.175	7235	49.930	49.930	9986
9	46.930	36.235	7247	49.990	49.990	9998
10	46.970	36.275	7255	49.970	49.970	9994

TABLE 3 : Channel & Frequency table to Base/Remote (USA 2)

BASE

CH	Rx ($f_{REF} = 5\text{KHz}$)			Tx ($f_{REF} = 5\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	48.760	38.065	7613	43.720	43.720	8744
2	48.840	38.145	7629	43.740	43.740	8748
3	48.860	38.165	7633	43.820	43.820	8764
4	48.920	38.225	7645	43.840	43.840	8768
5	49.020	38.325	7665	43.920	43.920	8784
6	49.080	38.385	7677	43.960	43.960	8792
7	49.100	38.405	7681	44.120	44.120	8824
8	49.160	38.465	7693	44.160	44.160	8832
9	49.200	38.505	7701	44.180	44.180	8836
10	49.240	38.545	7709	44.200	44.200	8840
11	49.280	38.585	7717	44.320	44.320	8864
12	49.360	38.665	7733	44.360	44.360	8872
13	49.400	38.705	7741	44.400	44.400	8880
14	49.460	38.765	7753	44.460	44.460	8892
15	49.500	38.805	7761	44.480	44.480	8896
16	49.670	38.975	7795	46.610	46.610	9322
17	49.845	39.150	7830	46.630	46.630	9326
18	49.860	39.165	7833	46.670	46.670	9334
19	49.770	39.075	7815	46.710	46.710	9342
20	49.875	39.180	7836	46.730	46.730	9346
21	49.830	39.135	7827	46.770	46.770	9354
22	49.890	39.195	7839	46.830	46.830	9366
23	49.930	39.235	7847	46.870	46.870	9374
24	49.990	39.295	7859	46.930	46.930	9386
25	49.970	39.275	7855	46.970	46.970	9394

TABLE 3 : Channel & Frequency table to Base/Remote (USA 2)

REMOTE

CH	Rx ($f_{REF} = 5\text{KHz}$)			Tx ($f_{REF} = 5\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	43.720	33.025	6605	48.760	48.760	9752
2	43.740	33.045	6609	48.840	48.840	9768
3	43.820	33.125	6625	48.860	48.860	9772
4	43.840	33.145	6629	48.920	48.920	9784
5	43.920	33.225	6645	49.020	49.020	9804
6	43.960	33.265	6653	49.080	49.080	9816
7	44.120	33.425	6685	49.100	49.100	9820
8	44.160	33.465	6693	49.160	49.160	9832
9	44.180	33.485	6697	49.200	49.200	9840
10	44.200	33.505	6701	49240	49240	9848
11	44.320	33.625	6725	49.280	49.280	9856
12	44.360	33.665	6733	49.360	49.360	9872
13	44.400	33.705	6741	49.400	49.400	9880
14	44.460	33.765	6753	49.460	49.460	9892
15	44.480	33.785	6757	49.500	49.500	9900
16	46.610	35.915	7183	49.670	49.670	9934
17	46.630	35.935	7187	49.845	49.845	9969
18	46.670	35.975	7195	49.860	49.860	9972
19	46.710	36.015	7203	49.770	49.770	9954
20	46.730	36.035	7207	49.875	49.875	9975
21	46.770	36.075	7215	49.830	49.830	9966
22	46.830	36.135	7227	49.890	49.890	9978
23	46.870	36.175	7235	49.930	49.930	9986
24	46.930	36.235	7247	49.990	49.990	9998
25	46.970	36.275	7255	49.970	49.970	9994

TABLE 4 : Channel & Frequency table to Base/Remote (NEW ZEALAND)

BASE

CH	Rx ($f_{REF} = 6.25\text{KHz}$)			Tx ($f_{REF} = 1,6.25\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	40.4625	29.7625	4762	1.7820	1.7820	1782
2	40.4500	29.7500	4760	1.7620	1.7620	1762
3	40.4375	29.7375	4758	1.7420	1.7420	1742
4	40.4250	29.7250	4756	1.7220	1.7220	1722
5	40.4125	29.7125	4754	1.7020	1.7020	1702
6	40.4000	29.7000	4752	34.3500	34.3500	5496
7	40.3875	29.6875	4750	34.3625	34.3625	5498
8	40.3750	29.6750	4748	34.3750	34.3750	5500
9	40.3625	29.6625	4746	34.3875	34.3875	5502
10	40.3500	29.6500	4744	34.4000	34.4000	5504

