

Specification	Products	Integrated Circuit	Type	BA4111F
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- Product name Integrated Circuit
- Type No. BA4111F
- Dimensions Fig-1
- Block diagram Fig-2
- Functions FM IF amplifier and limiter, Quadrature detector, AFC and tuning meter outputs, AFC output, Signal meter output, Muteing for weak signal reception, Muteing for detuned conditions.
- Features
1. Compact, MF pin package contributes to compact equipment design.
 2. Built-in soft muteing fuction.
 3. Enabls high degree of suppression of white noise between stations, and side peak noise encountered in the detuned condition.
 4. Variable muteing attack input signal level.
 5. Variable muteing maximum attenuation.
 6. Variable muteing slope with respect to input signal level.
 7. A signal meter output is provided which is suitable for use as a control signal for the BA1350 multiplexer.
 8. AFC output
 9. AFC output usable fo front-end control is provided.
 10. High output level.
 11. High sensitivity.
 12. Excellent S/N ratio.
 13. Low distortion.
 14. Wide supply voltage.

Absolute Maximum Ratings (T_a = 25°C)

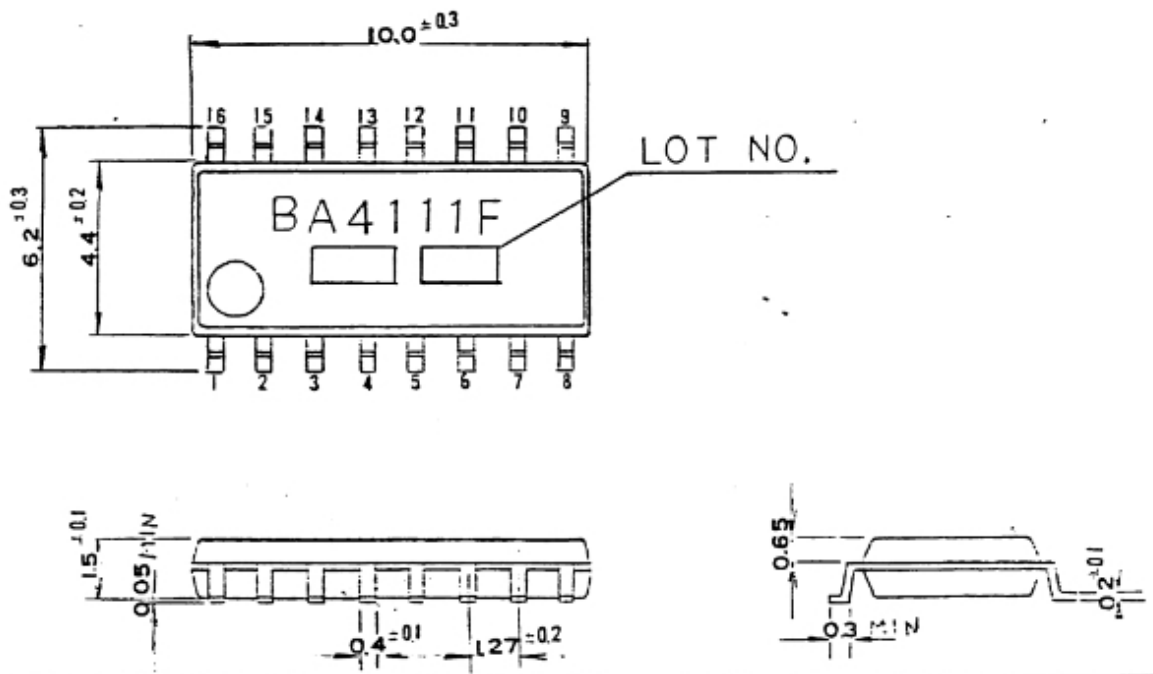
Parameter	Symbol	Limits	Unit
Supply voltage	V _{cc}	14	V
Power dissipation	P _d	500 ※	mW
Operating temperature	T _{opr}	-25~+75	°C
Storage temperature	T _{stg}	-55~+125	°C

