

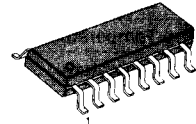
FM ONE CHIP RADIO

The KA22429 is a monolithic integrated circuit designed for Portable FM radio.

It is consisting of a RF input stage, Mixer, IF, Mute control and Loop (earphone drive) AMP.

It is suitable a pocket-size radio.

16 SOP



FUNCTIONS

- RF input stage
- Local osc
- Mixer
- IF amp
- Mute control
- Earphone drive amp.

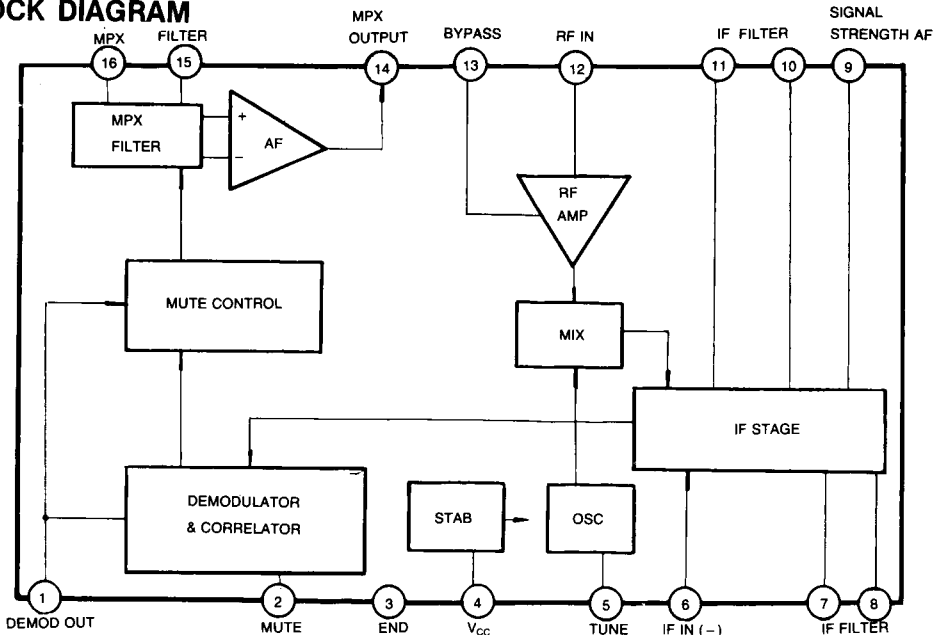
FEATURES

- Minimum number of external parts required
- It is able to a single trimmer tuning
- No FM det coil
- It is FLL IF detect system (76KHz)
- Operating voltage: $V_{CC} = 1.8V \sim 6.0V$

ORDERING INFORMATION

Device	Package	Operating Temperature
KA22429D	16 SOP	-10°C ~ +70°C

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	7	V
Oscillator Voltage	V _{OSC}	-0.5 ~ +0.5	V
Operating Temperature	T _{OPR}	-10 ~ +70	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C
Thermal Resistance Junction to Ambient	R _{θJA}	300	K/W

ELECTRICAL CHARACTERISTIC

MONO CONDITION: f = 98MHz, f_m = 1KHz, Δf = ± 22.5KHz, V_i = 50dBμ, Ta = 25°C, V_{CC} = 3V

STEREO CONDITION: f = 98MHz, f_m = 1KHz, Δf = ± 22.5KHz, V_i = 60dBμ (Modulated with pilot Δf = ± 6.75KHz)

Characteristic		Symbol	Test Condition	Min	Typ	Max	Unit
Quiescent Circuit Current		I _{CCQ}	V _i = 0		6.3		mA
MONO	Sensitivity	S _{VI1}	-3dB: Mute Disable		12		dBμ
		S _{VI2}	S/N = 26dB: Mute Enable		17		dBμ
	Signal to Noise Ratio	S/N ₁			60		dB
	Total Harmonic Distortion	THD ₁	Δf = ± 22.5KHz		0.7		%
		THD ₂	Δf = ± 75KHz		2.3		%
	AM Rejection Ratio	AMR	AM: fm = 1KHz, m = 80% FM: fm = 1KHz, Δf = 75KHz		50		dB
	Oscillator Voltage	V _{OSC}			250		mV
	AFC Range	ΔAFC			160		KHz
	Mute Range	MR			120		KHz
Band Width	BW	ΔV _O = 3dB Pre-Emphasis t = 5KHz		10		KHz	
AM Output Voltage	V _{O1}			90		μV	
STEREO	Sensitivity	S _{VI3}	S/N = 46dB		49		dBμ
	Signal to Noise Ratio	S/N ₂			53		dB
	Channel Separation	CS			20		dB
	AF Output Voltage	V _{O2}			80		mV