REMOTE

CH	Rx ($f_{REF} = 1,6.25\text{KHz}$)			Tx ($f_{REF} = 1,6.25\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	1.7820	2.2370	2237	40.4625	40.4625	6474
2	1.7620	2.2170	2217	40.4500	40.4500	6472
3	1.7420	2.1970	2197	40.4375	40.4375	6470
4	1.7220	2.1770	2177	40.4250	40.4250	6468
5	1.7020	2.1570	2157	40.4125	40.4125	6466
6	34.3500	23.6500	3784	40.4000	40.4000	6464
7	34.3625	23.6625	3786	40.3875	40.3875	6462
8	34.3750	23.6750	3788	40.3750	40.3750	6460
9	34.3875	23.6875	3790	40.3625	40.3625	6458
10	34.4000	23.7000	3792	40.3500	40.3500	6456

TABLE 5 : Channel & Frequency table to Base/Remote (HOLAND)

BASE

CH	Rx ($f_{REF} = 6.25\text{KHz}$)			Tx ($f_{REF} = 1,6.25\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	39.9375	29.2375	4678	31.0375	31.0375	4966
2	39.9625	29.2625	4682	31.0625	31.0625	4970
3	39.9875	29.2875	4686	31.0875	31.0875	4974
4	40.0125	29.3125	4690	31.1125	31.1125	4978
5	40.0375	29.3375	4694	31.1375	31.1375	4982
6	40.0625	29.3625	4698	31.1625	31.1625	4986
7	40.0875	29.3875	4702	31.1875	31.1875	4990
8	40.1125	29.4125	4706	31.2125	31.2125	4994
9	40.1375	29.4375	4710	31.2375	31.2375	4998
10	40.1625	29.4625	4714	31.2625	31.2625	5002
11	40.1875	29.4875	4718	31.2875	31.2875	5006
12	40.2125	29.5125	4722	31.3125	31.3125	5010

REMOTE

CH	Rx ($f_{REF} = 6.25\text{KHz}$)			Tx ($f_{REF} = 1,6.25\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	31.0375	20.3375	3254	39.9375	39.9375	6390
2	31.0625	20.3625	3258	39.9625	39.9625	6394
3	31.0875	20.3875	3262	39.9875	39.9875	6398
4	31.1125	20.4125	3266	40.0125	40.0125	6402
5	31.1375	20.4375	3270	40.0375	40.0375	6406
6	31.1625	20.4625	3274	40.0625	40.0625	6410
7	31.1875	20.4875	3278	40.0875	40.0875	6414
8	31.2125	20.5125	3282	40.1125	40.1125	6418
9	31.2375	20.5375	3286	40.1375	40.1375	6422
10	31.2625	20.5625	3290	40.1625	40.1625	6426
11	31.2875	20.5875	3294	40.1875	40.1875	6430
12	31.3125	20.6125	3298	40.2125	40.2125	6434

TABLE 6 :Channel & Frequency table to Base/Remote (FRANCE)

BASE

CH	Rx (f _{REF} = 6.25KHz)			Tx (f _{REF} = 6.25KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	41.4875	30.7875	4926	26.4875	26.4875	4238
2	41.4750	30.7750	4924	26.4750	26.4750	4236
3	41.4625	30.7625	4922	26.4625	26.4625	4234
4	41.4500	30.7500	4232	26.4500	26.4500	4232
5	41.4375	30.7375	4918	26.4375	26.4375	4230
6	41.4250	30.7250	4916	26.4250	26.4250	4228
7	41.4125	30.7125	4914	26.4125	26.4125	4226
8	41.4000	30.7000	4911	26.4000	26.4000	4224
9	41.3875	30.6875	4910	26.3875	26.3875	4222
10	41.3750	30.6750	4908	26.3750	26.3250	4220
11	41.3625	30.6625	4906	26.3625	26.3625	4218
12	41.3500	30.6500	4904	26.3500	26.3500	4216
13	41.3375	60.6375	4902	26.3375	26.3375	4214
14	41.3250	30.6250	4900	26.3250	26.3250	4212
15	41.3125	30.6125	4898	26.3125	26.3125	4210

