



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 : 600mV_{rms} (maximum).
- Total harmonic distortion : 0.3% (maximum).

Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		16	V
Maximum input voltage	V _{IN}		0.7	V _{rms}
Allowable power dissipation	Pd max	Derate by 4mW per 1°C when used at temperatures above 25°C.	400	mW
Operating temperature	Topr		-20 to +80	°C
Storage temperature	Tstg		-40 to +125	°C

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V _{CC}		12	V

Operating Characteristics at Ta = 25°C, V_{CC} = 12V, f = 10.7MHz, fm = 400Hz, 100% modulation

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

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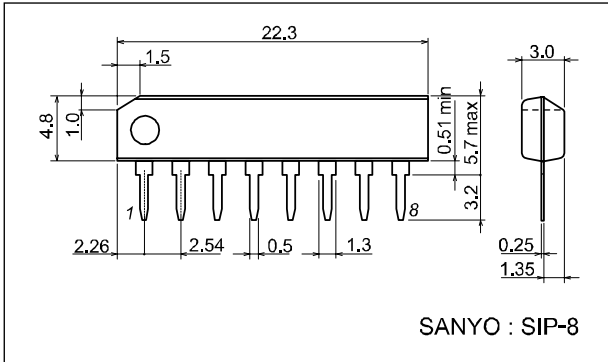
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LA1150

