

T-77-05-05

**KA2249/D**

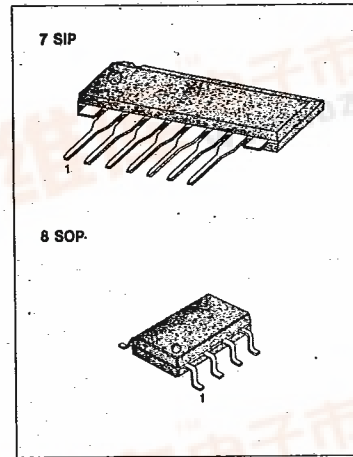
**LINEAR INTEGRATED CIRCUIT**

**FM FRONT END FOR PORTABLE RADIO**

The KA2249/D is a monolithic integrated circuit designed for FM front end of the portable radio.

**FEATURES**

- High frequency amplifier, frequency converter, local oscillator.
- Wide operating voltage:  $V_{CC} = 2V \sim 7V$  (KA2249)  
 $V_{CC} = 2V \sim 5V$  (KA2249D)
- Low current consumption: Typ. 2mA ( $V_{CC} = 4V$ ).



3

**SCHEMATIC DIAGRAM**

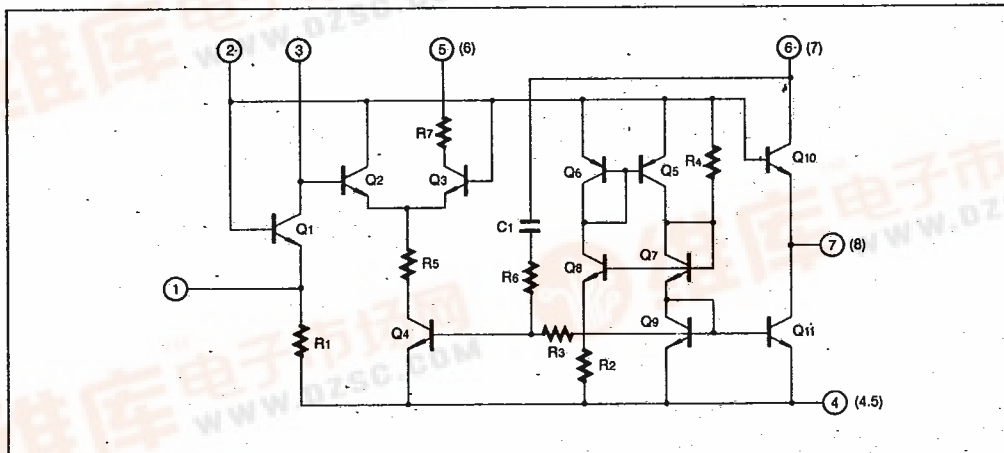


Fig. 1



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**ABSOLUTE MAXIMUM RATINGS (Ta=25°C)**

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	7	V
Terminal Voltage	V (3~4)	14	V
	V (5~4)		
	V (6~4)		
Power Dissipation (Ta = 75°C)	P <sub>d</sub>	30	mW
Operating Temperature	T <sub>opr</sub>	-20 ~ +75	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +125	°C

**ELECTRICAL CHARACTERISTICS**

(Ta = 25°C; V<sub>CC</sub> = 4V, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit	Fig
Circuit Current	I <sub>CC</sub>	V <sub>I</sub> = 0	1.4		3.0	mA	2
Output Voltage	V <sub>O</sub>	V <sub>I</sub> = 70dB <sub>μ</sub> , 106MHz	30.5		68.5	mV	3
Oscillation Voltage	V <sub>osc</sub>	V <sub>CC</sub> = 2V	130			mV	3

**TEST CIRCUIT 1**

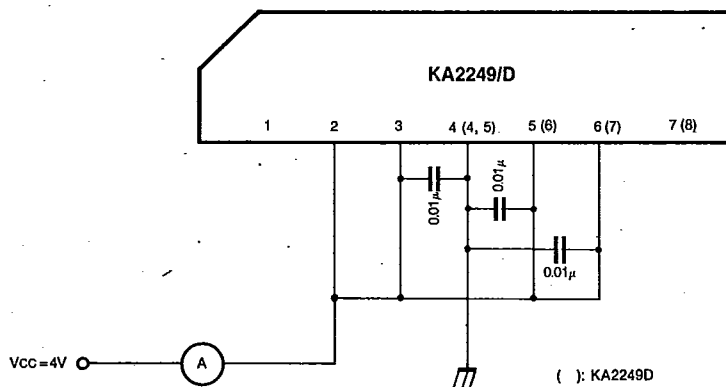


Fig. 2

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LINEAR INTEGRATED CIRCUIT

TEST CIRCUIT 2 ( $V_o$ ,  $V_{osc}$ )

