REFERENCE DATA

SPECIFICATION

TABLE OF CONTENTS

SIGNATURE	DATE
DRAWN BY L. Fukami	13 Jan, 1998
CHECKED BY Hiroshi Kondo	16 Jan, 1998
APPROVED BY M. Tanaka	19. Jan, 1998
QC. APPROVED BY Hideo Watasugi	17 Jan. 1998

REFERENCE DATA

1. Purpose

TK10930V is designed for the telecommunication's apparatus and applied for the FM-IF Part with independent AM Detector.

2. TOKO Part Number

TK10930V

3. Function

Narrow Band FM/AM IF System

4. Applications

Cordless Phones, Amateur Radio Transceivers.

5. Structure

The structure is a silicon monolithic bipolar circuit

6. Package Outline

24Lead—Shrink Small Outline Package :SSOP-24

7. Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit	Condition
Supply Voltage	$V_{CC\ MAX}$	10	V	
Power Dissipation	P_D	400	mW	※
Operating Voltage Range	V_{OP}	2.5 ～ 8.0	V	
Storage Temperature Range	Tstg	-55 ～ +150	℃	
Operating Temperature Range	T_{OP}	-30 ～ +75	℃	
Input Frequency	f_{MAX}	～ 60	MHz	

※ P_D must be derated at rate of 3.2mW／℃ for operation at 25℃.