REMOTE

CH	Rx (f _{REF} = 6.25KHz)			Tx (f _{REF} = 6.25KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	26.4875	37.1875	5950	41.4875	41.4875	6638
2	26.4750	37.1750	5948	41.4750	41.4750	6636
3	26.4625	37.1625	5946	41.4625	41.4625	6634
4	26.4500	37.1500	5244	41.4500	41.4500	6632
5	26.4375	37.1375	5942	41.4375	41.4375	6630
6	26.4250	37.1250	5940	41.4250	41.4250	6628
7	26.4125	37.1125	5938	41.4125	41.4125	6626
8	26.4000	37.1000	5936	41.4000	41.4000	6624
9	26.3875	37.0875	5934	41.3875	41.3875	6622
10	26.3750	37.0750	5932	41.3750	41.3750	6620
11	26.3625	30.0625	5930	41.3625	41.3625	6618
12	26.3500	30.0500	5928	41.3500	41.3500	6616
13	26.3375	30.0375	5926	41.3375	41.3375	6614
14	26.3250	30.0250	5924	41.3250	41.3250	6612
15	26.3125	30.0125	5922	41.3125	41.3125	6610

TABLE 7 : Channel & Frequency table to Base/Remote (SPAIN)

BASE

CH	Rx ($f_{REF} = 5\text{KHz}$)			Tx ($f_{REF} = 5\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	39.9250	29.2300	5846	31.0250	31.0250	6205
2	39.9500	29.2550	5851	31.0500	31.0500	6210
3	39.9750	29.2800	5856	31.0750	31.0750	6215
4	40.0000	29.3050	5861	31.1000	31.1000	6220
5	40.0250	29.3300	5866	31.1250	31.1250	6225
6	40.0500	29.3550	5871	31.1500	31.1500	6230
7	40.0750	29.3800	5876	31.1750	31.1750	6235
8	40.1000	29.4050	5881	31.2000	31.2000	6240
9	40.1500	29.4550	5891	31.2500	31.2500	6250
10	40.1750	29.4800	5896	31.2750	31.2750	6255
11	40.2000	29.5050	5901	31.3000	31.3000	6260
12	40.2250	29.5300	5906	31.3250	31.3250	6265

REMOTE

CH	Rx ($f_{REF} = 5\text{KHz}$)			Tx ($f_{REF} = 5\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	31.0250	20.3300	4066	39.9250	39.9250	7985
2	31.0500	20.3550	4071	39.9500	39.9500	7990
3	31.0750	20.3800	4076	39.9750	39.9750	7995
4	31.1000	20.4050	4081	40.0000	40.0000	8000
5	31.1250	20.4300	4086	40.0250	40.0250	8005
6	31.1500	20.4550	4091	40.0500	40.0500	8010
7	31.1750	20.4800	4096	40.0750	40.0750	8015
8	31.2000	20.5050	4101	40.1000	40.1000	8020
9	31.2500	20.5550	4111	40.1500	40.1500	8030
10	31.2750	20.5800	4116	40.1750	40.1750	8035
11	31.3000	20.6050	4121	40.2000	40.2000	8040
12	31.3250	20.7300	4126	40.2250	40.2250	8045

TABLE 8 : Channel & Frequency table to Base/Remote (AUSTRALIA)

BASE

CH	Rx ($f_{REF} = 5KHz$)			Tx ($f_{REF} = 5KHz$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	39.7750	29.0800	5816	30.0750	30.0750	6015
2	39.8250	29.1300	5826	30.1250	30.1250	6025
3	39.8750	29.1800	5836	30.1750	30.1750	6035
4	39.9250	29.2300	5846	30.2250	30.2250	6045
5	39.9750	29.2800	5856	30.2750	30.2750	6055
6	39.8000	29.1050	5821	30.1000	30.1000	6020
7	39.8500	29.1550	5831	30.1500	30.1500	6030
8	39.9000	29.2050	5841	30.2000	30.2000	6040
9	39.9500	29.2550	5851	30.2500	30.2500	6050
10	40.0000	29.3050	5861	30.3000	30.3000	6060