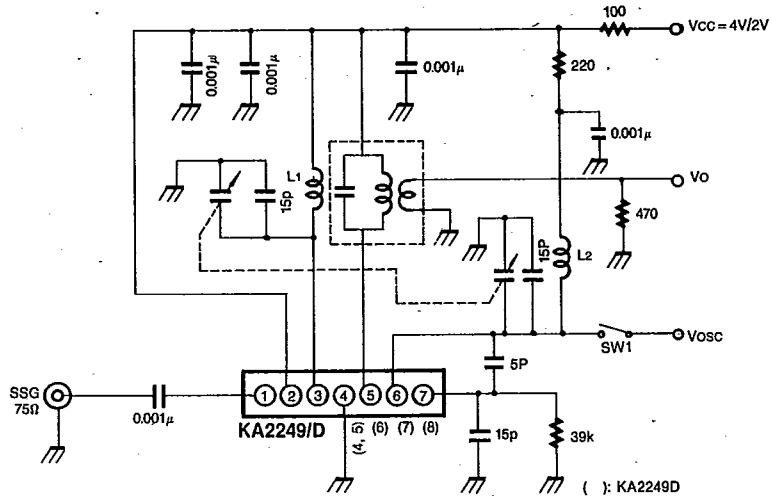
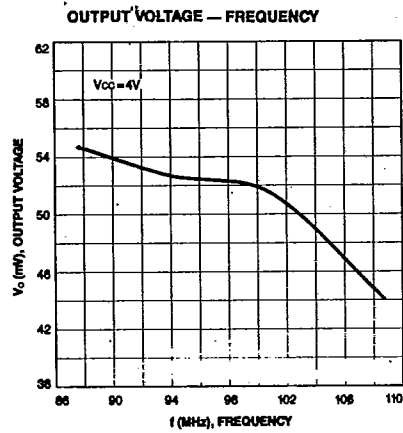
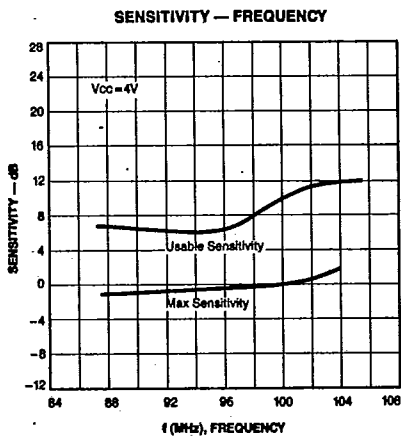


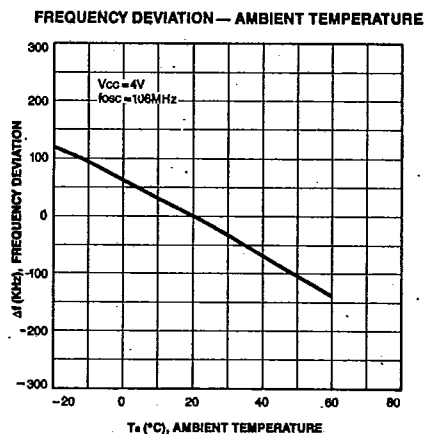
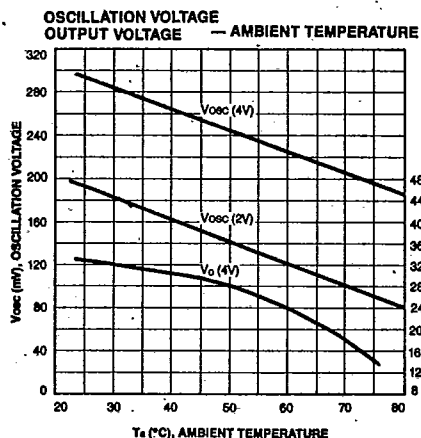
Fig. 3



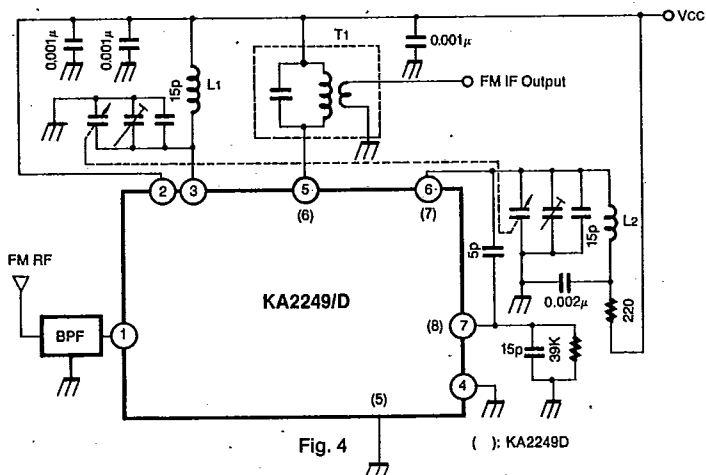
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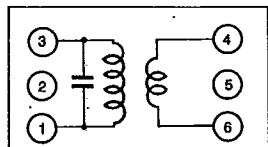


APPLICATION CIRCUIT



COIL SPECIFICATION

T1 FM IFT



C <sub>o</sub> (pF)	f (MHz)	Q <sub>o</sub> (%)	TURNS	
			1-3	4-6
56	10.7	95	12	2

Seoul Jupa  
SJ-015-382  
0.1mmφ UEW