REFERENCE DATA

8. Electrical Characteristics

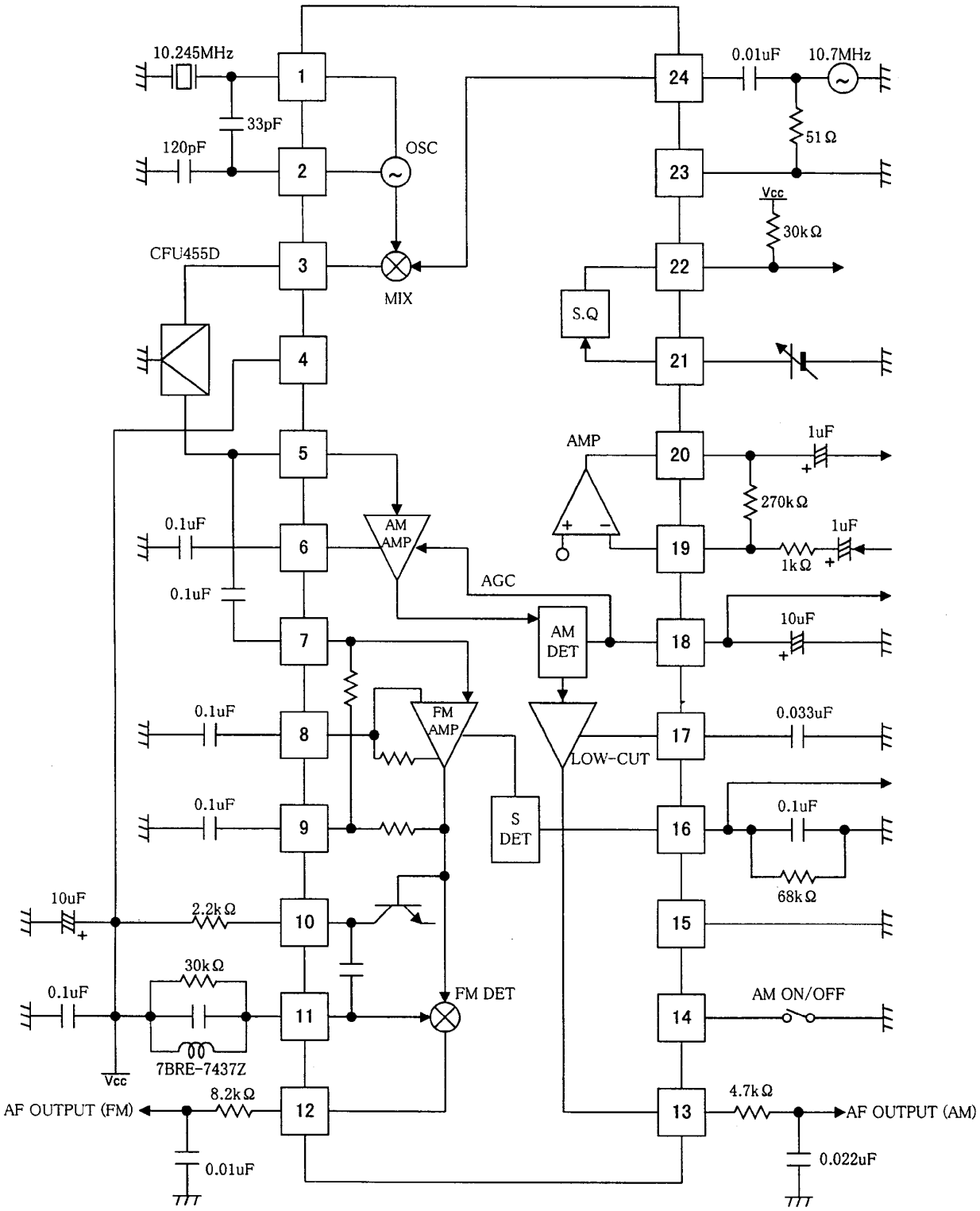
Condition : Ta=25℃, Vcc=3.0V

Parameter	Symbol	Value			Unit	Condition
		MIN	TYP	MAX		
Supply Current 1	Icc 1		6.8	8.9	mA	Non Input, AM ON
Supply Current 2	Icc 2		3.9	5.3	mA	Non Input, AM OFF
Mixer Conversion Gain	MG		20		dB	
Mixer Input Resistance	Mz		3.6		kΩ	DC Measurement
FM PART						
Limiting Sensitivity	Limit		2.0	8.0	uV	-3dB
Output Voltage	Vo	85	150	230	mVrms	10mVin ±3kHz DEV
Total Harmonic Distortion	THD		1.0	2.0	%	10mVin ±3kHz DEV
Output Impedance	Zo		800		Ω	10mVin
Filter Amp Gain	GF	30	38		dB	f=30kHz, Vo=100mV
SCAN Control High Level	SH	2.3			V	Squelch Input 2.5V
SCAN Control Low Level	SL			0.3	V	Squelch Input 0V
Squelch Hysteresis	Hys		30		mV	
RSSI Output Voltage	So		0.05	0.5	V	Vin=0mV, Rs=68kΩ
RSSI Output Voltage	S1	0.05	0.5	0.9	V	Vin=0.01mV, Rs=68kΩ
RSSI Output Voltage	S2	0.7	1.2	1.7	V	Vin=0.1mV, Rs=68kΩ
RSSI Output Voltage	S3	1.2	1.8	2.5	V	Vin=1mV, Rs=68kΩ
RSSI Output Voltage	S4	1.6	2.3	2.9	V	Vin=10mV, Rs=68kΩ
RSSI Output Voltage	S5	1.8	2.4	2.9	V	Vin=100mV, Rs=68kΩ
AM PART						
Sensitivity	US	20	15		dBu	Input Level when Output Level=20mV
Output Voltage	Vo 1	60	120	180	mVrms	1kHz 30%, Vin=1mV
Total Harmonic Distortion 1	THD 1		1.0	2.0	%	1kHz 30%, Vin=1mV
Total Harmonic Distortion 2	THD 2		2.0	4.0	%	1kHz 80%, Vin=1mV
S/N	S/N	40	48		dB	1kHz 30%, Vin=1mV
AM OFF	VOFF	-0.3		+0.3	V	SW Port Open : AM OFF, GND : AM ON

NOTE : Specification given herein are subject to change without notice.
Please confirm when ordering.

