

TA7613AP LINEAR INTEGRATED CIRCUIT

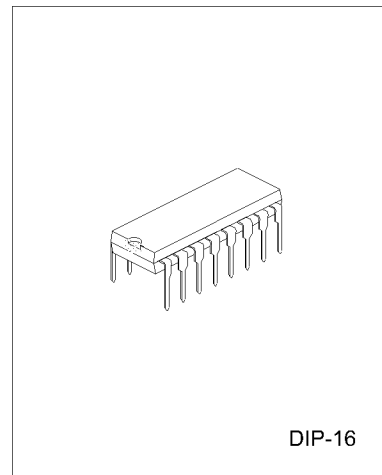
I-CHIP AM/FM RADIO IC

DESCRIPTION

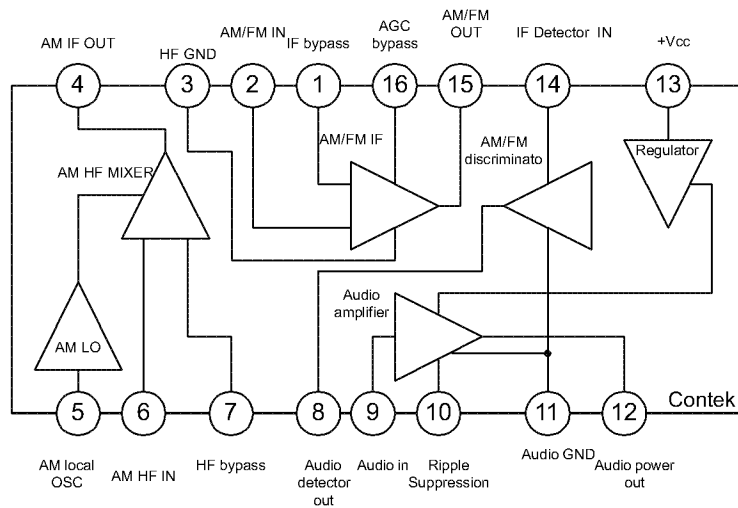
Contek TA7613AP Is A One-Chip AM/FM Radio Integrated Circuit That Is Suitable For Portable Radio Applications. It Includes AM Amplifier, Local OSC, AM Mixer, AM/FM Amplifier, AM AGE, FM AGE Circuit And Also Class B Audio Power Amplifier.

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



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ABSOLUTE MAXIMUM RATINGS(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.

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	
V Pin 16 (FM)	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
V Pin 16 (AM)	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

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

PARAMETER	SYMBOL	TEST CONDITIONS	VALUE	UNIT
Pin 2 Input	Rip2(AM)	f=465KHZ	200	kΩ
Impedance (AM)	Cip2(AM)	f=465KHZ	3	pF
Pin 2 Input	Rip2(FM)	f=10.7MHZ	30	kΩ
Impedanc(FM)	Cip2(FM)	f=10.7MHZ	3.5	pF
Pin 4 Output	Rop4	f=465KHZ	300	kΩ
Impedance	Cop4	f=465KHZ	6	pF
Pin 6 Input	Rip6	f=1MHZ	50	kΩ
Impedance	Cip6	f=1MHZ	5	pF
Pin 14 Input	Rip14(AM)	f=465KHZ	300	kΩ
Impedance(AM)	Cip14(AM)	f=465KHZ	3.5	pF
Pin 14 Input	Rip14(FM)	f=10.7MHZ	300	kΩ
Impedance(FM)	Cip14(FM)	f=10.7MHZ	4	pF
Pin 15 Output	Rop15(AM)	f=465KHZ	300	kΩ
Impedance(AM)	Cop15(AM)	f=465KHZ	5.5	pF
Pin 15 Output	Rop15(FM)	f=10.7MHZ	300	kΩ
Impedanc(FM)	Cop15(FM)	f=10.7MHZ	6	pF

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TEST CIRCUIT

