



# SANYO Semiconductors DATA SHEET

## LA1150 — Monolithic Linear IC FM IF Amplifier and Detector IC

### Overview

The LA1150 is an FM IF amplifier and detector IC.

### Features

- FM IF amplifier and limiter.
- Demodulated output : 600mVrms (maximum).
- Total harmonic distortion : 0.3% (maximum).

### Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V <sub>CC</sub> max		16	V
Maximum input voltage	V <sub>IN</sub>		0.7	Vrms
Allowable power dissipation	Pd max	Derate by 4mW per 1°C when used at temperatures above 25°C.	400	mW
Operating temperature	T <sub>opr</sub>		-20 to +80	°C
Storage temperature	T <sub>stg</sub>		-40 to +125	°C

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V <sub>CC</sub>		12	V

Operating Characteristics at Ta = 25°C, V<sub>CC</sub> = 12V, f = 10.7MHz, fm = 400Hz, 100% modulation

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	I <sub>CC</sub>		8	12	15	mA
Output pin (pin 7) DC voltage	V <sub>7</sub>		3.7		5.2	V
Demodulated output	V <sub>O</sub>	V <sub>IN</sub> = 80dBμ	400		600	mVrms
Input limiting voltage	V <sub>IN</sub> (lim)	-3dB limiting		50	55	dBμ
Total harmonic distortion	THD	V <sub>IN</sub> = 80dBμ		0.2	0.3	%
Signal-to-noise ratio	S/N	V <sub>IN</sub> = 80dBμ	70	80		dB
AM rejection ratio	AMR		47	53		dB
Output resistance	R <sub>o</sub>	f = 400Hz	6.2	7.7	9.5	kΩ

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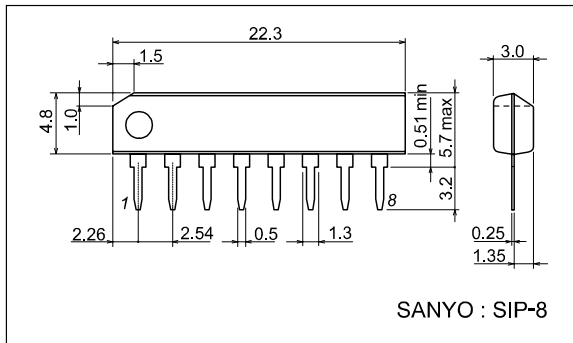
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# LA1150

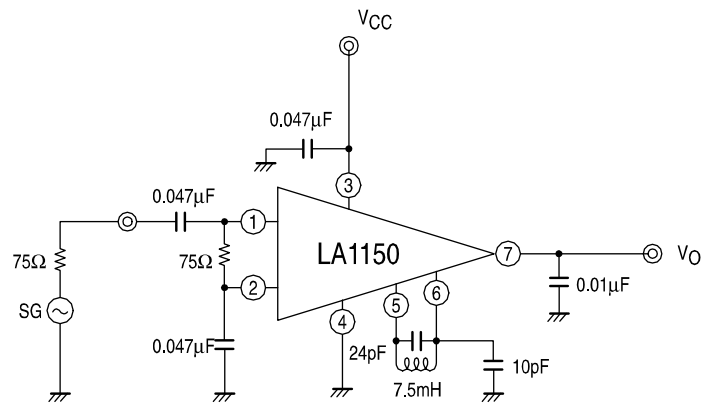
## Package Dimensions

unit : mm

3016B

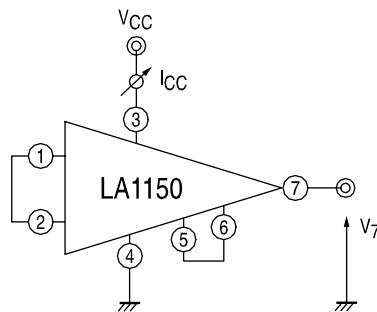


## AC Test Circuit



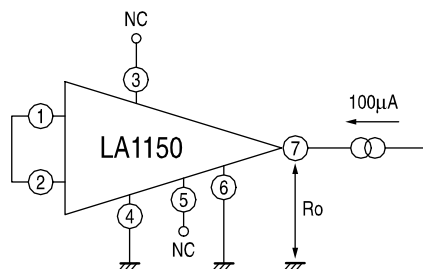
PCA00608

## DC Test Circuit



PCA00609

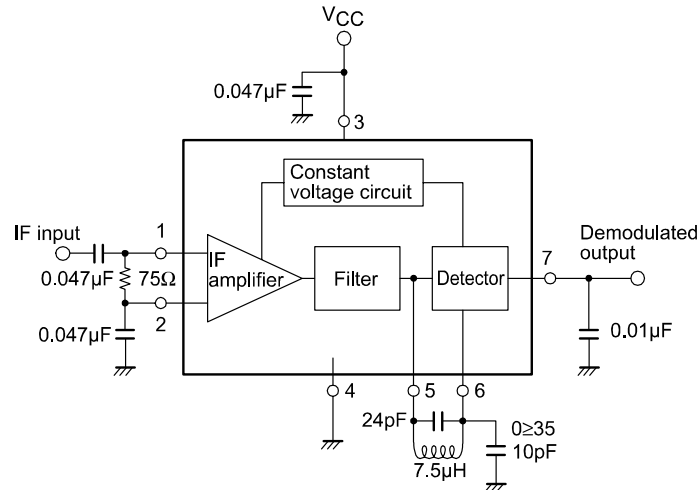
## Ro Test Circuit



PCA00610



## Application Circuit Example



PCA00612

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