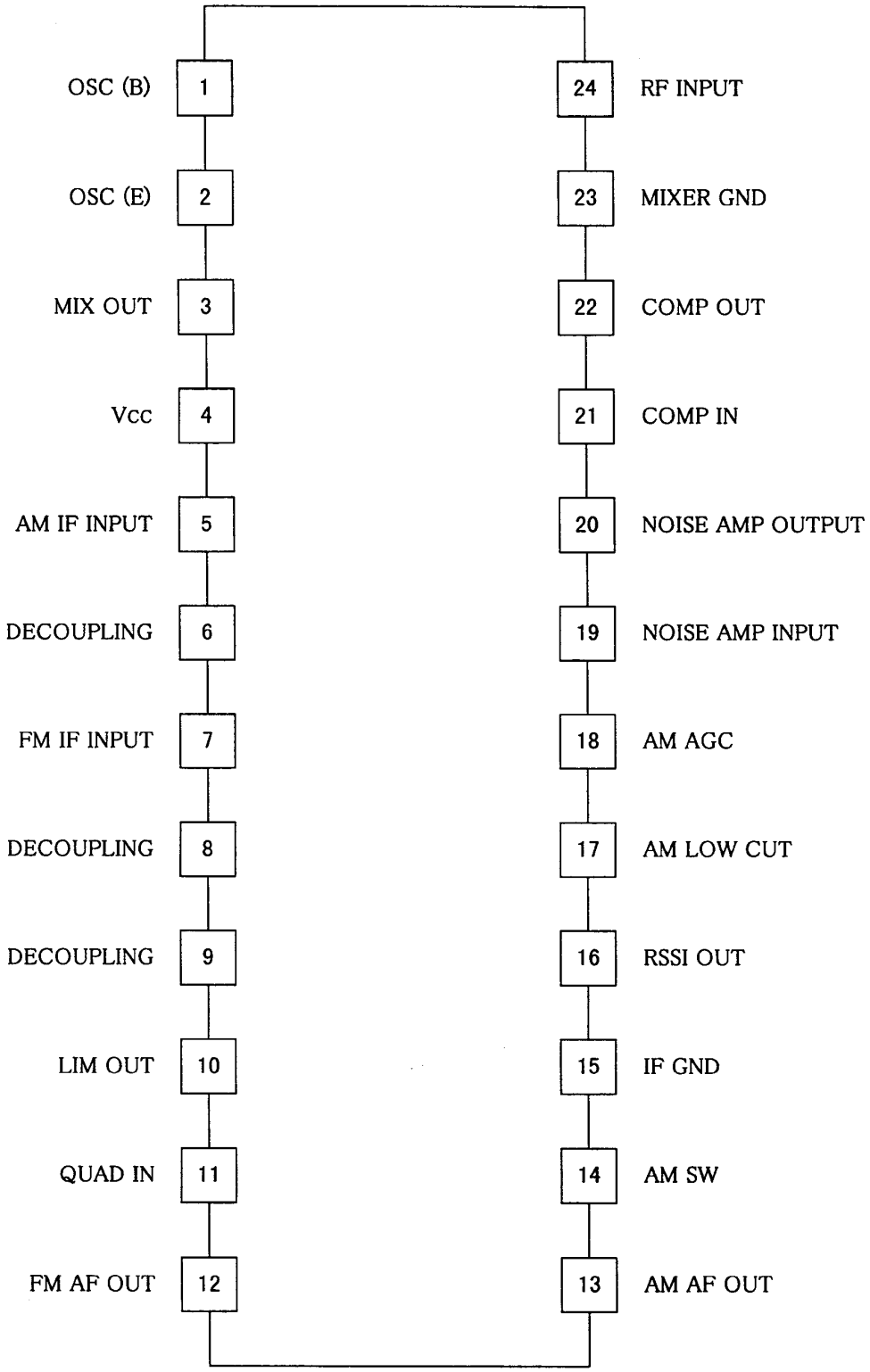
REFERENCE DATA

9. Test Circuit / Block Diagram



10. Pin Assignment

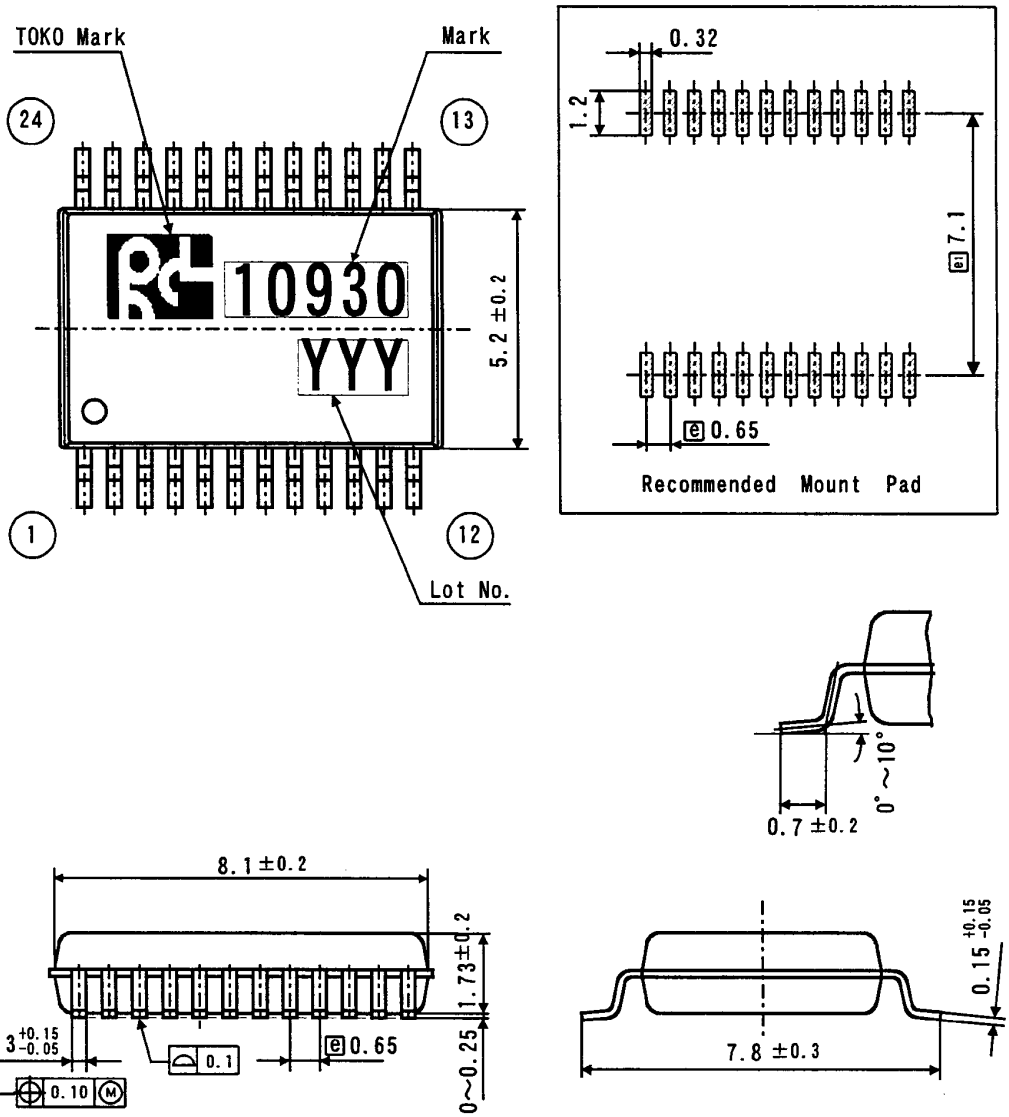
REFERENCE DATA



REFERENCE DATA

11. Package Outline Dimensions/Marking

SSOP-24



			Molded Resin	: Epoxy Resin
			Lead Frame	: Copper Alloy
			Terminal Treatment	: Solder Plating(5~15 μ m)
			Mark Method	: Ink
Unit	:	mm	Country of Origin	: Philippines
General Tolerance	:	±0.2	Weight	: 0.17g

12. Cautions

12-1. WARNING - Life support applications policy
TOKO,INC. products shall not be used within any life support systems without the specific written consent of TOKO,INC. A life support system is a product or system intended to support or sustain life which, if it fails, can be reasonably expected to result in a significant personal injury or death.

12-2. Examples of characteristics given here are typical for each product and being technical data, these do not constitute a guarantee of characteristics or conditions of use.
The circuits shown in this specification are intended to explain typical applications of the products concerned. Accordingly, TOKO is not responsible for any circuit problems, nor for any infringement of third party patents or any other intellectual property rights that may arise from the use of these circuits. Moreover , this catalog dose not signify that TOKO agrees implicitly or explicitly to license any patent rights or other intellectual property rights which it holds.

12-3. This part is not designed for anti-nuclear radiation structure.
Please do not use this part in an environment where nuclear radiation may occur.

12-4. We may not accept the return of parts damaged by careless handling.

13. Others

13-1. No Ozone Depleting Substances were used in the manufacture of theses parts.

13-2. No material used in this part contain brominated PBBOs or PBBs as the flame-retardant.

13-3. In the event of any confusion concerning this "Specifications", both parties shall settle such confusion through reasonable discussions.

13-4. The announcement number of CISTEC list is as follows.
TK10930***** No. : 0002500010000012 Announcement time : September 1992

13-5. For the cautions to storage and device mounting, please refer to the Quality Specification No. QH7-B008.

13-6. For the package, please refer to the Package Specification No. DP3-F021.