※Derating is done at 5.0mW/°C for operation above T_a=25°C

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Electrical Characteristics (Unless otherwise noted, $T_a=25^\circ\text{C}$ $V_{cc}=9\text{V}$)

Parameter	Symbol	Limits			Unit	Conditions	Test Circuit
		Min	Typ	Max			
Quiescent current	I_q	—	22	—	mA		Fig-3
Limiting sensitivity	LIM	—	25	—	$\text{dB}\mu\text{V}$	-3dB	Fig-3
Detector output level	V_o	—	300	—	mV_{rms}	100%mod, 1kHz, $100\text{dB}\mu\text{V}$	Fig-3
Total harmonic distortion	THD	—	0.1	—	%	100%mod, 1kHz, $100\text{dB}\mu\text{V}$	Fig-3
Signal-to-noise-ratio	S/N	—	80	—	dB	100%mod, 1kHz, $100\text{dB}\mu\text{V}$	Fig-3
AM rejection ratio	AMR	—	60	—	dB		Fig-3
Output impedance	Z_{out}	—	3.9	—	$\text{k}\Omega$		Fig-3



(Unit: mm)

Fig-1 Dimensions

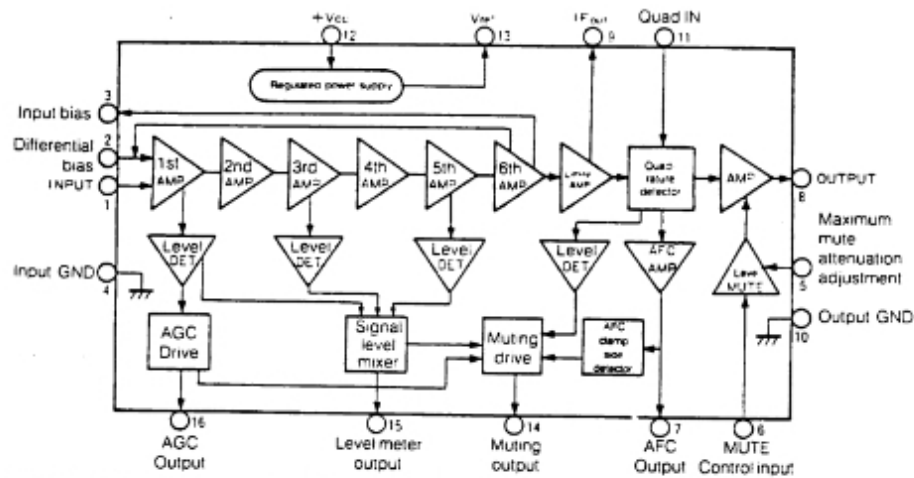


Fig-2 Block Diagram

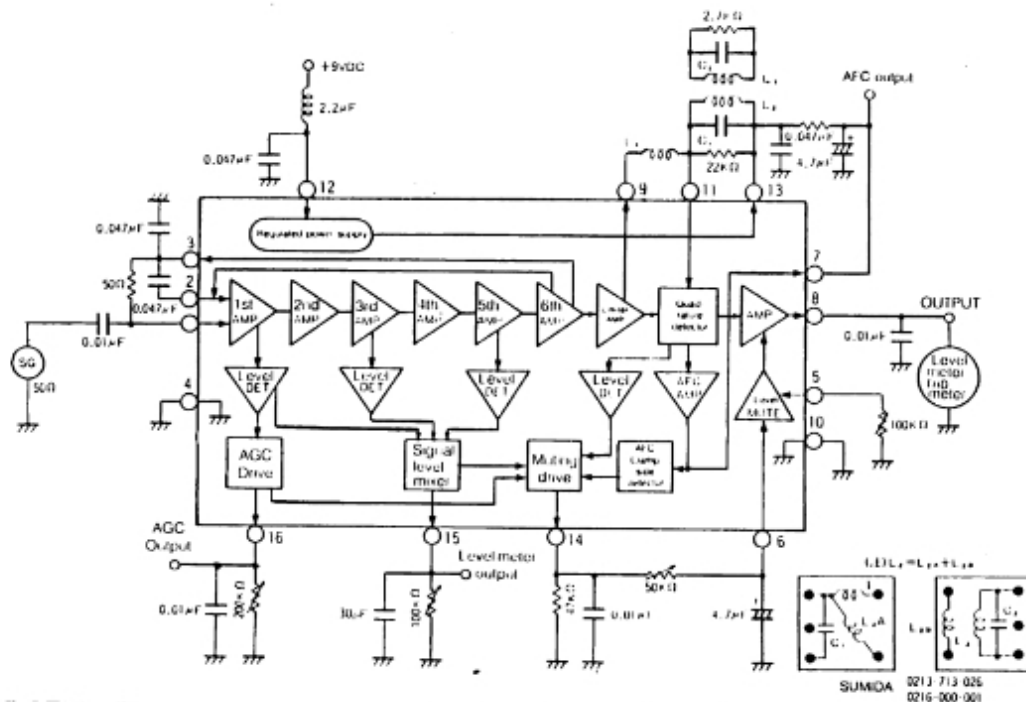


Fig-3 Test Circuit

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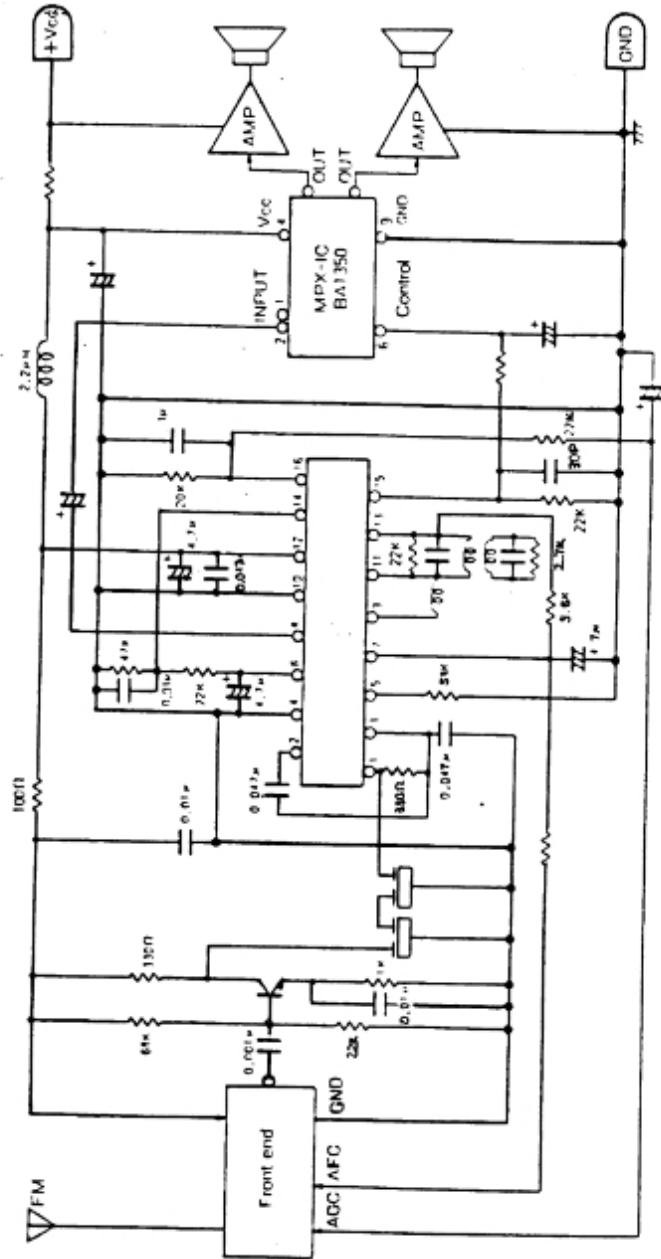


Fig-4 Application Circuit