HA1199P

Advance Information

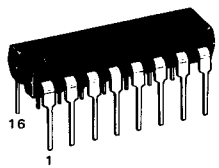
AM SUBSYSTEM FOR CAR RADIO

The HA1199P is a complete one-chip radio subsystem for car radio applications. Automatic dynamic range magnitude control at the RF stage provides good high input signal-handling characteristics (THD = 1% typ at 130 dBμ).

- High AGC FOM — 63 dB Typ
- Good Usable Sensitivity — 23 dBμ Typ
- Low Distortion — 0.4% Typ at 74 dBμ
- Supply Voltage Range — 10.8 to 15.6 Volts

AM RADIO SUBSYSTEM

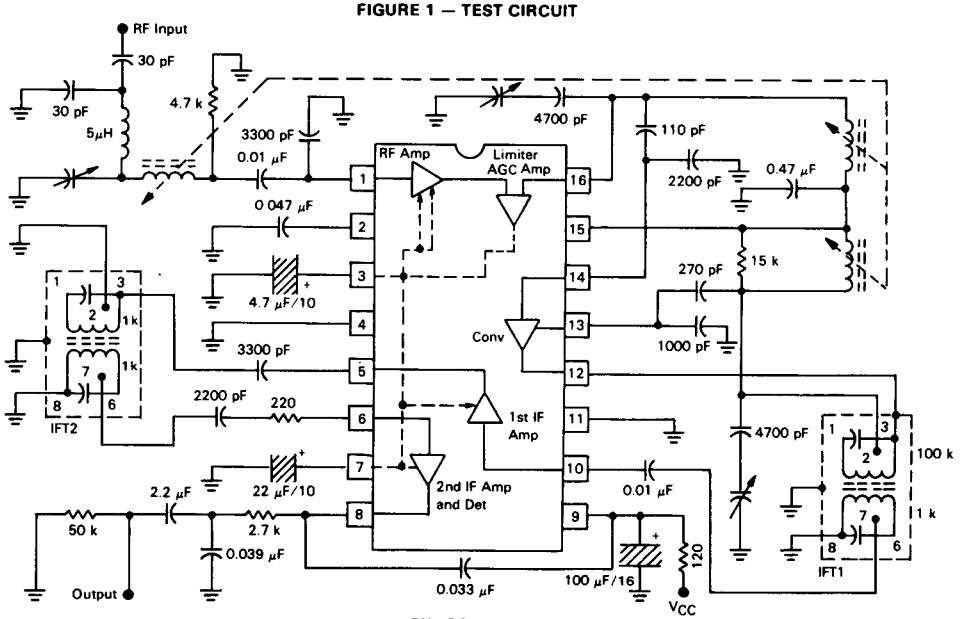
MONOLITHIC SILICON INTEGRATED CIRCUIT



P SUFFIX
PLASTIC PACKAGE
CASE 648

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FIGURE 1 — TEST CIRCUIT



PIN CONNECTIONS

1 RF Amplifier Input	5 First IF Amplifier Output	9 V_{CC}	13 Lo Input
2 RF Bypass	6 Second IF Amplifier Input	10 First IF Amplifier Input	14 Converter Input
3 AGC Bypass	7 AGC Bypass	11 Gnd	15 V_{CC}'
4 Gnd	8 Detector Output	12 Converter Output	16 RF Amplifier Output

This is advance information and specifications are subject to change without notice.

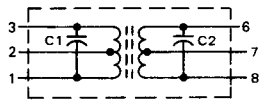
MAXIMUM RATINGS

Rating	Value	Unit
Power Supply Voltage	16	Volts
Junction Temperature	150	°C
Operating Temperature Range (Ambient)	-30 to +70	°C
Storage Temperature Range	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (V_{CC} = 13.2 V, f_c = 1.0 MHz, f_{mod} = 400 Hz, T_A = 25°C unless otherwise noted)

Characteristic	Min	Typ	Max	Unit
Drain Current at Zero Signal	—	15	—	mA
Signal-to-Noise Ratio Input = 34 dBμ, 30% Modulation	25.5	30	—	dB
AGC FOM Test @ 10 dB Output Down, 30% Modulation 1) Output @ 74 dBμ Input 2) Output @ 86 dBμ Input	 — 51	 57 63	 — —	dB
Detector Output Input = 74 dBμ, 30% Modulation	80	120	157	mV
Distortion Input = 114 dBμ, 30% Modulation	—	0.4	5.0	%
Sensitivity Input @ S/N = 20 dB, 30% Modulation	—	23	—	dBμ

SPECIFICATION OF THE IFTs



	Q0	Number of Turns				C1 (pF)	C2 (pF)	Tuned Frequency (kHz)
		1-2	2-3	6-7	7-8			
First IFT	70	66	220	260	26	180	180	262.5
Second IFT	70	271	23	271	23	180	180	262.5

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