

UTC KA22427 LINEAR INTEGRATED CIRCUIT

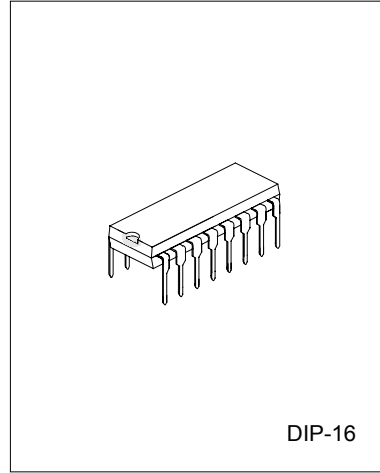
I-CHIP AM/FM RADIO IC

DESCRIPTION

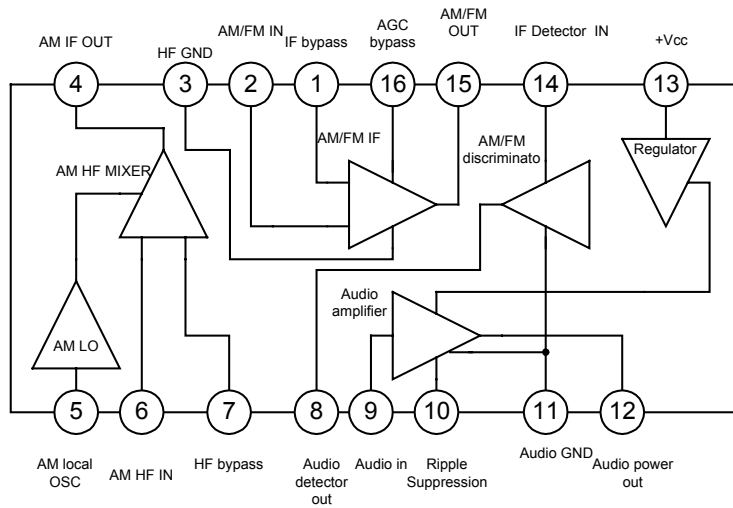
UTC KA22427 is a one-chip AM/FM radio integrated circuit that is suitable for portable radio applications. It includes AM amplifier, local OSC, AM mixer, AM/FM amplifier, AM AGE, FM AGE circuit and also class b Audio Power Amplifier.

FEATURES

- *Low external components count.
- *Wide operating voltage : 3 - 13 V.
- *Internal regulated supply for constant current operation.
- *DC selection of AM/FM mode.



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATING(Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
SUPPLY VOLTAGE	VCC	11	V
SUPPLY CURRENT	ICC	44	mA
POWER DISSIPATION	PD	600	mW
THERMAL RESISTANCE	RJ-A	100	°C/W
OPERATING TEMPERATURE	TOPX	-18~65	°C
STORAGE TEMPERATURE	TSTG	-40~125	°C

NOTE: Ta>25°C, DERATE WITH 10mW/°C UNLESS SPECIFIED.