TEST CIRCUIT

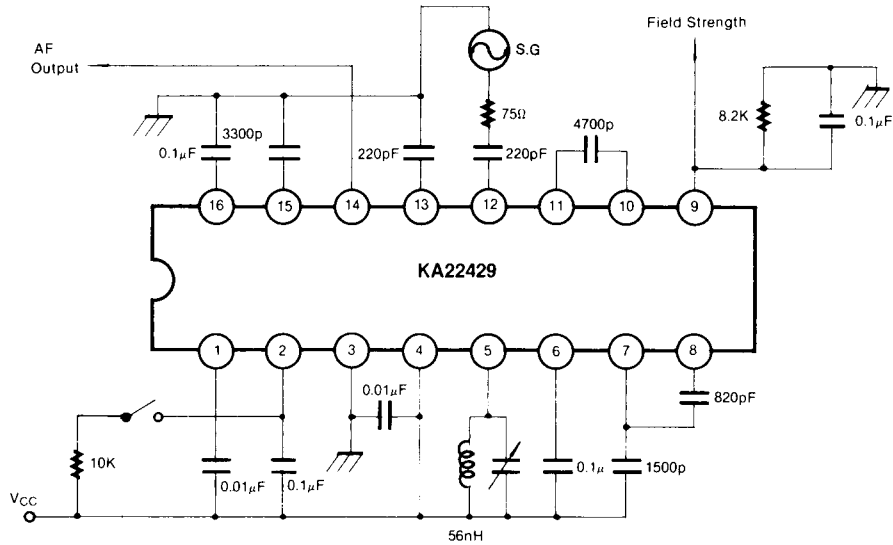


Fig. 1 Test Circuit for Mono Operation

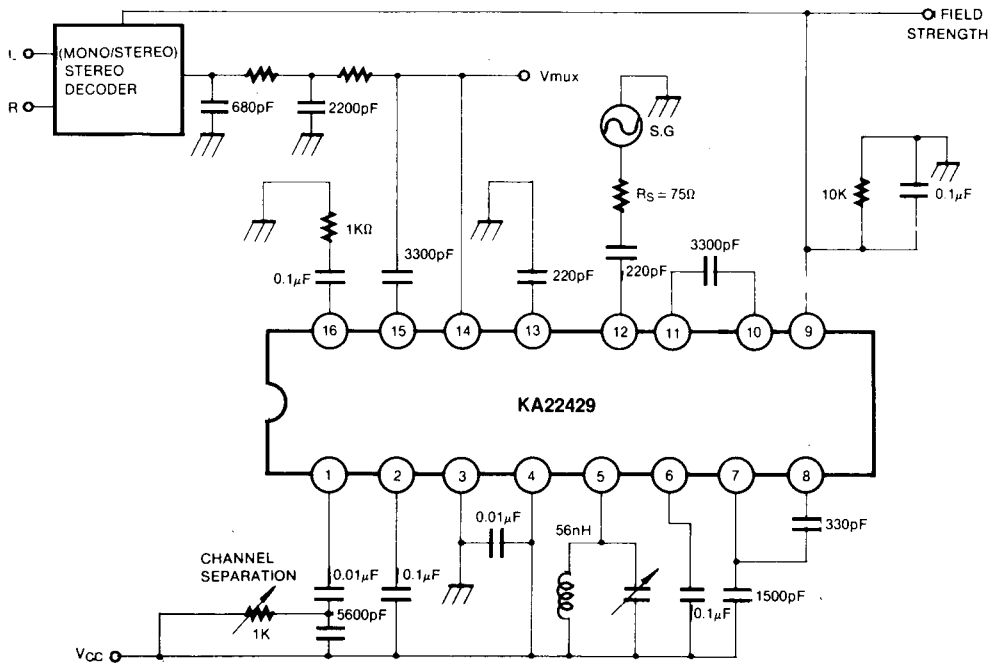
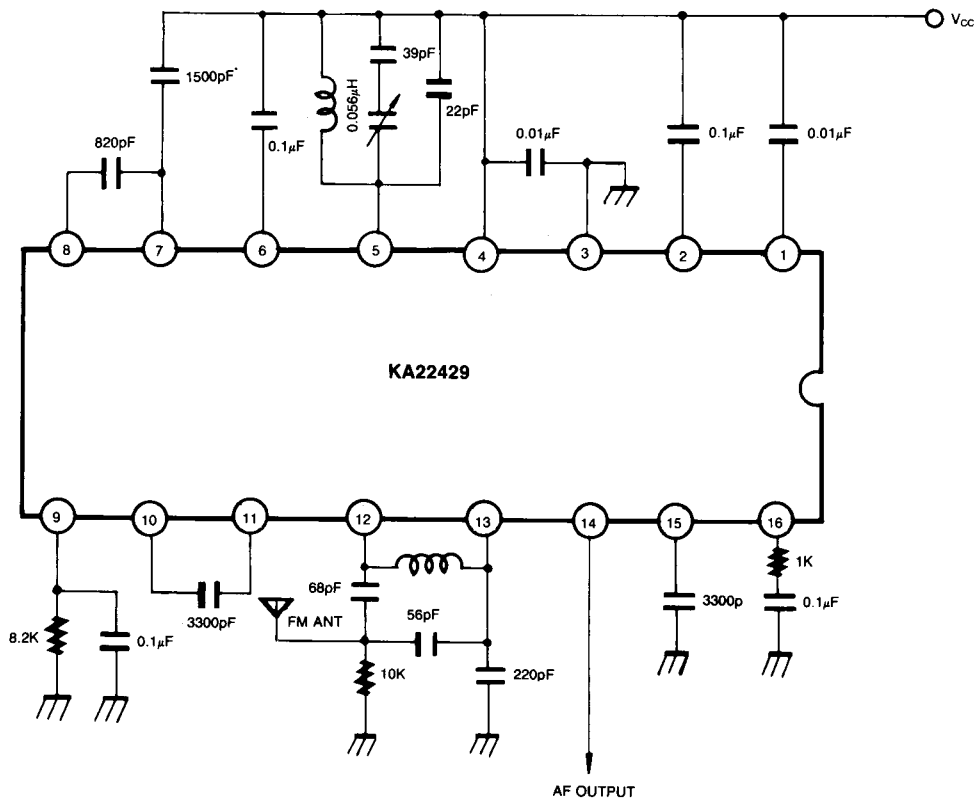


Fig. 2 Test Circuit for Stereo Operation

APPLICATION CIRCUIT



This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.