REMOTE

CH	Rx ($f_{REF} = 5KHz$)			Tx ($f_{REF} = 5KHz$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	30.0750	19.3800	3876	39.7750	39.7750	7955
2	30.1250	19.4300	3886	39.8250	39.8250	7965
3	30.1750	19.4800	3896	39.8750	39.8750	7975
4	30.2250	19.5300	3806	39.9250	39.9250	7985
5	30.2750	19.5800	3816	39.9750	39.9750	7995
6	30.1000	19.4050	3881	39.8000	39.8000	7960
7	30.1500	19.4550	3891	39.8500	39.8500	7970
8	30.2000	19.5050	3901	39.9000	39.9000	7980
9	30.2550	19.5550	3911	39.9500	39.9500	7990
10	30.3000	19.6050	3921	40.0000	40.0000	8000

TABLE 9 : Channel & Frequency table to Base/Remote (CHINA)

BASE

CH	Rx (f _{REF} = 5KHz)			Tx (f _{REF} = 5KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	48.250	37.550	7510	45.250	45.250	9050
2	48.275	37.575	7515	45.275	45.275	9055
3	48.300	37.600	7520	45.300	45.300	9060
4	48.325	37.625	7525	45.325	45.325	9065
5	48.350	37.650	7530	45.350	45.350	9070
6	48.375	37.675	7535	45.375	45.375	9075
7	48.400	37.700	7540	45.400	45.400	9080
8	48.425	37.725	7545	45.425	45.425	9085
9	48.450	37.750	7550	45.450	45.450	9090
10	48.475	37.775	7555	45.475	45.475	9095

REMOTE

CH	Rx (f _{REF} = 5KHz)			Tx (f _{REF} = 5KHz)		
	f _{RX} (MHz)	f _{VCO} (MHz)	N	f _{TX} (MHz)	f _{VCO} (MHz)	N
1	45.250	34.550	6910	48.250	48.250	9650
2	45.275	34.575	6915	48.275	48.275	9655
3	45.300	34.600	6920	48.300	48.300	9660
4	45.325	34.625	6925	48.325	48.325	9665
5	45.350	34.650	6930	48.350	48.350	9670
6	45.375	34.675	6935	48.375	48.375	9675
7	45.400	34.700	6940	48.400	48.400	9680
8	45.425	34.725	6945	48.425	48.425	9685
9	45.450	34.750	6950	48.450	48.450	9690
10	45.475	34.775	6955	48.475	48.475	9695

TABLE 10 : Channel & Frequency table to Base/Remote (U.K)

BASE

*1st IF = 10.7MHz

CH	Rx ($f_{REF} = 6.25\text{KHz}$)			Tx ($f_{REF} = 1.0\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	47.45625	36.75625	5881	1.6420	1.6420	1642
2	47.46875	36.76875	5883	1.6620	1.6620	1662
3	47.48125	36.78125	5885	1.6820	1.6820	1682
4	47.49375	36.79375	5887	1.7020	1.7020	1702
5	47.50625	36.80625	5889	1.7220	1.7220	1722
6	47.51875	36.81875	5891	1.7420	1.7420	1742
7	47.53125	36.83125	5893	1.7620	1.7620	1762
8	47.54375	36.84375	5895	1.7820	1.7820	1782