UTCKA22427 LINEAR INTEGRATED CIRCUIT

ELECTRICAL CHARACTERISTICS

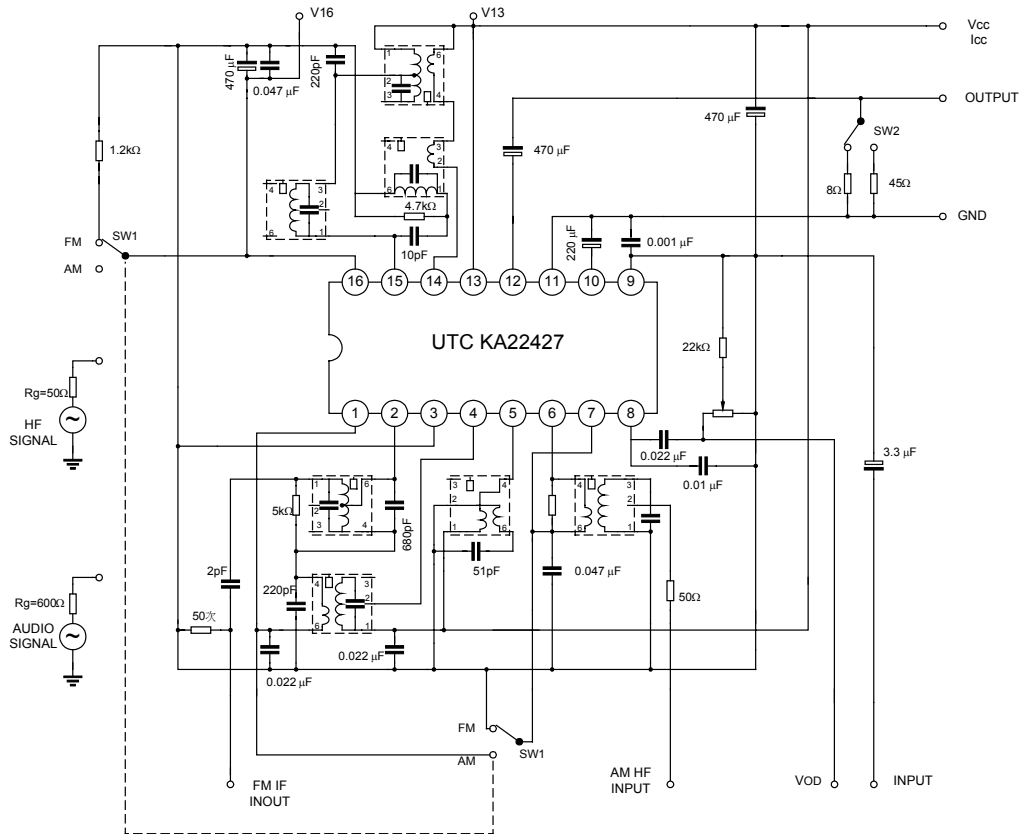
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	ICCQ	SW1→FM,VCC=3V	7	12	17	mA
		SW1→FM,VCC=9V	10	17	23	
Pin 16 Terminal Voltage	V16(FM)	SW1→FM,ICC=42mA	2.0	2.4	3.1	V
Limiting Voltage	VIN(lim)	SW1→FM,VCC=5.5V,-3dB V16=2.4V,VR=Min.		57		dB μ V
Internal Regulated Voltage	VCC	SW1→AM,ICC=42mA	12.5	13.2	14.0	V
Pin 16 Voltage	V16(AM)	SW1→AM,VCC=9V	1.4		1.9	V
Signal to Noise Ratio	VO	SW1→AM,VCC=12V,VIN=37dB SW2→45 Ω ,V16=1.4V	1.5	3.0		V
Maximum Sensitivity	S/N	SW1→AM,VCC=5.5V, SW2→8 Ω ,VIN=37.5dB	15	20		dB
Power Output	POUT	SW2→8 Ω ,VCC=5.5V,f=1KHZ VR=Min. THD=10%	0.28			W
Total Harmonic Distortion	THD	SW2→45 Ω ,ICC=42mA,f=1KHZ VR=Min. VOUT=2V		0.5	4.0	%
Voltage Gain	GV	SW2→8 Ω ,VCC=5.5V,f=1KHZ VR=Min.		40		dB

INPUT - OUTPUT IMPEDANCE(Ta=25°C,VCC=6V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Pin 2 Input (AM)	Rip2(AM)	f=465KHZ		200		K Ω
Impedance (AM)	Cip2(AM)	f=465KHZ		3		pF
Pin 2 Input (FM)	Rip2(FM)	f=10.7MHZ		30		K Ω
Impedance (FM)	Cip2(FM)	f=10.7MHZ		3.5		pF
Pin 4 Output	Rop4	f=465KHZ		300		K Ω
Impedance	Cop4	f=465KHZ		6		pF
Pin 6 Input	Rip6	f=1MHZ		50		K Ω
Impedance	Cip6	f=1MHZ		5		pF
Pin 14 Input (AM)	Rip14(AM)	f=465KHZ		300		K Ω
Impedance (AM)	Cip14(AM)	f=465KHZ		3.5		pF
Pin14 Input (FM)	Rip14(FM)	f=10.7MHZ		300		K Ω
Impedance (FM)	Cip14(FM)	f=10.7MHZ		4		pF
Pin15 Output (AM)	Rop15(AM)	f=465KHZ		300		K Ω
Impedance (AM)	Cop15(AM)	f=465KHZ		5.5		pF
Pin15 Output (FM)	Rop15(FM)	f=10.7MHZ		300		K Ω
Impedance (FM)	Cop15(FM)	f=10.7MHZ		6		pF

UTC KA22427 LINEAR INTEGRATED CIRCUIT

TEST CIRCUIT



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.