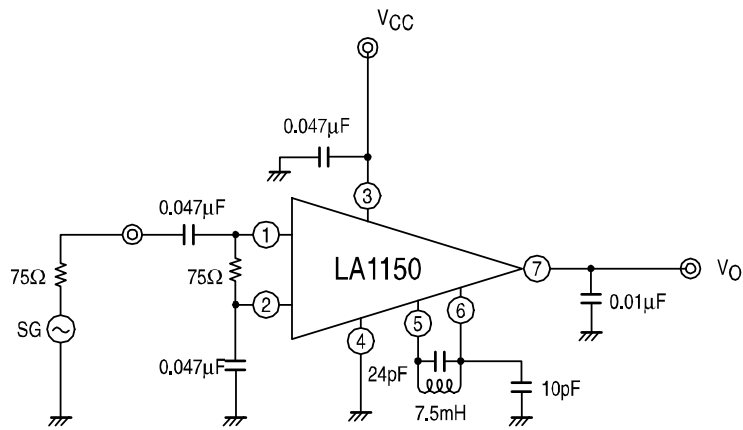
Package Dimensions

unit : mm

3016B

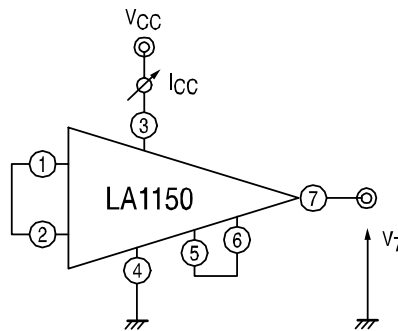


AC Test Circuit



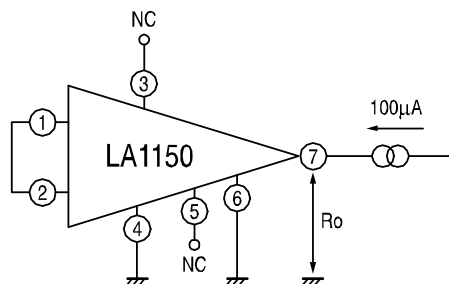
PCA00608

DC Test Circuit



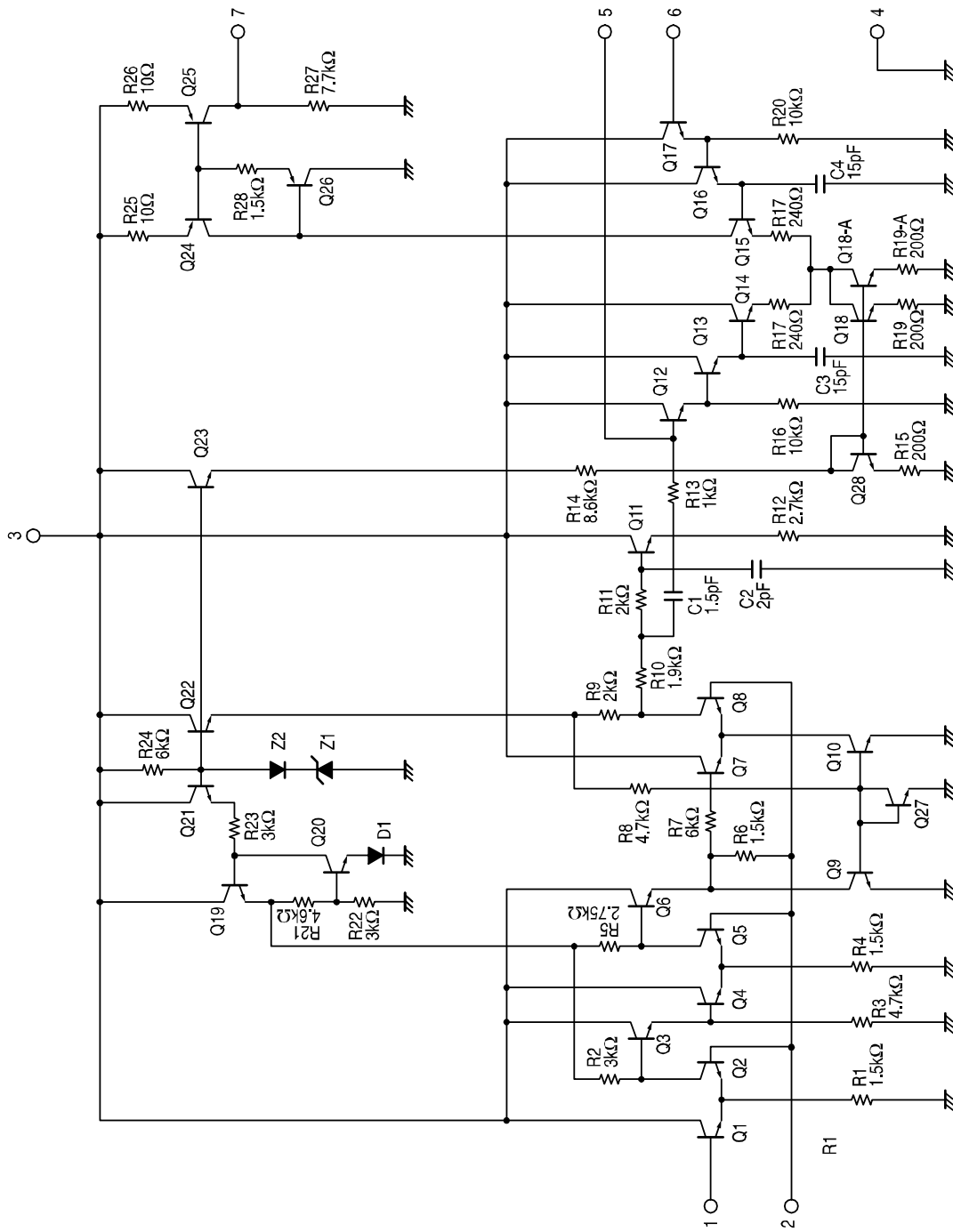
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Ro Test Circuit



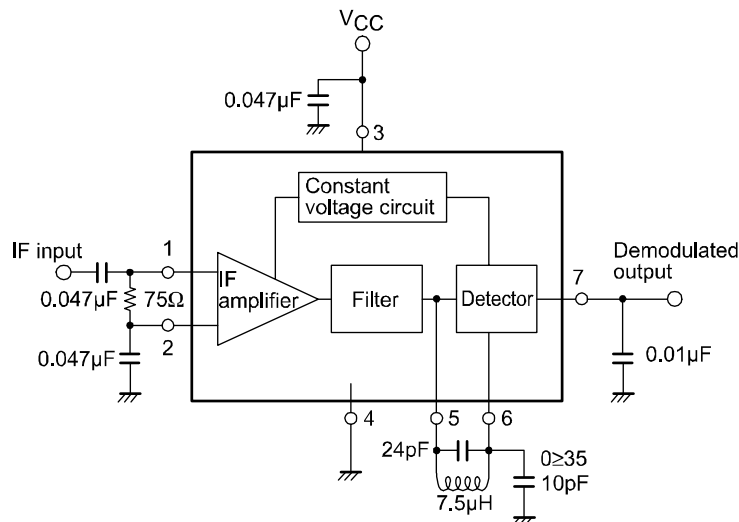
PCA00610

Equivalent Circuit



PCA00611

Application Circuit Example



PCA00612

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