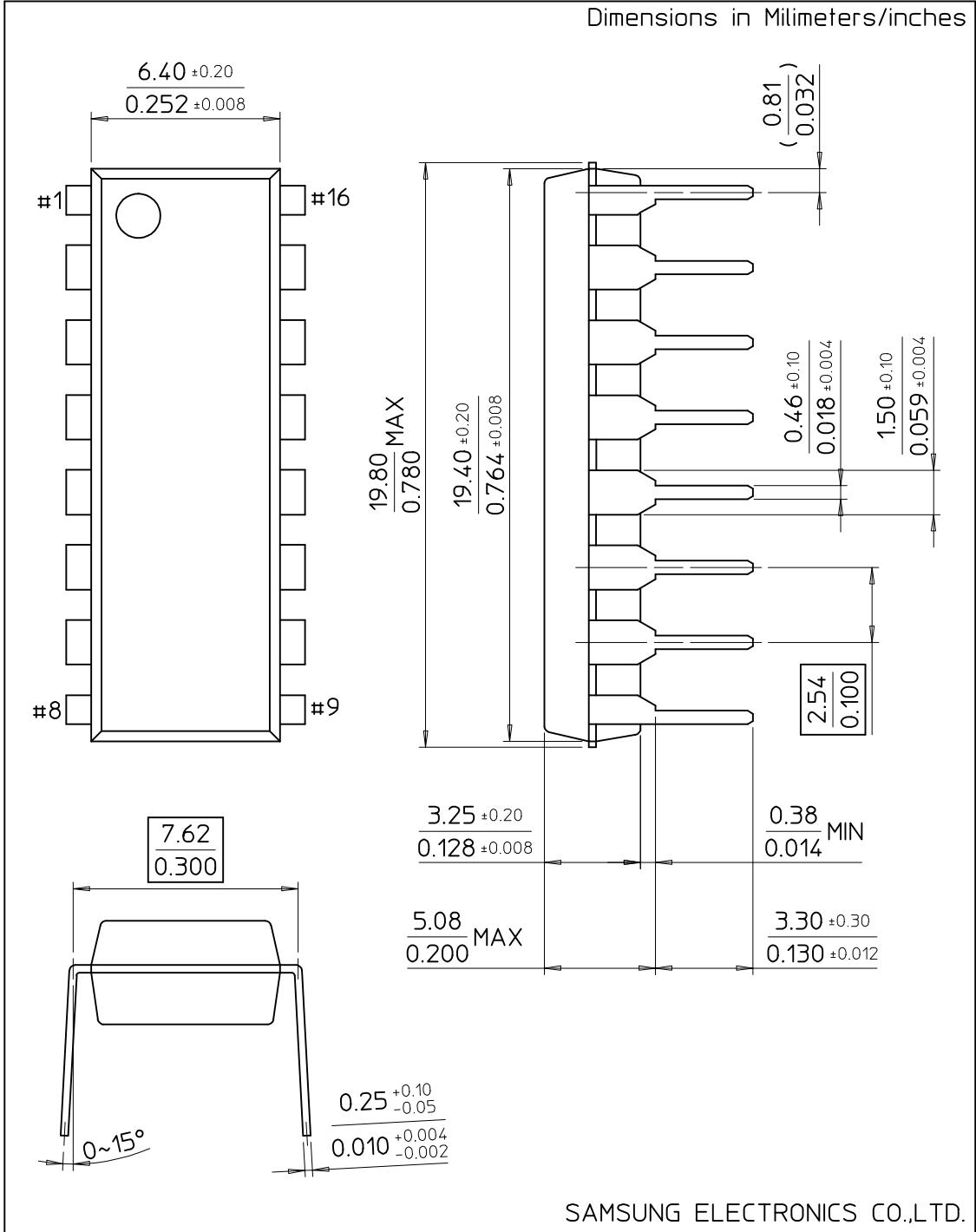
REMOTE

*1st IF = 455KHz

CH	Rx ($f_{REF} = 1\text{KHz}$)			Tx ($f_{REF} = 6.25\text{KHz}$)		
	f_{RX} (MHz)	f_{VCO} (MHz)	N	f_{TX} (MHz)	f_{VCO} (MHz)	N
1	1.6420	2.097	2097	47.45625	47.45625	7593
2	1.6620	2.117	2117	47.46875	47.46875	7595
3	1.6820	2.137	2137	47.48125	47.48125	7597
4	1.7020	2.157	2157	47.49375	47.49375	7599
5	1.7220	2.177	2177	47.50625	47.50625	7601
6	1.7420	2.197	2197	47.51875	47.51875	7603
7	1.7620	2.217	2217	47.53125	47.53125	7605
8	1.7820	2.237	2237	47.54375	47.54375	7607

16-DIP-300A

Dimensions in Millimeters/inches



SAMSUNG ELECTRONICS CO.,LTD.

16-SOP-225

